

Location	Product Name	Manufacturer Name	Manufacturer Part #
Body Shop	39023 - 39583 TPO - Direct Bumper Coaters	Sem Products Inc.	39153
Body Shop	39091-LV; 39104-LV Flexible Bumper Coater	Sem Products Inc.	
Body Shop	3M Dynatron Putty-Cote 592, 592T, 593	3M General Office	LB-K100-0587-6
Body Shop	3M Panel Bonding Adhesive PN 08115	3M	08115
Body Shop	3M Scotch-Weld Epoxy Adhesive DP-100 Clear	3M	
Body Shop	470 Featherspray	Sluyter Company Ltd.	
Body Shop	476 Spray Adhesive	Sluyter Company Ltd.	
Body Shop	Acrysol Body Solvent 16 Oz NW	Lawson Products Inc	P60170
Body Shop	Air Tool Oil	CRC Industries	74095
Body Shop	Air Tool Oil	Kleen-Flo Tumbler Industries Ltd.	4168
Body Shop	Allegro 70% IPA Hygienic Wipe	Allegro Industries	1001, 1001-05, 1001-10
Body Shop	Bactine Original First Aid Liquid	Bayer Healthcare LLC - Consumer Care	
Body Shop	BD7-77 Plus Penetrant	Barnes Group Inc.	BD1108
Body Shop	Bio-Rust	J. Walter Company Ltd.	53-G 245
Body Shop	Bon Ami Power Foam Glass Cleaner	Diversey Inc.	
Body Shop	Correction pen (Multi-Purpose)	Pentel Co. Ltd	ZL31-W, ZLC31-W, ZL33-W
Body Shop	Cream Hardener	ITW Evercoat	100340
Body Shop	Crown 8034 General Purpose Silicone Lubricant	Aervoe Industries Inc	
Body Shop	Depend (R) Activator 7387 Aerosol	Henkel Loctite Corporation	21088
Body Shop	Dupli-Color Enamel Paint, Gloss Black (OSHA)	Sherwin Williams	DA1600

Body Shop	Dupli-Color Enamel Paint, Gloss White (OSHA White)	Sherwin Williams	DA1670
Body Shop	Dupli-Color Engine Enamel with Ceramic, Aluminum	Sherwin Williams	DE1615
Body Shop	Dupli-Color Lacquer Paint, Flat Black	Sherwin Williams	DAL1607
Body Shop	Dupli-Color Primer Surfacers, Gray Hot Rod	Sherwin Williams	DAP1692
Body Shop	Eco-Care Engine Degreaser	Kleen-Flo Tumbler Industries Ltd.	022
Body Shop	Envy Foaming Disinfectant Cleaner	Diversey Lever	
Body Shop	ETP Gold Cutting Fluid	Lawson Products Inc	P91010
Body Shop	European Auto Coat	Transtar Autobody Technologies	1273
Body Shop	Everglass quart	Illinois Tool Works Inc.	100632
Body Shop	Extend(R) Rust Treatment	Henkel Corp	37557
Body Shop	Film Forming Lubricant	Balmar, LLC	101G
Body Shop	Glance Foaming Glass & Multi-Surface Cleaner	Johnson Diversey	04553
Body Shop	Glass Cleaner	Sprayway	1000000075
Body Shop	Graffiti wipes	Total Solutions	1447
Body Shop	HHS 5000 500ml	Würth Canada Limitée	893-1063
Body Shop	High Build Undercoat 550G. Paintable - 890.9072	Würth Canada Limitée	890.9072
Body Shop	Johnsens Brake Parts Cleaner	Technical Chemical Company	2420
Body Shop	Kopr-Kote Thermal Grade	Jet Lube of Canada Ltd.	
Body Shop	Krylon Industrial Quik-Mark Solvent-Based Inverted Marking Paint (Fluorescent), Orange	Sherwin Williams	03702
Body Shop	Loctite 242 Threadlocker	Henkel Loctite Canada Inc.	135355

Body Shop	LPS 1 (Aerosol)	LPS Laboratories Inc.	C30116
Body Shop	Marvel Air Tool Oil	Marvel Oil Company Inc.	50093
Body Shop	Metal Glaze	ITW Evercoat	100416
Body Shop	Moovit (Aerosol)	Lloyds Laboratories Inc.	11008
Body Shop	Mopar Multi-Purpose Lube	Chrysler LLC.	
Body Shop	Never-Seez Regular Grade Cmpd.	Bostik Findley Inc.	V048740
Body Shop	One Step Hand Sanitizer	Belvedere International Incorporated	
Body Shop	PF 7770-3 Truck Line Pliogrip Urethane Adhesive Part A	Pro-Form Products Ltd.	
Body Shop	Pyro-Chem ABC	Tyco Fire Protection Products	2001-2-012 ANa
Body Shop	QD Electronic Cleaner (Aerosol)	CRC Industries	75012
Body Shop	Reflex 700 A	Langeman Manufacturing Ltd.	872-1025
Body Shop	Rustex Primer Grey	Cloverdale Paint Inc.	71024
Body Shop	Sika Cleaner-205	Sika Canada Inc.	
Body Shop	Sikaflex 252	Sika Corporation	604270
Body Shop	Sikaflex-222 UV	Sika Canada Inc.	
Body Shop	Stokolan intensive repair	Deb	
Body Shop	TECHNOMELT KS 250 COOL known as Dorus KS 250 cool	Henkel AG & Co.	
Body Shop	TEROSON SI 9160 CL known as SILATECH SILICONE SEALANT IND	Henkel Corporation	475372
Body Shop	Valve Action Paint Marker	LA-CO Industries Inc.- Markal Company	96800
Body Shop	Way Oil Vistac 68, 220	Chevron Texaco Global Lubricants	232511
Body Shop	WD-40 Bulk Liquid	WD 40 Products Canada Ltd.	
Body Shop	Windex Original Glass Cleaner with Ammonia-D	Diversey Inc.	350000014153

Inventory List by Status - All Products with Document Type

Location	Product Name	Manufacturer Name	Manufacturer Part #	Item Status	Document Type
Transit Dept (8050) > 421 Osborne (8080)	Cat Cement	Chemtool Inc.	Carterpillar	Deactivated	
Transit Dept (8050) > 421 Osborne (8080)	G.b.p. Reducer Activator	Sherwin-Williams Automotive Finishes	R7K981	Deactivated	
Transit Dept (8050) > 421 Osborne (8080)	Goldex Institutional Bleach	RW Packaging Ltd.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080)	Kopr-Kote Thermal Grade	Jet Lube of Canada Ltd.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080)	Percept Concentrated General Virucide Disinfectant Cleaner (cAN)	Johnson Diversey/ The Butcher Company	4337041	Deactivated	
Transit Dept (8050) > 421 Osborne (8080)	PERCEPT RTUWIPES	JohnsonDiversey - Canada, Inc.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080)	Shopworks Bioclean	Rochester Midland Ltd.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	39023 - 39583 TPO - Direct Bumper Coaters	Sem Products Inc.	39153	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	39091-LV; 39104-LV Flexible Bumper Coater	Sem Products Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	39143 Trim Black	Sem Products Inc.	39143	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	3M Dynatron Putty-Cote 592, 592T, 593	3M General Office	LB-K100-0587-6	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	3M Panel Bonding Adhesive PN 08115	3M	08115	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	3M Scotch-Weld Epoxy Adhesive DP-100 Clear	3M		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	470 Featherspray	Sluyter Company Ltd.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Body Shop	476 Spray Adhesive	Sluyter Company Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Abrasive Sanding Discs	KWH Mirka		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Accel Tb Wipes	Virox Technologies		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	ACDelco Penetrating Fluid, 290 g	Shrader Canada Ltd.	992955	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Acrysol Body Solvent 16 Oz NW	Lawson Products Inc	P60170	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Air Tool Oil	CRC Industries	74095	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Air Tool Oil	Kleen-Flo Tumbler Industries Ltd.	4168	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Allegro 70% IPA Hygienic Wipe	Allegro Industries	1001, 1001-05, 1001-10	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	BD7-77 Plus Penetrant	Barnes Group Inc.	BD1108	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Bio-Rust	J. Walter Company Ltd.	53-G 245	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Bon Ami Power Foam Glass Cleaner	Diversey Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Coated Abrasives Flap Discs (Aluminum Oxide, Zirconia, Ceramic Grains, Surface Conditioning Disc, And Semiflex Discs)	Jet Equipment & Tools Ltd		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Coated Finished Flap Discs	Saint-Gobain Abrasives, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Correction pen (Multi- Purpose)	Pentel Co. Ltd	ZL31-W, ZLC31-W, ZL33-W	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Cream Hardener	ITW Evercoat	100340	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Crown 8034 General Purpose Silicone Lubricant	Aervoe Industries Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Depend (R) Activator 7387 Aerosol	Henkel Loctite Corporation	21088	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Dupli-Color Enamel Paint, Gloss Black (OSHA)	Sherwin Williams	DA1600	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Dupli-Color Enamel Paint, Gloss White (OSHA White)	Sherwin Williams	DA1670	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Dupli-Color Engine Enamel with Ceramic, Aluminum	Sherwin Williams	DE1615	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Dupli-Color Lacquer Paint, Flat Black	Sherwin Williams	DAL1607	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Dupli-Color Primer Surfacer, Gray Hot Rod	Sherwin Williams	DAP1692	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Eco-Care Engine Degreaser	Kleen-Flo Tumbler Industries Ltd.	022	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Envy Foaming Disinfectant Cleaner	Diversey Lever		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	ETP Gold Cutting Fluid	Lawson Products Inc	P91010	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Body Shop	European Auto Coat	Transtar Autobody Technologies	1273	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Everglass quart	Illinois Tool Works Inc.	100632	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Extend(R) Rust Treatment	Henkel Corp	37557	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Film Forming Lubricant	Balmar, LLC	101G	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Flap Disc, Type 29 and 27	Osborn	AB-03	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Floor-Dry, Solid-a-Sorb, MP Grades	EP Minerals, LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Glance Foaming Glass & Multi-Surface Cleaner	Johnson Diversey	04553	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Glass Cleaner	Sprayway	1000000075	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Graffiti wipes	Total Solutions	1447	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Grinding discs / cutting-off wheels group O	Klingspor Abrasives Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Grinding discs, cutting-off wheels group KP	Klingspor Abrasives Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	HHS 5000 500ml	Würth Canada Limitée	893-1063	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	High Build Undercoat 550G. Paintable - 890.9072	Würth Canada Limitée	890.9072	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Body Shop	HI-LITER Markers (Yellow, Light Green, Light Blue, Pink)	Avery Product Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	HP Grinding, HP XX, Allsteel XX, Stainless, ALU, Concrete, Pipefitter, Xcavator, Ripcut, Chopcut, Chopcut ALU, Portacut, Zip, Zip Stainless, Zipcut, Zip ALU, Railcut, HP Cup Wheel, Flexcut, Flexcut Milscale	J. Walter Company Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Johnsens Brake Parts Cleaner	Technical Chemical Company	2420	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Kitty Hair	Fibre Glass-Evercoat Co. Inc.	100857	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Kopr-Kote Thermal Grade	Jet Lube of Canada Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Krylon Industrial Quik- Mark Solvent-Based Inverted Marking Paint (Fluorescent), Orange	Sherwin Williams	03702	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Loctite 242 Threadlocker	Henkel Loctite Canada Inc.	135355	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	LPS 1 (Aerosol)	LPS Laboratories Inc.	C30116	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Marvel Air Tool Oil	Marvel Oil Company Inc.	50093	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Metal Glaze	ITW Evercoat	100416	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Moovit (Aerosol)	Lloyds Laboratories Inc.	11008	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Mopar Multi-Purpose Lube	Chrysler LLC.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Never-Seez Regular Grade Cmpd.	Bostik Findley Inc.	V048740	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	One Step Hand Sanitizer	Belvedere International Incorporated		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	PF 7770-3 Truck Line Pliogrip Urethane Adhesive Part A	Pro-Form Products Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Pyro-Chem ABC	Tyco Fire Protection Products	2001-2-012 ANa	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	QD Electronic Cleaner (Aerosol)	CRC Industries	75012	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Reflex 700 A	Langeman Manufacturing Ltd.	872-1025	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Reflex 700 B	Langeman Manufacturing Ltd.	983-1030	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Reinforced Resinoid Bonded Abrasive Wheel	Osborn		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Rost Off	Wurth USA	08902	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Rustex Primer Grey	Cloverdale Paint Inc.	71024	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Sika Cleaner-205	Sika Canada Inc.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Sikaflex 252	Sika Corporation	604270	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Sikaflex-222 UV	Sika Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Small Diameter Abrasive Wheels	Osborn		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Stokolan intensive repair	Deb		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Super Duster 134 and Super Duster 134 Plus	MG Chemicals Ltd.	402A-140G	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	TECHNOMELT KS 250 COOL known as Dorus KS 250 cool	Henkel AG & Co.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	TEROSON SI 9160 CL known as SILATECH SILICONE SEALANT IND	Henkel Corporation	475372	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Travabon	Stockhausen Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Uvex Clear Lens Cleaning Towelette	Honeywell Safety Products	S468	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Valve Action Paint Marker	LA-CO Industries Inc.- Markal Company	96800	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Vitrified Abrasive Product	Saint Gobain North America	66253109044	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Way Oil Vistac 68, 220	Chevron Texaco Global Lubricants	232511	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	WD-40 Bulk Liquid	WD 40 Products Canada Ltd.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Windex Original Glass Cleaner with Ammonia- D	Diversey Inc.	350000014153	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	41 Cut-Off Wheel	Tyrolit North America Inc.	384142	In Progress	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Bactine Original First Aid Liquid	Bayer Healthcare LLC - Consumer Care		In Progress	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Body Shop	Crown General Purpose Silicone Lubricant - Bulk	Aervoe Industries Inc		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	11111-BT503 Wasp and Hornet Killer	K-G Packaging - Spray Pak		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	14 OZ MRO SOLUTIONS HD DGRSR LB 12PK	MRO Solutions L.L.C.	1000009047	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	3M Booth Coating	3M Canada Inc.	60-9801-0920-5	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	603-604 Sico Expert	Sico Production	603404	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	71-054 BREEZE EXT. S/G-CLEAR BASE	General Paint Corp.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	883-401 Sico Expert	Sico Industries Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	883-403 Sico Expert	Sico Industries Inc.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Acrylic Lacquer Thinner Fast Evaporating	The Martin-Senour Co.	3092	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Air Tool Oil	CRC Industries	74095	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Air Tool Oil	Kleen-Flo Tumbler Industries Ltd.	4168	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Aquapon WB Component B	PPG Industries Architectural Finishes	98-101	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Armour Etch	Armour Products	15-0150	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	BEYE 2X3.7L 123 Primer	Rust-Oleum	Z02012	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Boiled Linseed Oil	Recochem Inc.	13-404EXP	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	CertainTeed Finishing Products and Ready- Mix Compounds	CertainTeed Gypsum		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Clovaguard Hb Polyamide Epoxy	Cloverdale Paint Inc.	83150A	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Colorant S Red Oxide 837770	PPG Architect Coatings		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Colorant Y Yellow Ochre 837930	PPG Architect Coatings		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Conv. Epoxy Primer Black	PPG Automotive Refinish	F3997	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Conventional Epoxy Primer Hardener	PPG Automotive Refinish	F3996	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Corrostop Bright Red 635720	PPG Architect Coatings		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Corrostop Burnt Orange 635590	PPG Industries, Inc.	00400801	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Corrostop Gloss Black 635180	PPG Architect Coatings		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Corrostop Gloss Ultwh 635110	AkzoNobel Canada Inc.	635110	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Corrostop Nbase 635503	PPG Architect Coatings		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Corrostop Real Blue 635350	PPG Architect Coatings		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Covercoat Semi-Gloss Latex Clear Base Weatherone	Cloverdale Paint Inc.	02124	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	D-15 Insect Repellent	Quixtar Canada Corporation	602643	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Dettol Antiseptic Disinfectant (Liquid) - Canadian	Reckitt & Benckiser	930666	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Devflex Acrylic Semi-Gloss	PPG Architectural Coatings	4216L	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Dimension 2K Acrylic Urethane Sealer (Part A) Gray	Sherwin Williams	DS693	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Dimension Reducer, Medium	Sherwin-Williams	DR633	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Dlx K&B Eggshell White 18010	PPG Architect Coatings		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	EP589 Gray Epoxy Primer	BASF Canada Inc.	30089473	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Epoxy Primer Catalyst	PPG Coatings and Resins	DP402LF	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Floor Urethane Natwh 261501	PPG Architect Coatings		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	G156, XF Metal Polish Paste	Meguiar's		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	General Paint Industrial Urethane Self-Prime Coating - Gloss interior and exterior, Clear Base	General Paint Corp	16-054	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Gld Ultra Sgl ClBase 94806	PPG Architect Coatings		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	HHS Lube 500ml	Würth Canada Limitée	08931065	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Hi-Glo Synthetic Enamel System, Fast Reducer	Sherwin-Williams	WS59	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Hi-Hide Eggshell Int Acrylic Latex White	Cloverdale Paint Inc.	03243	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	IC LSPR 12PK White Marking	Rust Oleum Corporation	020066112684	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Interior Semi-Gloss Acrylic Latex White Base-Premium Classic	Cloverdale Paint Inc.	01123	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	KRYLON ColorMaster with Covermax Technology, Silver	Krylon Products Group	51511	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Krylon High Strength Spray Adhesive	Sherwin Williams	9090	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Krylon INdustrial Quik- Mark Water-Based Inverted Marking Paint (APWA) Brilliant White	Sherwin-Williams	03901	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	LePage Polyfilla Big	Henkel Loctite Canada Inc.	1256104	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	LIMCO LB Bases & Colors without Lead	BASF Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Manus Impact Beads	Potters Industries Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	New Rapid Tap	Relton Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	NON SANDING EPOXY PRIMER LIGHT GRAY (LEAD FREE)	PPG Industries, Inc.	DP50LF	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Olympic Wood Protector Sc Navajo Red	PPG Coatings and Resins	79304	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Para Premium Eggshell Latex Interior Wall Paint, White	General Paint Ltd	9090	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Product 567 Bulk	Henkel Australia Pty Ltd		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Promar 400 Interior Latex Gloss Enamel Extra White	Sherwin Williams	B21W4451	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Regal Aquaglo	Benjamin Moore & Co.	333, n333	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Rohper LSPR 6Pk Flat Gray Primer	Rust Oleum Corporation	V2182838	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Rohper Lspr 6Pk Gloss High Tmp Aluminum	Rust Oleum Corporation	V2116838	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Select Semigloss Natwh 677500	Akzo Nobel / Sico		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Sikaflex-252	Sika Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Spec 200 Interior Semi Gloss	Benjamin Moore & Co.	034	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Speckle Stone Metallic Series	K-G Spray-Pak Inc.	00002865	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Stokolan Classsic	Deb-Stoko USA LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Super Acrylic II Eggshell Clear Base	Cloverdale Paint Inc.	43057	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Super Acrylic II Eggshell Deep Base	Cloverdale Paint Inc.	43054	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Super Acrylic II Semi- Gloss Clear Base	Cloverdale Paint Inc.	44057	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Super Acrylic II Semi- Gloss Deep Base	Cloverdale Paint Inc.	44054	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Thinner - Fast	PPG Automotive Refinish / NexaAutoColor	F3320	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	TNT S/G Deeptone Base	PPG Industries	27-210	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	TSP General Purpose Cleaner	Dap Inc.	070798630017	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Turpentine	Recochem Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Ultra Low Voc Ecologic WB Gloss Level 2 Eggshell Neutral Base	Cloverdale Paint Inc.	70694	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Ultra Low VOC Ecologic WB Gloss Level 3 Pearl Deep Base	Cloverdale Paint Inc.	70651	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Ultra Low VOC Ecologic WB Gloss Level 3 Pearl White Base	Cloverdale Paint Inc.	70653	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Ultra Low VOC Ecologic WB Gloss Level 5 Semi Gloss Deep Base	Cloverdale Paint Inc.	70621	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Ultra Low Voc Ecologic WB Gloss Level 5 Semi Gloss Neutral Base	Cloverdale Paint Inc.	70624	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Ultra Low Voc Ecologic WB Gloss Level 5 Semi Gloss White Base	Cloverdale Paint Inc.	70623	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Ultra Low Voc Ecologic WB Gloss Level 6 Gloss Deep Base	Cloverdale Paint Inc.	70601	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	VHT FlameProof Coating 1300-2000F (704-1093C) - Serosol, Flat Gray	VHT Products Co.	SP104	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	W/R Epoxy Topcoat Midtone Base	PPG Industries Architectural Finishes	98-56	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	WD-40 Bulk Liquid	WD 40 Products Canada Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	WDCARE QT 6PK WATCO Dark Satin Fin Wax	Rust-Oleum Corporation	66941	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Windex Original Glass Cleaner with Ammonia- D	Diversey Inc.	350000014153	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Zep Spirit II Ready-To- Use Detergent Disinfectant	Zep Manufacturing Company of Canada	0679	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Building Painters Shop	Loctite 754 Extended Rust Treatment	Henkel Australia Pty Ltd		In Progress	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	03405-2100 38-2100-2 Quick Start Starting Fluid 311G	K-G Packaging - Spray Pak		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	AcrylPro Ceramic Tile Adhesive	Custom Building Products Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Black Knight	Certified Labs, Div. of NCH Corp.	0638	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Concrete Bonding Adhesive	Quikrete Companies	9902	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Crown 8034 General Purpose Silicone Lubricant	Aervoe Industries Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Debba Industrial Protective Cream	Deb USA, Inc	42131	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Dupli-Color Automotive Finish, Super Black	Sherwin-Williams	BG600	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Dupli-Color Enamel Paint, Gloss Black (OSHA)	Sherwin Williams	DA1600	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	DUPLI-COLOR Sandable Primer, Gray Hot Rod	Dupli-Color Products	DAP1692	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Dynaflex 230 - Colors	Dap Canada Inc.	070798740822	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Elmer's Carpenter's Wood Filler-MAX	Elmer's Products, Inc.	E9010	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Facto Hd40	Swish Maintenance Ltd.	5840	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Fast dry enamel metallic color satin gloss in aerosol	PEINTURES J.C.96	PJC-103-M-S	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Gojo Natural Orange Pumice Hand Cleaner	GOJO Industries, Inc.	0956-04	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Goo Gone Liquid	Goo Gone	2098C, 2088C, 2065C, 2050C	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	GSI Amine	STONHARD, DIVISION OF STONCOR GROUP, INC	72203/A	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Henry 203 Roll Roofing Adhesive	Henry Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Homax Grout and Stone Sealer, Waterbased Aerosol	Homax Products	9540	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Industrial Choice Aerosol - Solvent Based Inverted Marking Paint	Rust Oleum Corporation	239007	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Johnsens Brake Parts Cleaner	Technical Chemical Company	2420	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Lps Noflash Electro Contact Cleaner	LPS Laboratories Inc.	04016	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Meadow-Patch T1	W. R. Meadows Inc	8211000	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Minwax Stainable Wood Filler	Sherwin Williams	4285-	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Miracle Lumber Lock Adhesive	ITW TACC International Corp.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Moovit (Aerosol)	Lloyds Laboratories Inc.	11008	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	New Rapid Tap	Relton Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	OMNI-PAK MasterBlend EZ TOUCH (DV Cans)	THE SHERWIN- WILLIAMS COMPANY	DV6, DV12, DV16	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Pennzoil GT Performance Racing Motor Oil SAE 25W-50	SOPUS Products		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	PolyBlend Sanded Grout	Custom Building Products Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Portland Cement Based Concrete Products	Quikrete Companies		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Powerhold 5500 Cove Base Adhesive	Powerhold		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Roof Cement	Gibson Homans Co	182470	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Seal Cure /18 (VOC)	W. R. Meadows of Canada	3582-000	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Severe Weather Superior Roof Repair	Henry Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Sikaflex 252	Sika Corporation	604270	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Sikaflex Self-Leveling Sealant	Sika Canada	AQ 191 A	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	SikaGrout 212	Sika Canada Inc.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	SpeedSet Fortified Thin- Set Mortar (Gray / White)	Custom Building Products Inc.	010186302805	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Stanley Chalks	Stanley Works		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Straitline Marking Chalk Blue	Irwin Industrial Tool Company Pty Ltd	77007	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Structo-Lite Basecoat Plaster	USG Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Super Lube 11 OZ Dri- Film Lubricant with Syncolon PTFE	Synco Chemical Corporation	11016	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Sure-Steptm	W.R. Meadows of Western Canada	3050-340	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Synko Dust Control Drywall Compound	CGC Inc (A USG Company)		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Synko Lite Joint	CGC Inc (A USG Company)		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Tandus Centiva C-36E Floor Primer	Tandus Centiva		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	The Wave Urinal Deodorizer	Fresh Products Inc.	RWDS10xx, WDS10xx, WDS100xx	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Ultrabond Eco 575	Mapei Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Ultramarine Blue	Nubiola	UMB/US01	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Carpentry Shop	Zep Spirit II Ready-To- Use Detergent Disinfectant	Zep Manufacturing Company of Canada	0679	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	101Eu Film Forming Lubricant	Oil Center Research Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	34A Valve Grinding Compound 1.5oz	Permatex Canada	80036	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	39143 Trim Black	Sem Products Inc.	39143	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	3D Aviation Form-A- Gasket #3 Sealant 1PT	Permatex USA	80017	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	3M Super Foam Fast Spray Adhesive 74, Clear	3M Canada Inc.	62-4950-4935-5	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	404 Quick Set Instant Adhesive	Henkel Loctite Canada Inc.	135465	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	A9 Aluminum Cutting Fluid	Relton Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	AeroShell Oil W 15W- 50	Shell Canada Products Ltd.	001A9612	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Air Tool Oil	Kleen-Flo Tumbler Industries Ltd.	4168	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Alcohol Free Towelettes	Allegro Industries	3001	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Aromx 60	Swish Maintenance Ltd.	8960	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	BD1077 Heavy Load Red Grease	American Jetway	0718-63	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	BD7-77 Plus Penetrant	Barnes Group Inc.	BD1108	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Biowash 2000	Prairie West Industrial Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Blue Steel Ink Aerosol	DoALL Cutting Fluids	F02378	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Bon Ami Power Foam Glass Cleaner	Diversey Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Brake & Parts Cleaner 408gr - 890.9107	Würth Canada Limitée		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	CB 100	J. Walter Company Ltd.	53-G 167	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Compressor Oil 460	Esso Petroleum Canada		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Crankcase Oil ISO 68 Special Formula Premium Grade	Cat Pumps		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Crown 8034 General Purpose Silicone Lubricant	Aervoe Industries Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Cut+Cool Cutting and Drilling Oil Eco 5L	Würth Canada Limitée	893.050012	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	D-15* Insect Repellent	Amway Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	DEVCON Titanium Putty	ITW Polymers Adhesives	10760	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Dow Corning 4 Electrical Insulating Compound	Dow Corning Corporation / Styron LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Dry All	Origination		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Dupli-Color Acrylic Lacquer Aerosol Paint, Flat Black	Dupli-Color Products	DAL1607	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Dupli-Color Enamel Paint, Gloss Black (OSHA)	Sherwin Williams	DA1600	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Dupli-Color Enamel Paint, Gloss White (OSHA White)	Sherwin Williams	DA1670	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Dupli-Color Engine Enamel With Ceramic, Ford Red	Sherwin Williams	DE1605	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Dupli-Color Primer Sealer, Gray	Sherwin Williams	DAP1699	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Dykem Transparent Stain Aerosol - Steel Blue and Steel Red	ITW Pro Brands	80000	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Envy Foaming Disinfectant Cleaner	Diversey Lever		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Extend(R) Rust Treatment	Henkel Corp	37557	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Fluid Film Aerosol (AS)	Eureka Chemical Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Glance Foaming Glass & Multi-Surface Cleaner	Johnson Diversey	04553	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Gojo Original Formula Hand Cleaner	GOJO Industries, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	HHS 5000 500ml	Würth Canada Limitée	893-1063	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	High Build Undercoat 550G. Paintable - 890.9072	Würth Canada Limitée	890.9072	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Hydrex Mv 22, 36, 60	Petro-Canada	490-110	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Johnsens Brake Parts Cleaner	Technical Chemical Company	2420	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Kolor Kut Water Finding Paste	Kolor Kut Products Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Kopr-Kote Thermal Grade	Jet Lube of Canada Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Lemon Kleen	Prairie West Industrial Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 222Ms Threadlocker	Henkel Loctite Canada Inc.	135334	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 242 Threadlocker	Henkel Loctite Canada Inc.	135355	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 262 Threadlocker High Strength	Henkel Loctite Canada Inc.	26221	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 515 Gasket Eliminator Flange Sealant Part No. 51531	Henkel Loctite Canada Inc.	51531	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 518	Henkel Limited	153476	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 567 PST Pipe Sealant with PTFE Thread Sealant Part No. 56747	Henkel Loctite Canada Inc.	56747	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 609 Retaining Compound Press Fit	Henkel Loctite Canada Inc.	135512	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 620 Retaining Compound Slip Fit	Henkel Loctite Canada Inc.	135514	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 680 Retaining Compound Slip Fit	Henkel Loctite Canada Inc.	68035	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite 754 Extend	Henkel Corporation	234981	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite MR 5414 Black Contact Adhesive Known As Loctite Black Contact Adhesiv	Henkel Loctite Canada Inc.	234930	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite SF 7070 known as Loctite 7070	Henkel Limited		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite SI 587 known as Loctite 587 300ml EN	Henkel Loctite Canada Inc.	234590	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	loctite SI 5900 Instant Gasket Known As Instant Gasket 190ml AE	Henkel Corporation	40479	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite Sil CB GRS 280 GR known as Loctite 39401 280 Grit-> End MSDS/Lable Name	Henkel Corporation	232872	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Loctite Silver Grade Anti-Seize	Henkel Loctite Canada Inc.	76759	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	LPS 1 (Aerosol)	LPS Laboratories Inc.	C30116	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	LPS 3 Premier Rust Inhibitor Aerosol	LPS Laboratories Inc.	00316	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	LPS F-104 (Aerosol)	ITW Pro Brands	04920	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	LPS NoFlash NU	ITW Pro Brands	C04015	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	LPS Tapmatic TriCut	LPS Laboratories Inc.	05316	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Lubriplate 105	Lubriplate Lubricants Co		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Magic Non Alcohol Hygenic Cleansing Fluid	Braco Manufacturing / Magic Safety Products	ST100BN	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Manus Impact Beads	Potters Industries Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Masters 770 Yellow Low Voc Cement for Plastic Pipe	GF Thompson Co. Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Masters Metallic Compound	GF Thompson Co. Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	MOBIL VACTRA OIL NO. 2 (FEBIS K 68)	Imperial Oil Products Division	8303	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Moovit (Aerosol)	Lloyds Laboratories Inc.	11008	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Never-Seez Regular Grade Cmpd.	Bostik Findley Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	New Rapid Tap	Relton Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Nuflex 302 High Temperature Gasket Making Silicone Sealant	Nuco Inc.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Oatey Candian PVC Medium Clear or Grey Cement	Oatey Co.	31505	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Omni	J. Walter Company Ltd.	53-X 003	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	One Step Hand Sanitizer	Belvedere International Incorporated		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Opti-Mizer	Interlube International Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Osborn Blue Layout Fluid 76214	Osborn International	M5715	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Personal Respirator Cleaning Pad	Allegro Industries	1001, 1001-05, 1001-10	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Petrosol 3139	Sunoco Inc, A Division of Suncor Energy	101803	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	PF 500 Non-Paintable Rubberized Undercoat	Pro-Form Products Ltd.	PF 500	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	PowerFist Air Tool Oil	Nemco Resources	5059	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Propane	Worthington Cylinder Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Protective Cream 311	West Penetone Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Pyro-Chem ABC	Tyco Fire Protection Products	2001-2-012 ANa	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	QD Electronic Cleaner (Aerosol)	CRC Industries	75012	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Resinoid Bonded Abrasives	United Abrasives, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Respiratory Fluid with Alcohol	Braco Manufacturing / Magic Safety Products	CN30DNA	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Rubber Care Stick	Würth Australia Pty Ltd.	0893 012 8	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Safety Wash Cleaner Degreaser	MG Chemicals Ltd.	4050-1L	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Shell Gadus S4 V600AC 1.5	Shell Canada Products Ltd.	001E0213	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Shell Spirax S6 ATF A295	Shell Oil Products	001D8305	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Sikaflex-252	Sika Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Smoke Screen Aerosol	Zep Manufacturing Company of Canada	0187	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Speclt Sspr 6Pk Farm Yellow (Caterpillar)	Rust Oleum Corporation	7449830	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Sterling Wunrub 83	Johnson Diversey	2050020	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Stokolan Classsic	Deb-Stoko USA LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Stokolan intensive repair	Deb		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	STP Oil Treatment	The Armor All / STP Products Company		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Super Duster 134 and Super Duster 134 Plus	MG Chemicals Ltd.	402A-140G	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Super Lube Multi- Purpose Synthetic Grease with Syncolon (PTFE)	Synco Chemical Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Syngard FS 75W90 Limited Slip Blend	Martin Lubricants	571209	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Ten Minute Rad Flush	Kleen-Flo Tumbler Industries Ltd.	708	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	TEROSON SI 9160 CL known as SILATECH SILICONE SEALANT IND	Henkel Corporation	475372	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Travabon	Stockhausen Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Trim Black	PPG Coatings and Resins	SXA9000	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Trim Tap NC	Master Chemical Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Ultra Coolant	Ingersoll Rand	38459582	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Uno S V	J. Walter Company Ltd.	53-G 053	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Uvex Clear Lens Cleaner	Honeywell Safety Products	S461	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Victory Blue	Victory Blue, Llc		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Voltesso 35	Exxonmobil Canada	201580103030	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	WD-40 Bulk Liquid	WD 40 Products Canada Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Weld-On P-68 Low VOC Primer for PVC and CPVC Plastic Pipe	IPS Corp.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	White Petroleum Jelly USP	Jedmon Products Limited		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Windex Original Glass Cleaner with Ammonia- D	Diversey Inc.	350000014153	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Windex Powerized Foaming Glass Cleaner (Aerosol)	Johnson Diversey	90129	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Xk2	Zep Manufacturing Company of Canada	6745	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	Zep Spirit II Ready-To- Use Detergent Disinfectant	Zep Manufacturing Company of Canada	0679	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Machine Shop	ZL-W01	Pentel of America Ltd		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	104000 Mulco Supra Expert	Akzo Nobel		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	2.1 EPOXY PRIMER BLACK	PPG Industries	DP90LV	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	2.1 EPOXY PRIMER GRAY	PPG Industries	DP50LV	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	2.1 Epoxy Primer White	PPG Automotive Refinish	DP48LV	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	2319S Lacquer Thinners and Cleaning Solvents	DuPont Chemicals	2319S	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	245 Core SN63Pb37	Litton Kester Solder		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	247; 5/95; 30/70 ASTM 30 A, B, C; 40/60 ASTM 40 A, B; 50/50 ASTM A, B;	The Canada Metal Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	2-6 Casting Alloy, 15/85 ASTM 15B, 20/80 ASTM 20 B, 25/75 ASTM 30 A B, 30/70, 34/66, 35/65, 45/55 ASTM A B, Pirellie, "E" Alloy	The Canada Metal Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	39101; 39104 Flexible Bumper Coater	Sem Products Inc.	39101	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	39103 Flexible Bumper Coater	Sem Products Inc.	39103	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3-in-one Multi-purpose Oil	WD-40 Company		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3M Bondo Red Cream Hardener 307, 913, 913M, 913C, 913ES, 928, 928C, 9307, 7653079, 810505D, 510506D, 810507D	3M General Office	LB-K100-0415-4	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3M Brand Contact Adhesive 10 Neutral/Brushable (EC- 2166) (Inactive)	3M Canada Inc.	CS-0406-1444-1	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3M Brand Ten Bond Contact Cement	3M Canada Inc.	CS-0406-2181-8	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3M Dynatron Blue Cream Hardener 4B, 8, 309, 30753, 9307G	3M General Office	LB-K100-0514-3	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3M Dynatron Fiberglass Resin, P.N. 692, 694	3M General Office	70-0080-0039-7	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3M Dynatron Putty-Cote 592, 592T, 593	3M General Office	LB-K100-0587-6	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3M Perfect-It Foam Polishing Pad Glaze - Light PN 38109, 39109, 39109S, 39819	3M Canada Inc.	38109	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3M Scotch-Grip High Performance Contact Adhesive 1357	3M Canada Inc.	62-1357-2630-5	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	3M Super Duty Rubbing Compound PN 5954 5955 5956 39004	3M Canada Inc.	5954	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	404 Quick Set Instant Adhesive	Henkel Loctite Canada Inc.	135465	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	44 Core SN96.5AG3.0CU0.5	Litton Kester Solder		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	44 Resin	Litton Kester Solder	44	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	470 Featherspray	Sluyter Company Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	476 Spray Adhesive	Sluyter Company Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	567 Thread Sealant Pst Pipe Sealant with Ptfе	Henkel Loctite Canada Inc.	234460	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	660 Quick Metal Retaining Compound	Henkel Loctite Canada Inc.	135527	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	68034 - Crown Silicone Lubricant	Aervoe Industries Canada	85-68034-3 (80646X)	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	70% Isopropyl Alcohol	Canadian Custom Packaging		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	7007 & 7011 Stamp Ink	TCI Stamps		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	A-125 (Liquid)	Ecolab Ltd		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Accel Tb Wipes	Virox Technologies		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Acrysol Body Solvent 16 Oz NW	Lawson Products Inc	P60170	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Adora Lotion Hand Soap	Avmor Ltd.	1213	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Aervoe Survey Marking Paint - Aerosol (English)	Aervoe Industries Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Air 1 Diesel Exhaust Fluid	Recochem Inc.	55-124AIRH52	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Air Tool Oil	Kleen-Flo Tumbler Industries Ltd.	4168	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Ajax Cleanser	Colgate Palmolive Canada		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Aqua-Prep Low Voc Surface Cleaner	Sherwin-Williams Automotive Finishes	SC155	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Arcair Air Carbon Arc Electrodes, Tweco Heat Shrink Carbon	Tweco/ArcairProducts Inc.	21-xx3-003	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Arctec 222 (AC-DC)	Arctec Alloys Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Armour Shield B Component	Cloverdale Paint Inc.	83ARMB	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Aromx 60	Swish Maintenance Ltd.	8960	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Autorf Sspr 6Pk Farm Yellow (John Deere) (249275)	Rust Oleum Corporation	249275	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	AW 4715 Rockguard Black	Pro-Form Products Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	BD1077 Red Grease	Barnes Group Inc.	A-6010 0718-63	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	BD1107 7-77 LUBRICANT-20 OZ	American Jetway	0718-28	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Bio-Circle L	J. Walter Company Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Biowash 2000	Prairie West Industrial Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Black Semi Gloss Durethane	PPG Automotive Refinish	DU9645	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Black Sure Foot	Davis Frost, Inc.	LX-00097	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Bleach 5.0% -7.9%	Lavo Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Blue Marvel 2000	Zep Manufacturing Company of Canada	G244	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Brake & Parts Cleaner 408gr - 890.9107	Würth Canada Limitée		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Brake Cleaner Refilo 20L	Würth Canada Limitée	890108720	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Brake Lining - AF / 557	Fras-Le S.A.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Butcher's Percept RTU Wipes	Virox Technologies		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Calclean-Canada	Nu-Calgon Wholesalers Inc.	4820	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Canadian Hi- Performance Brake Parts Cleaner	Technical Chemical Company	2416F	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Carbon Steel Welding Wire	National Standard Company		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Castrol Transynd	Castrol Canada Inc.	455936-US03 US65	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	CC640 Series	Hewlett Packard Co.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Cdg Wheel Spray - 893.1056 500MI	Würth Canada Limitée	893.1056	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Centari R Acrylic Enamel Tints and Miscellaneous Factory Packaged Colors	Dupont Performance Coatings		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Circuitworks Conductive Epoxy - Part A (Adhesive)	ITW Chemtronics Inc.	CW2400	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Circuitworks Conductive Epoxy - Part B (Hardener)	ITW Chemtronics Inc.	CW2400	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Circuitworks Rubber Keypad Repair Kit - Part B (Curing Agent)	ITW Chemtronics Inc.	CW2605 (Part B)	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Cleaner 33	Sluyter Company Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	ClovaGuard HB Polyamide Activa	Cloverdale Paint Inc.	83150B	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Clovaguard Hb Polyamide Epoxy	Cloverdale Paint Inc.	83150A	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	CMT 22A	Brake Pro Ltd		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	CMT 22A1	Brake Pro Ltd		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Compressor Oil- Solest 35	thermo king	985-887-2200	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Concept Mixing Bases	PPG Automotive Refinish	DMC-1 (0808-T0)	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Contact OL Spray 200ml - 893.60	A. Würth GmbH & Co. KG		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Continuum Aec3139	GE Betz CANADA		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Conv. Epocyl Primer Black	PPG Automotive Refinish	F3997	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Conventional Epoxy Primer	PPG Automotive Refinish	F3995	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Conventional Epoxy Primer Hardener	PPG Automotive Refinish	F3996	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Corashield Antichip Coating	PPG Automotive Refinish	P7972	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Correction Fluid	Dixon Ticonderoga Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Correction pen (Multi- Purpose)	Pentel Co. Ltd	ZL31-W, ZLC31-W, ZL33-W	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Corrshield MD4102	Ge Betz		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Cream Hardener	ITW Evercoat	100340	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Crown 8034 General Purpose Silicone Lubricant	Aerovoe Industries Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Cupran Special	Evonik Stockhausen Inc	SK-127B	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dap 73473 Silicone Sealant Clear CDN	Dow Corning Corporation / Styron LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dar Fast Reducer	PPG Automotive Refinish	DTR601	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	DAR Reducer	PPG Automotive Refinish	DTR602WC	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Darina XL EP 2	Shell Canada Products Ltd.	504-554	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Deb Azure Foam Wash	Deb Canada	AZU1L-CAN, AZU2LT-CAN	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Debonaire Foaming Skin Cleanser (Pink). (Unscented)	DEB Canada Inc.& SBS Products	SF 032A	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Depend (R) Activator 7387 Aerosol	Henkel Loctite Corporation	21088	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Depend Activator 7075	Henkel Loctite Canada Inc.	22671	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dettol Antiseptic Disinfectant (Liquid) - Canadian	Reckitt & Benckiser	930666	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Diamond Glacier Supreme	Tiger Calcium Services Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Di-Electric Grease (Aerosol)	CRC Industries	03082	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Diesel Exhaust Fluid	Brenntag Canada Inc.	00070093	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Diesel Exhaust Fluid 32	Cummins Filtration / Fleetguard Inc.	CC2584	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dimension 4.6 Voc Sealer, Gray	Sherwin-Williams Automotive Finishes	DS691	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Door Latch Grease and Silicone Brake Caliper Grease and Dielectric Compound	Ford Canada	178365	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dow Brake Fluid 310	DOW CIG North America		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dow Corning 4 Electrical Insulating Compound	Dow Corning Corporation / Styron LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dow Corning 732 Multi- Purpose Sealant, Aluminum	Dow Corning Corporation / Styron LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dow Corning 732 Multi- Purpose Sealant, Black	Dow Corning Corporation / Styron LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Enamel Paint, Gloss Black (OSHA)	Sherwin Williams	DA1600	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Enamel Paint, Gloss White (OSHA White)	Sherwin Williams	DA1670	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Enamel Paint, Leaf Green	Sherwin Williams	DA1630	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Enamel Paint, Machinery Gray	Sherwin Williams	DA1612	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Enamel Paint, Royal Blue	Sherwin Williams	DA1620	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Engine Enamel With Ceramic, Ford Red	Sherwin Williams	DE1605	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Lacquer Paint, Flat Black	Sherwin Williams	DAL1607	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Lacquer Paint, Gloss Black	Sherwin Williams	DAL1677	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Primer Sealer, Gray	Sherwin Williams	DAP1699	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Dupli-Color Primer Surfacer, Gray Hot Rod	Sherwin Williams	DAP1692	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Duron Single Grade Oils Sae Viscosity Grades 10W, 20, 30, 40, 50	Petro-Canada	420-054	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Duster	ITW Chemtronics Inc.	ES1617C	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Enamel 1-Gl 2Pk 7400 Yel (Old Caterpllr)	Rust Oleum Corporation	7448402	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Envirowest Gunwash	Univar Canada Ltd.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	EPOXY HARDENER	PPG Industries	DP401LV	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Epoxy Primer Catalyst	PPG Automotive Refinish	DP401LF	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Epoxy Primer Gray	PPG Automotive Refinish	F3993	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Epoxy Primer White (Non Chrome)	PPG Automotive Refinish	DP48LF	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Etching Filler	Sherwin-Williams Automotive Finishes	E2G980	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	European Auto Coat	Transtar Autobody Technologies	1273	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Everglass	Fibre Glass-Evercoat Co. Inc.	100622	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Exempt Solvent	PPG Automotive Refinish	F3385	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Exempt Solvent - Medium	PPG Automotive Refinish	F3390	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Extend Rust Treatment	Henkel Loctite Canada Inc.	234981	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Extra Oil Heavy Duty Floor Sweeping Compound	Prairie West Industrial Ltd	14808-60-7	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Extra Slow Activator	PPG Automotive Refinish	ESX540	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	eyesaline	Fendall, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	F-900 Torque Seal	Organic Products Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Fast Compliant Thinner	PPG Automotive Refinish	D8764	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Fast Dry Additive	PPG Automotive Refinish	F3400	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Fast Dry Surfacer	PPG Automotive Refinish	F3975	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Fast Reducer	PPG Automotive Refinish	F3311	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Film Forming Lubricant 380	Balmar, LLC	101G 380	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Fire Extinguisher ABC Multipurpose Dry Chemical	Pyro Chem, Inc.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Fluid Film Aerosol (AS)	Eureka Chemical Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Foam San	Zep Manufacturing Company of Canada	0880	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Form-a-Thread 4.8ml Syr Act	Henkel Loctite Canada Inc.	28654_390222	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Gasket Eliminator 518 Sealant	Henkel Loctite Canada Inc.	51831	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Gasoline, Unleaded	Petro-Canada		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Gear, Chain & Cable Lubricant	Henkel Loctite Corporation	81251	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Glance Foaming Glass & Multi-Surface Cleaner	Johnson Diversey	04553	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Glass Impact Beads	Potters Industries Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Gojo Original Formula Hand Cleaner	GOJO Industries, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Goldex Institutional Bleach	RW Packaging Ltd.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Graffiti Wipes	Share Corporation Canada Chemical Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Granular Absorbent	Oil-Dri Corporation of America		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Green Link Bowl Cleaner	Zep Manufacturing Company of Canada	P848	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Heat Shield	Auto-Chem Inc.	4680 / 4681	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Heavy Duty Diesel Antifreeze (SCA) Pure	Nemco Resources	0701	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	HHS Lube 500ml	Würth Canada Limitée	08931065	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	HHS Red Lube 500ML	Würth Canada Limitée	089310651	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	High Build Undercoat 550G. Paintable - 890.9072	Würth Canada Limitée	890.9072	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	High Solids Hardener - Fast	PPG Automotive Refinish	F3260	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	HP Color LaserJet CB381A Cyan Print Cartridge	Hewlett Packard Company		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Hp Color Laserjet Cb382A Yellow Print Cartridge	Hewlett Packard Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Hp Color Laserjet Cb383A Magenta Print Cartridge	Hewlett Packard Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	HP Color Laserjet CB384A Imaging Drum Cartridge	Hewlett Packard Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	HP Color LaserJet CB385A Imaging Drum Cartridge	Hewlett Packard Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	HP Color LaserJet CB386A Imaging Drum Cartridge	Hewlett Packard Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	HP Color LaserJet CB387A Imaging Drum Cartridge	Hewlett Packard Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Hp Color Laserjet Cb390A Black Print Cartridge	Hewlett Packard Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	HP LaserJet 92291A-X Print Cartridge	Hewlett Packard Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Hs Polyurethane Clear	PPG Automotive Refinish	DCU2001 (0808)	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Hydrex Aw 22, 32, 46, 68, 80, 100	Petro-Canada	490-138	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	HYDREX TM MV ARCTIC 15	Petro Canada Lubricants		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Hydrogen Peroxide Solution - 10 Volume 3%	RW Packaging Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Ice Fighter Plus	Zep Manufacturing Company of Canada	5813	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	International Compound Irmco #2			Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Jet Clean F.S. EX JT #1	Zep Manufacturing Company of Canada	P241	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Johnsen's Canadian Hi- Performance Brake Parts Cleaner 14 OZ	Technical Chemical Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Kem-Transport Synthetic Enamel Reducer, Fast	Sherwin-Williams Automotive Finishes	R4K183	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Kem-Transport Zinc Chromate Primer	Sherwin-Williams Automotive Finishes	E2Y36	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Kitty Hair	Fibre Glass-Evercoat Co. Inc.	100857	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Klarifiant	Johnson Diversey		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Kolor Kut Water Finding Paste	Kolor Kut Products Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Kopr-Kote Thermal Grade	Jet Lube of Canada Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Krylon High Heat & Radiator Paint, Aluminum	Sherwin Williams	1402	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Laura Line Sanitizing Gel	J. R. Phoenix Skin Care Prod./Laura Line Skin Care		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lavo-6 Bleach	Lavo		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lead Acid Battery	NorthStar Battery Co. LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Leak Seeker #14-755	31 Incorporated		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lemon Kleen	Prairie West Industrial Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lepage LCP 506 Contact Cement Premium Grade	Henkel Consumer Adhesives		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Liberty No Scrub Stripper	Swish Maintenance Ltd.	4007	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lift-Away	Johnson Diversey	2405205	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Liquid Hardener (93510)	US Chemical & Plastic Cie	765-3032	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Liquid Paper Correction Fluid - Pen and Ink	NewellRubbermaid		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lite Weight	Fibre Glass-Evercoat Co. Inc.	100156	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite 222Ms Threadlocker Low Strength	Henkel Loctite Canada Inc.	22221	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite 242 Threadlocker	Henkel Loctite Canada Inc.	135355	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite 262 Threadlocker	Henkel Loctite Canada Inc.	26231	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite 290 Threadlocker	Henkel Loctite Canada Inc.	29031	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite 567 PST Pipe Sealant with PTFE Thread Sealant Part No. 56747	Henkel Loctite Canada Inc.	56747	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite 587 Blue High Performance RTV Silicone Gasket Maker	Henkel Loctite Corporation	58775	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite 609 Retaining Compound Press Fit	Henkel Loctite Canada Inc.	135512	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite 680 Retaining Compound Slip Fit	Henkel Loctite Canada Inc.	68035	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite 7649 Primer	Henkel Loctite Canada Inc.	209715	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite Fixmaster Pox Pak	Henkel Loctite Canada Inc.	702092	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite Instant Gasket	Henkel Loctite Corporation	IDH No. 270636	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Loctite Silver Grade Anti-Seize	Henkel Loctite Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Low Voc Hardener	PPG Automotive Refinish	DFX11	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	LPS 1 Premium Lubricant	LPS Laboratories Inc.	00105	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	LPS 3 Premier Rust Inhibitor Aerosol	LPS Laboratories Inc.	00316	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lps F-104° Solvent/Degreaser	LPS Laboratories Inc.	04905	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lps Noflash Nu Electro Contact Cleaner	LPS Laboratories Inc.	04015	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	LPS Precision Clean Concentrate	LPS Laboratories Inc.	02701	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lubriplate 105	Lubriplate Lubricants Co		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Marvelube EP 9F	Esso Petroleum Canada	8370	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Masters Metallic Compound	GF Thompson Co. Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Maximum 5W30, 10W30, 10W40	Petro-Canada	410-335	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Mc30BI Marrin - Lotion Hand Soap	Marrin Brothers Limited		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Medium Solids Hardener	PPG Automotive Refinish	F3270	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Mercon SP Automatic Transmission Fluid	Ford Canada	175325	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Micromist Fresh Scent	Zep Manufacturing Company of Canada	0243	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Mighty Kleen	Prairie West Industrial Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Mineral Spirits	Univar Canada Ltd		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Miracle Disinfectant Spray 'N Wipe	Swish Maintenance Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	MOBIL DELVAC SYNTHETIC ATF	Imperial Oil Products Division	20026	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	MOBIL VACTRA OIL NO. 2 (FEBIS K 68)	Imperial Oil Products Division	8303	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Molykote 33 Extreme Low Temp. Bearing Grease, Medium	Dow Corning Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Moovit (Aerosol)	Lloyds Laboratories Inc.	11008	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Nemco Diesel SCA Antifreeze	Nemco Resources		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Nemco Methanol	Nemco Resources		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Nemco Rad Antifreeze & Summer Coolant Nemco Universal Antifreeze	Nemco Resources		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Nemco Windshield Washer Fluid	Nemco Resources		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Never-Seez Heavy Metal Free Product Series	Bostik Findley Inc.	V682040	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Never-Seez Regular Grade Cmpd.	Bostik Findley Inc.	V048740	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Nev-SZ Reg NSA16 12.5oz Aero	Bostik Findley Inc.	45987	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Nitrogen Dioxide 0.001- 0.022%, Carbon Monoxide 0.0005-1.0%, Methane 0.0-2.5%, Oxygen 0.0-23.5%	Air Liquide	10058036, 10058034, 10058171, 10058172, 10150597,	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Non-Fluorescent Colors 201 Red	Aervoe Industries Inc	201	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	One Shot Intake System Cleaner	Kent Automotive		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	One Step Hand Sanitizer	Belvedere International Incorporated		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Oxivir Plus Disinfectant Cleaner Concentrate (Can)	Diversey/Sealed Air	100859586	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Oxivir Plus Disinfectant Cleaner Concentrate (CAN) (1:40 Dilution)	Diversey, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	P-388 (BN-3)	Fricciones Tecnicas y Maquinados S.A. de C. V.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	P-397 (B N6)	Fricciones Tecnicas y Maquinados S.A. de C. V.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	P-417 (BN-4)	Fricciones Tecnicas y Maquinados S.A. de C. V.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Paradichlorobenzene	Recochem Inc.	21-128	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Pc Quick Grid Rear Defrost 1.4MI	Permatex Canada	81532	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Peak Global Lifetime Concentrate Antifreeze & Coolant	Old World Industries LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	PEAK LONG LIFE CONCENTRATE ANTIFREEZE & COOLANT	Old World Industries LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Pelletized Radiator Stop Leak	Rislone		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	PENCOOL 200055	The Penray Companies, Inc. (Canada)	200055	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Personal Safety Equipment Cleaning Pads	Allegro Industries	1001	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Petro-Canada Atf D3M	Petro-Canada		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Petrosol 3139	Petro-Canada	S3139	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Pf 206 Brush Able Rubber Based Seam Sealer (Off-White)	Pro-Form Products Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	PF 500 Non-Paintable Rubberized Undercoat	Pro-Form Products Ltd.	PF 500	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	PF 532 Pro Guard Rubberized Gravlguard	Pro-Form Products Ltd.	PF 532	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	PF 701 Non-Paintable Rubberized Undercoat	Pro-Form Products Ltd.	PF 701	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Pigmented Chrome Etch Primer	PPG Automotive Refinish	F3960	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Pigmented Chrome Etch Primer Harden	PPG Automotive Refinish	F3961	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Plastic Adhesion Promoter (Aerosol), Clear	Sherwin-Williams Automotive Finishes	UPO-7226A	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	PolarZone RV Antifreeze	Nemco Resources	0680	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Power Cool 3149 Antifreeze & Coolant (Silicate Free)	Old World Industries LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	pr88 – The Wash-off Hand Protection	Ursula Rath GmbH		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Prairie Extract	Prairie West Industrial Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Prairie West Industrial Ltd. Heavy Duty Floor Sweeping Compound	Prairie West Industrial Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Precision XI 3 Moly Ep1, Ep2	Petro-Canada	650-137	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Precision XI Emb	Petro-Canada	650-134	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Precision XI Ep00	Petro-Canada	650-131	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Precision XI Ep1, Ep2	Petro-Canada	650-132	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Preptech Epoxy Penetrating Sealer Activator	Cloverdale Paint Inc.	83020B	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Prestone Command Heavy Duty Antifreeze/Coolant	Prestone R & D Laboratory	AFC10000/F	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Propane	Bernz-O-matic		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Protective Cream 311	West Penetone Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Qd Contact Cleaner (Aerosol)	CRC Industries	72130	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Quick Grid TM Repair Kit .05FO CG	Permatex Canada	15067	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Radiator Stop Leak and Conditioner	Bar's Products	C16 / R6	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Reducer	PPG Automotive Refinish	DT860	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Reducer - Medium	Refinish Products	F3321	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Refrigerant R-134a	Ford Canada	132532	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Replenisher Black	Xerox Corporation	006R01046, 006R01047, 006R01186, 006R01146, 006R01	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Resinoid Bonded Abrasives	United Abrasives, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Ridgid Nuclear Thread Cutting Oil	Ridge Tool Company	41565	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Rohper Lspr 6Pk Gloss High Tmp Aluminum	Rust Oleum Corporation	V2116838	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Rost Off 300ml	Würth Canada Limitée	890.2	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Rost Off Ice - 893.240	A. Würth GmbH & Co. KG	893.240	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Sbs 33 Waterless Skin Cleanser with Patented Scrubbers	Deb USA, Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	SC-200	Spartan Chemical Co., Inc.	2200	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Set 45	BASF Corporation	30368387	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Shell Bronze Gasoline	Shell Canada Products Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Sika Cleaner-205	Sika Canada Inc.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Sikaflex-221	Sika Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Sikaflex-222 UV	Sika Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Sikaflex-252	Sika Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Silicone Conformal Coating	MG Chemicals Ltd.	422-55	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Single Stage High Solids Polyurethane Enamel	PPG Industries	FDGH-1	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Single Stage High Solids Polyurethane Enamel	PPG Industries	FDGH-3	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Single Stage Hs Polyurethane Enamel	PPG Automotive Refinish	FDGH-1 (0808)	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Single Stage HS Polyurethane Enamel	PPG Automotive Refinish	FDGH-3 (0808-T0)	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Slow Activator	PPG Automotive Refinish	ESX520	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Sodium Bicarbonate, Solid	Brenntag Canada Inc.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Solder paste CMC no. 50 or no. 504	Canada Metal (Pacific) Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	SOS	State Industrial Products		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	SP-30	Kester, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	SpeedBonder 325 Structural Adhesive	Henkel Loctite Canada Inc.	32530	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Stephanie Janes Heavy Duty Floor Sweeping Compound	ABT Products Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Sterling Wunrub 83	Johnson Diversey	2050020	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Stick-Kut - Lubricating Stick Wax	Relton Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Stokolan Classsic	Deb-Stoko USA LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	STP Oil Treatment	The Armor All / STP Products Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Stream	Johnson Diversey Canada		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Suds	Prairie West Industrial Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Super Cold 134	MG Chemicals Ltd.	403A-285G	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Super Duster 134 and Super Duster 134 Plus	MG Chemicals Ltd.	402A-140G	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Superior Lithium Polymer Battery	Kokam Co., Ltd.	SLPB	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Supreme 5W-20, 5W- 30, 10W-30, 10W-40, 20W-50 Motor Oil	Petro-Canada	410-341	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Swish Clean & Green Toilet Bowl Cleaner	Swish Maintenance Ltd.	65319	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Swish Clean-It Lotion Soap	Swish Maintenance Ltd.	8027	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Synthite ER-41Air Drying Varnish	John C. Dolph Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Tech-Chek Concentrate	Tech International		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	TECTYL 518	DAUBERT CHEMICAL COMPANY		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Tellus 46	Shell Canada Products Ltd.	407-163	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	TERJ KF#3	Dubois Chemicals, Inc	3600043, 3600170	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Thinner - Slow	PPG Automotive Refinish	F3340	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Thinner Lacquer 94 ABS (0629)	Brenntag Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Travabon	Stockhausen Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Traxon 80W-90, 85W-140	Petro-Canada	470-501	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Tun-O-Wash Cleaner (Formerly CFC Free Tun-O-Wash)	ITW Chemtronics Inc.	ES2400C	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	ULS Diesel B5	Shell Canada Products Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	ULS Diesel B5 Dye	Shell Canada Products Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Ultra Coolant	Ingersoll Rand	38459582	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Used OIL	GFL environmental west corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Very Slow Activator	PPG Automotive Refinish	ESX530	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	WATER BASED RUST INHIBITOR	CORROSION CONTROL COATINGS LTD.	C1800WB CAVITY WAX CLEAR	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Wave Urinal Deodorizer	Fresh Products Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	WD-40 Bulk Liquid	WD 40 Products Canada Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Weller WB1 2Oz. - Butane Fuel	Apex Tool Group		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Windex Powerized Glass Cleaner (RTU)	Johnson Diversey	90122	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	WorkCentre 6400 Toner	Xerox Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Workcentre 7525/7530/7535/7545/7 556 Toner	Xerox Corporation	6R1509	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Wynn's Heavy Duty Universal Cooling System Flush	Wynn's	A4701	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	XALT Superior Lithium Polymer Battery	Dow Kokam LLC	4343	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Xk2	Zep Manufacturing Company of Canada	6745	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Yukon Gold	Tiger Calcium Services Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Zep Smoke Screen	Zep Manufacturing Company	0187	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Zep Spirit II Ready-To- Use Detergent Disinfectant	Zep Manufacturing Company of Canada	0679	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lithium Ion Secondary Battery	Mitsubishi Heavy Industries Ltd.	P140	In Progress	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Aircraft Paint Stripper	US Chemical & Plastic Cie	495-1	Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Argon (Gas/Liquid)	Air Liquide Canada Inc		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Blueshield 6/ Blueshield 7/ Blueshield 8/ Blueshield 21/ Aflux	Air Liquide Canada Inc		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Cat Cement	Chemtool Inc.	Carterpillar	Deactivated	

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	DuPont SUVA 134a Refrigerant	DuPont-Mitsui Fluorochemicals Co. Ltd.	130000000349	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Envirotac 2	Enviromental Products & Applications		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Freylube Prema	Freylube Division	SL-078	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	G.b.p. Reducer Activator	Sherwin-Williams Automotive Finishes	R7K981	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Kubota Premium UDT	Shell Canada Products Ltd.		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	KUBOTA SAE 10W-30 ENGINE OIL	Ashland	KU10205	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Lubriplate No. 105	Fiske Brothers Refining Co./ Lubriplate	21421	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Shopworks Bioclean	Rochester Midland Ltd.		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Stokolan	Stockhausen Inc.		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	SUVA 134a (Auto)	Dupont	811972	Deactivated

Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	SUVA 134a refrigerant	E.I. du Pont Canada Company	130000000349	Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Terj Kf#3	Johnson Diversey Canada		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Stores - Transit (CWIN90)	Zep Spirit li Ready-To- Use Detergent Disinfectant	Zep Manufacturing Company		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Acrysol Body Solvent 16 Oz NW	Lawson Products Inc	P60170	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Air Brake Antifreeze	Nemco Resources	0780	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Ajax Cleansing Powder- Regular	Colgate-Palmolive Company	200000017779	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Aromx 60	Swish Maintenance Ltd.	8960	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Autorf Sspr 6Pk Farm Yellow (John Deere) (249275)	Rust Oleum Corporation	249275	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	BD7-77 Plus Penetrant	Barnes Group Inc.	BD1108	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Bio-Circle L	J. Walter Company Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Blue Marvel 2000	Zep Manufacturing Company of Canada	G244	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Catchmaster Brand Products (Insect and Rodent Glue Traps and Monitors)	Atlantic Paste & Glue Co. Inc		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Citra Solve Aerosol	Share Corporation Canada Chemical Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Classique Gentle Lotion Unitip	Avmor Ltd.	1213	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	D&E (All)	Irving Blending & Packaging		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	D-15 Insect Repellent	Quixtar Canada Corporation	602643	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Diesel Exhaust Fluid	Brenntag Canada Inc.	00070093	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Diesel Fuel	Petro-Canada	W104	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Dry All	Origination		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Dupli-Color Acrylic Enamel Aerosol Pain, Gloss White (OSHA White)	Dupli-Color Products	DA1670	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Dupli-Color Acrylic Lacquer Aerosol Paint, Flat Black	Dupli-Color Products	DAL1607	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	duron E 15W-40	Petro Canada		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Extra Oil Heavy Duty Floor Sweeping Compound	Prairie West Industrial Ltd	14808-60-7	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Floor-Dry, Solid-a-Sorb, MP Grades	EP Minerals, LLC		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Fluid Film Aerosol (AS)	Eureka Chemical Company		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Gasoline, Unleaded	Petro-Canada		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Glance Foaming Glass & Multi-Surface Cleaner	Diversey Lever		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Graffiti & Spray Paint Remover	ITW Dymon	07816	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Graffiti wipes	Total Solutions	1447	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Green Link Bowl Cleaner	Zep Manufacturing Company of Canada	P848	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Hi-Liter Markers	Avery Dennison Stationery		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Jet Clean	Simoniz USA, Inc.	J0395	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Jet Clean F.S. EX JT #1	Zep Manufacturing Company of Canada	P241	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Johnsens Brake Parts Cleaner	Technical Chemical Company	2420	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Kolor Kut Modified Water Finding Paste (M- 3)	Kolor Kut Products Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	KRYLON Industrial QUIK-MARK Solvent- Based Inverted Marking Paint (APWA), Blue	Sherwin Williams	03621	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Lavo-6 Bleach	Lavo		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Lock De-Icer w/ Teflon	K-G Spray-Pak INC	03405-1132, 38-1132-2	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Lps Noflash Nu Electro Contact Cleaner	LPS Laboratories Inc.	04015	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Maxforce Roach Killer Bait Gel Syringe	Bayer Crop Science Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Mercon SP Automatic Transmission Fluid	Ford Canada	175325	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Moovit (Aerosol)	Lloyds Laboratories Inc.	11008	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Og 73	Share Corporation Canada Chemical Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Prairie Extract	Prairie West Industrial Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Pyro-Chem ABC	Tyco Fire Protection Products	2001-2-012 ANa	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Qd Contact Cleaner (Aerosol)	CRC Industries	72130	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Quato 44	Swish Maintenance Ltd.	9807	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Red Devil Degreaser	ECP Incorporated		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Reducer	PPG Automotive Refinish	DT860	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	SC 400	J. Walter Inc.	53-G 513	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Sharpie Pen	Sanford, L.P.	071408	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Smoke Screen Aerosol	Zep Manufacturing Company of Canada	0187	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Stokolan Classic Cream	Deb USA, Inc.	33869-US, 33886-US, PN10087250-US	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	STP08001 , STP08002 , STP15101 Screen Cleaning Wipes, Tub	Kleinmann GmbH	775488 (model 16982)	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Super Duster 134 and Super Duster 134 Plus	MG Chemicals Ltd.	402A-140G	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Super Lube 11 OZ Dri- Film Lubricant with Syncolon PTFE	Synco Chemical Corporation	11016	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Trapper Rat Glue, Mouse Glue	Bell Laboratories Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Travabon	Stockhausen Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Trisodium Phosphate	Cleartech Industries Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	TSP General Purpose Cleaner	Dap Inc.	070798630017	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Uvex Clear Lens Cleaner	Honeywell Safety Products	S461	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Uvex Clear Lens Cleaning Towelette	Honeywell Safety Products	S468	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Vanish Snow & Ice Melter	HLF Diversified Inc.		Matched	English Canada WHMIS



SECTION I: PRODUCT INFORMATION

PRODUCT: **Sika® Aktivator-205 (Old Sika® Cleaner-205)** REVISION DATE: November 20, 2014

USAGE: CLEANING SOLUTION

MANUFACTURER/SUPPLIER: SIKA CANADA INC.
601, avenue Delmar
Pointe Claire, QC
H9R 4A9

EMERGENCY TELEPHONE NUMBER: CANUTEC (collect) (613) 996-6666

TDG CLASSIFICATION: Isopropanol Solution WHMIS Classification: B2, D2B
UN NUMBER: 1219 Class: 3
Packaging Group: II

SECTION II: HAZARDOUS INGREDIENTS

Hazardous ingredients	%	T.L.V.	# CAS	LD ₅₀ (mg/kg) (route, species)	LC ₅₀ (species, route)
ISOPROPYL ALCOHOL	60-100	ACGIH 400 ppm (TWA) 500 ppm (STEL)	67-63-0	5 045 (oral, rat)	66 100mg/m ³ /4h (rat)

SECTION III: PHYSICAL CHARACTERISTICS

Physical State:	Liquid (isopropanol)	Boiling Point:	82°C (isopropanol)
Appearance and Odor:	Clear and colorless liquid, rubbing alcohol odor	Freezing Point:	Not Established
Odor Threshold:	Not Established	Density:	0.8 g/ml
Evaporation Rate:	2.83 (isopropanol)	Water Solubility:	Miscible in water (isopropanol)
Vapor Density:	2,1 (isopropanol)	pH:	No information found (isopropanol)
Vapor Pressure:	44 @ 25°C (isopropanol)	% volatile:	100 (isopropanol)
		Water/Oil Distribution:	Not Established



PRODUCT: **Sika® Aktivator-205 (Old Sika® Cleaner-205)**

SECTION IV: FIRE AND EXPLOSION HAZARDS

Flammability:	Yes	TDG inflammability Class:	3 (isopropanol)
If Yes, under what conditions:	Flame, spark	Flammable upper limits (% vol.):	12.7 (isopropanol)
		Flammable lower limits (% vol.):	2.0 (isopropanol)
		Flash Point (method used):	12°C (isopropanol)
Extinguishing methods:	Foam, dry chemical products, CO ₂ , water for large flames.	Auto-ignition temperature:	399°C (isopropanol)
		Dangerous Combustion Products:	CO (isopropanol)
Special Methods:	Firefighters must wear complete protective clothing with NIOSH respiratory equipment.	Protect from mechanical impact:	No
		Protect from static discharge:	No

SECTION V: REACTIVITY DATA

Chemical stability:	Yes	Dangerous decomposition products:	CO.
If not, under what conditions:			
Incompatibility with other material:	Yes	Polymerization Risks:	No
If Yes, which ones:	Acid, strong oxidizer, amine, aluminum at high temperature.		

Incompatibility with pure Isopropanol:
strong oxidizers, acetaldehyde, acids, chlorine, ethylene oxide, hydrogen-palladium combination, hydrogen peroxide-sulfuric acid combination, potassium tert-butoxide, hypochlorous acid, isocyanates, nitroform, phosgene, aluminum, oleum and perchloric acid.



PRODUCT: Sika® Aktivator-205 (Old Sika® Cleaner-205)

SECTION VI: TOXIC PROPERTIES

ROUTE OF ENTRY / CONTACT

Eyes: Irritating, splashes cause severe irritation, possible corneal burns and eye damage.

Skin: Irritating. Contact may result in dermatitis. May cause skimming of skin's fat.

Inhalation: Vapor or mist from this product may cause irritation.

Ingestion: May cause nausea, vomiting, fainting, diarrhea, lung damage, gastro-intestinal system disorder, constipation. The single lethal dose for a human adult = 250 ml

Over exposure may cause breathing difficulties, headaches, nausea, vomiting, lack of coordination, fainting. May aggravate respiratory, skin, eye, and lung problems.

Aggravation of pre-existing condition, skin disorder, impaired liver kidney, or pulmonary function may be more susceptible to the effects of this agent.

Carcinogenicity: Not established

Toxic effects on reproduction: Not established

Teratogenicity: Not established

Mutagenicity: Not established

Product with synergistic effects: Not established

An acute or chronic exposure will increase the toxic effects mentioned in this section and may aggravate respiratory problems.



PRODUCT: Sika® Aktivator-205 (Old Sika® Cleaner-205)

SECTION VII: PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves: Use chemical resistant gloves.

Respiratory equipment: NIOSH approved mask with organic vapor cartridge.

Eyes: Full-face mask and goggles

Shoes: Leather

Clothing: Rubber Apron and lab coat

Other: Eye wash station, shower

OTHERS

Ventilation: Sufficient ventilation required.

Procedure in case of leaks: Absorb with sand or other absorbent material.

Handling and Equipment methods: Avoid skin, eye and clothing contact

Warehouse Requirements: Keep all containers closed in a cool, dry and well ventilated area. Keep away from heat and open flame.

Special Shipping Instructions: See TDG class

Waste Disposal: Dispose of sand and rinse water according to municipal, provincial or federal laws for disposal of chemicals.



PRODUCT: Sika® Aktivator-205 (Old Sika® Cleaner-205)

SECTION VIII: FIRST AID

- Skin : Remove contaminated clothing and shoes.
Wash immediately with plenty of water.
Wash clothing before re-wearing.
Consult a physician if required.
- Eyes : Rinse eyes immediately with plenty of water for several minutes, while holding eyelids wide open, to ensure a proper wash.
See a physician if required.
- Inhalation : In the case of overexposure, evacuate to fresh air.
Consult a physician if required.
- Ingestion : Drink plenty of water. Do not induce vomiting.
Do not give anything by mouth to an unconscious person.
See a physician immediately.

SECTION IX: PREPARATION INFORMATION

Prepared By: R & D of Sika Canada Inc.
 Telephone #: (514) 697-2610
 Fax #: (514) 694-2792

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SECTION I: PRODUCT INFORMATION

PRODUCT: **Sikaflex®-252** REVISION DATE: February 24th, 2015

USAGE: ONE COMPONENT URETHANE BASED ADHESIVE / SEALANT

SUPPLIER: SIKA CANADA INC.
601, avenue Delmar
Pointe Claire, QC
H9R 4A9

EMERGENCY TELEPHONE NUMBER: CANUTEC (collect) (613) 996-6666

TDG CLASSIFICATION: Not Regulated WHMIS Classification: B3, D2A
UN NUMBER: Not Established Class: Not Applicable
Packaging Group: Not Applicable

SECTION II: HAZARDOUS INGREDIENTS

Hazardous ingredients	%	T.L.V.	# CAS	LD ₅₀ (mg/kg) (route, species)	LC ₅₀ (species, route)
XYLENE	1-5	ACGIH 100ppm (TWA) 150ppm (STEL)	1330-20-7	4300 (oral, rat)	6350ppmh/4H
POLYOL AND ISOCYANATE PREPOLYMER	30-60	Not Established	Not Available	Not Established	Not Established
AMORPHOUS SILICA	5-10	Not Available	7631-86-9	Not Available	Not Available
METHYLENE BIS PHENYL ISOCYANATE	0,1-1,0	ACGIH 0,005 ppm	101-68-8	31 600 (oral, rat)	369mg/m ³ /4H (rat)

SECTION III: PHYSICAL CHARACTERISTICS

Physical State:	Paste	Boiling Point:	Not Established
Appearance and Odor:	Various color, odorless	Freezing Point:	Not Established
Odor Threshold:	Not Established	Density:	1,21 g/ml
Evaporation Rate:	Not Established	Water Solubility:	Not Established
Vapor Density:	Not Established	pH:	Not Established
Vapor Pressure:	Not Established	% volatile:	Not Established
		Water/Oil Distribution:	Not Established



PRODUCT: Sikaflex®-252

SECTION IV: FIRE AND EXPLOSION HAZARDS

Flammability:	No	TDG inflammability Class:	Not Regulated
If Yes, under what conditions:		Flammable upper limits (% vol.):	Not Established
Extinguishing methods:	Foam, dry chemical products, CO ₂ , water for large flames.	Flammable lower limits (% vol.):	Not Established
Special Methods:	Firefighters must wear complete protective clothing with respiratory equipment and they must protect any exposed skin. Heated isocyanates react strongly with water.	Flash Point (method used):	> 80°C (TCC)
		Auto-ignition temperature:	Not Established
		Dangerous Combustion Products:	Carbon oxides, Nitrogen oxide.
		Protect from mechanical impact:	No
		Protect from static discharge:	No

SECTION V: REACTIVITY DATA

Chemical stability:	Yes	Dangerous decomposition products:	Carbon oxides, Nitrogen oxide,
If not, under what conditions:			
Incompatibility with other material:	Yes	Polymerization Risks:	No
If Yes, which ones:	Acid, strong oxidizer, amine.		



PRODUCT: Sikaflex®-252

SECTION VI: TOXIC PROPERTIES

ROUTE OF ENTRY / CONTACT

Eyes: Irritating.

Skin: Irritating. Contact may result in dermatitis, allergic reactions, and sensitization.

Inhalation: Vapor or mist from this product may cause irritation.

Ingestion: May cause nausea, vomiting, fainting, diarrhea, lung damage, G.I. system disorder, constipation, ulcers.

Over exposure may cause breathing difficulties, sensitization, headaches, nausea, vomiting. May aggravate respiratory, skin, eye, lung problems and allergies.

If the product is applied according to the manufacturer, none of these symptoms should be encountered.

A person who is sensitized to isocyanate may have a reaction with a level of isocyanate well below the T.L.V.

Xylene is a central nervous system depressor and in rare cases, may cause a sensitization of the heart muscle causing arrhythmia.

Carcinogenicity: Not Established

Toxic effects on reproduction: Not Established

Teratogenicity: Xylene is classified as a development toxicant (Embryo toxin)

Mutagenicity: Not Established

Product with synergistic effects: Not Established

An acute or chronic exposure will increase the toxic effects mentioned in this section and may aggravate respiratory problems. An over exposure may cause death.



PRODUCT: Sikaflex®-252

SECTION VII: PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves: Use chemical resistant gloves.

Respiratory equipment: Use a NIOSH approved respirator if the TLV is exceeded.

Eyes: Full face mask or safety glasses

Shoes: Leather

Clothing: Rubber Apron

Other: Eye wash station, shower

OTHERS

Ventilation: Sufficient ventilation required

Procedure in case of leaks: Absorb with sand or other absorbent material.

Handling and Equipment methods: Avoid skin, eye and clothing contact

Warehouse Requirements: Keep all containers closed in a cool, dry and well ventilated area. Keep away from heat and open flame.

Special Shipping Instructions: See TDG class

Waste Disposal: Dispose of sand and rinse water according to municipal, provincial or federal laws for disposal of chemical.



PRODUCT: Sikaflex®-252

SECTION VIII: FIRST AID

- Skin : Remove contaminated clothing and shoes.
Wash immediately with plenty of water.
Wash clothing before re-wearing.
Consult a physician if required.
- Eyes : Rinse eyes immediately with plenty of water for several minutes, while holding eyelids wide open, to ensure a proper wash.
See a physician immediately.
- Inhalation : In the case of overexposure, evacuate to fresh air.
Consult a physician if required.
- Ingestion : Drink plenty of water. Do not induce vomiting.
Do not give anything by mouth to an unconscious person.
See a physician immediately.

SECTION IX: PREPARATION INFORMATION

Prepared By: R & D of Sika Canada Inc.
 Telephone #: (514) 697-2610
 Fax #: (514) 694-2792

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SAFETY DATA SHEET

Stokolan® intensive repair

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product name Stokolan® intensive repair

Product number 99036413,99036414,99036415,99036416,99042843,99036417,99036418,99036419,99036420

Internal identification M 961

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Hand Cream

1.3. Details of the supplier of the safety data sheet

Supplier Deb Ltd
Denby Hall Way
Denby
Derbyshire
DE5 8JZ
Main Tel. 01773 855100
Technical Tel 01773 855105
reach@deb.co.uk

1.4. Emergency telephone number

Emergency telephone National Poisons Information Service (UK) 0844 8920111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Classification (67/548/EEC or -
1999/45/EC)

2.2. Label elements

Hazard statements NC Not Classified

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Stokolan® intensive repair

INCI	<p> AQUA (WATER) VITIS VINIFERA SEED OIL CAPRYLIC/CAPRIC TRIGLYCERIDE DICAPRYLY ETHER POLYGLYCERYL-4 DIISOSTEARATE/POLYHYDROXYSTEARATE/SEBACATE ISOPROPYL PALMITATE UREA SORBITOL ZINC SULFATE GINKGO BILOBA LEAF EXTRACT ALLANTOIN TOCOPHEROL CERA ALBA GLYCERIN CHOLESTEROL CERAMIDE NP CERAMIDE NS CERAMIDE EOS CERAMIDE EOP CERAMIDE AP CAPROYL PHYTOSPHINGOSINE CAPROYL SPHINGOSINE HYDROGENATED CASTOR OIL CERA MICROCRISTALLINA/PARAFFIN CETYL ALCOHOL BEHENIC ACID CETEARETH-25 PHENOXYETHANOL BENZOIC ACID DEHYDROACETIC ACID ETHYLHEXYLGLYCERIN TRISODIUM DICARBOXYMETHYL ALANINATE ALCOHOL PROPYLENE GLYCOL ASCORBYL PALMITATE ASCORBIC ACID CITRIC ACID LACTIC ACID PARFUM (FRAGRANCE) </p>
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SECTION 4: First aid measures**4.1. Description of first aid measures**

Inhalation	Not relevant. Unlikely route of exposure as the product does not contain volatile substances.
Ingestion	Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
Skin contact	Not relevant.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.

Stokolan® intensive repair

Skin contact Does not decompose when used and stored as recommended.

Eye contact May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products No known hazardous decomposition products.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes.

6.2. Environmental precautions

Environmental precautions Not considered to be a significant hazard due to the small quantities used.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Flush away spillage with plenty of water. Avoid contamination of ponds or watercourses with washing down water. Absorb spillage with non-combustible, absorbent material. Do not discharge into drains or watercourses or onto the ground.

6.4. Reference to other sections

Reference to other sections For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in closed original container at temperatures between 0°C and 30°C.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

8.2. Exposure controls

Appropriate engineering controls Not relevant.

Stokolan® intensive repair

Eye/face protection	Not relevant.
Hygiene measures	Not relevant.
Respiratory protection	No specific recommendations.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
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9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None known.
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10.4. Conditions to avoid

Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
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10.5. Incompatible materials

Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended.
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SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Inhalation	No specific health hazards known.
Ingestion	May cause discomfort if swallowed.
Skin contact	Skin irritation should not occur when used as recommended.
Eye contact	May cause temporary eye irritation.

SECTION 12: Ecological Information

Ecotoxicity	Not regarded as dangerous for the environment.
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12.1. Toxicity

12.2. Persistence and degradability

Persistence and degradability	The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.
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Stokolan® intensive repair

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

Road transport notes Not classified.

Rail transport notes Not classified.

Sea transport notes Not classified.

Air transport notes Not classified.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

Stokolan® intensive repair**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU legislation This is a cosmetic product regulated by Regulation EC no 1223/2009 (as amended) and is thus exempt from the Safety Data Sheet requirements of Regulation EC no 453/2010. It is also exempt from the classification and labelling rules of the Classification, Labelling and Packaging Regulation (EC) No 1272/2008.

Water hazard classification WGK 1

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	Revision of information NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	18/06/2015
Revision	1
SDS number	21025

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Safety Data Sheet according to (EC) No 1907/2006

Page 1 of 5

TECHNOMELT KS 250 COOL known as Dorus KS 250 cool

sds no. : 364025
V002.2
Revision: 06.06.2012
printing date: 07.03.2014

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

TECHNOMELT KS 250 COOL known as Dorus KS 250 cool

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use:

Wood adhesives

1.3. Details of the supplier of the safety data sheet

Henkel AG & Co. KGaA
Henkelstr. 67
40589 Düsseldorf

Germany

Phone: +49 (049) 211 797 0
Fax-no.: +49 (049) 211 798 4008

ua-productsafety.uk@uk.henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

No data available.

Classification (DPD):

No classification required.

2.2. Label elements

Label elements (CLP):

No data available.

Label elements (DPD):

The product is not subject to classification according to the calculation methods of the "General Classification Guideline for Preparations of the EC" as issued in the last version.

2.3. Other hazards

None if used properly.

SECTION 3: Composition/information on ingredients

General chemical description:

Hotmelt adhesive

Base substances of preparation:

Ethylene-vinyl acetate copolymer

Declaration of the ingredients according to CLP (EC) No 1272/2008:

No data available.

Declaration of ingredients according to DPD (EC) No 1999/45:

Contains no dangerous substances exceeding the limits of the EU-Regulation

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Molten product. After skin contact cool down immediately with cold water. Do not remove adherent product. Seek medical advice.

Eye contact:

After contact with the hot melt: cool with water, seek medical attention.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

All common extinguishing agents are suitable.

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In case of fire toxic gases can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Allow to solidify.
Remove mechanically.
Dispose of contaminated material as waste according to Chapter 13.

6.4. Reference to other sections

See advice in chapter 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene measures:

Do not eat, drink or smoke while working.
Wash hands before work breaks and after finishing work.

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.
Store in sealed original container.

7.3. Specific end use(s)

Wood adhesives

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Suitable breathing mask when there is inadequate ventilation.

Hand protection:

Wear refractive gloves while working with the hot melt.

Eye protection:

Protective goggles

Skin protection:

Wear protective equipment.

Advices to personal protection equipment:

Use only personal protection that's CE-labelled according to the regulation no. 819 of 19 August 1994.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	solid material granulate amber
Odor	aromatic

pH	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	No data available / Not applicable
Decomposition temperature	No data available / Not applicable

Vapour pressure	No data available / Not applicable
Density (20 °C (68 °F))	1,16 g/cm ³
Bulk density	No data available / Not applicable
Viscosity (Brookfield; Instrument: RVT; 200 °C (392 °F); speed of rotation: 10 min ⁻¹ ; Spindle No: 27)	13.000 - 18.000 mPa.s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

Softening point/range 97 - 105 °C (206.6 - 221 °F)

SECTION 10: Stability and reactivity

10.1. Reactivity

None if used for intended purpose.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

At higher temperatures acetic acid may be released.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General toxicological information:

To the best of our knowledge no harmful effects are to be expected if the product is handled and used properly.

SECTION 12: Ecological information

General ecological information:

Do not empty into drains, soil or bodies of water.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

The valid EEC waste code numbers are not product-related but are largely source-related. These can be requested from the manufacturer.

In consultation with the responsible local authority, must be subjected to special treatment.

SECTION 14: Transport information

General information:

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

VOC content 0 %
(VOCV 814.018 VOC regulation
CH)

SECTION 16: Other information

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.



Revision Number: 005.3

Issue date: 03/17/2016

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	TEROSON SI 9160 CL known as SILATECH® SILICONE SEALANT IND	IDH number:	475372
Product type:	Silicone	Item number:	32389
		Region:	Canada
Company address:	Contact information:		
Henkel Corporation	Telephone: 905.814.6511		
2515 Meadowpine Boulevard	MEDICAL EMERGENCY Phone: Poison Control Center		
Mississauga, Ontario L5N 6C3	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Paste	WHMIS hazard class:	D.2.B
Color:	Translucent		
Odor:	Acetic acid		
WARNING:	PROLONGED OR REPEATED CONTACT WITH UNCURED SEALANT MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. REPEATED OR PROLONGED CONTACT MAY CAUSE ALLERGIC SKIN REACTION.		

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:	Acetic acid produced during cure may irritate eyes, nose and throat. When heated to temperatures exceeding 300° F (150° C) in the presence of air, silicones may form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Vapors irritate the eyes, nose and throat. Safe handling conditions may be maintained by keeping formaldehyde vapor concentrations below the OSHA permissible limit.
Skin contact:	Prolonged or repeated contact with uncured sealant may cause skin irritation.
Eye contact:	Vapors may irritate eyes. Contact with eyes will cause irritation.
Ingestion:	Not expected under normal conditions of use. Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Silicone Resin	Proprietary	60 - 100
Distillates (petroleum), hydrotreated middle	64742-46-7	10 - 30
Silicon dioxide	7631-86-9	10 - 30
Triacetoxymethylsilane	17689-77-9	1 - 5
Methylsilanetriyl triacetate	4253-34-3	1 - 5

IDH number: 475372

Product name: TEROSON SI 9160 CL known as SILATECH® SILICONE SEALANT IND

Exposure to moisture during cure will release 1-5% acetic acid.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
Skin contact:	Wipe off paste with paper towel or cloth. Wash with soap and water. If symptoms develop and persist, get medical attention.
Eye contact:	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Ingestion:	Do not induce vomiting. If a person feels unwell or symptoms of skin irritation appear, consult a physician.

5. FIRE FIGHTING MEASURES

Flash point:	> 93 °C (> 199.4 °F)
Autoignition temperature:	Not available.
Flammable/Explosive limits - lower:	4 % Upper/lower explosion limit
Flammable/Explosive limits - upper:	19.9 % Upper/lower explosion limit
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	None
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Formaldehyde. Silica mist. Acrid smoke and fumes.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Scrape up as much material as possible. Spilled material will solidify. Store in a partly filled, closed container until disposal. Maintain good ventilation for large spills.

7. HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Do not handle contact lenses until all sealant has been removed from hands. Residual sealant may transfer to lenses and cause eye irritation.
Storage:	Store in a dry area below 90° F. Keep container closed.

For information on product shelf life contact Henkel Canada Customer Service at 800-263-5043.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Silicone Resin	None	None	None	None
Distillates (petroleum), hydrotreated middle	5 mg/m3 TWA Inhalable fraction.	5 mg/m3 PEL Mist.	None	None
Silicon dioxide	6 mg/m3 TWA	20 MPPCF TWA 0.8 mg/m3 TWA	None	3 mg/m3 TWA Respirable fraction.
Triacetoxylethylsilane	None	None	None	None
Methylsilanetriyl triacetate	None	None	None	None
Acetic acid	15 ppm STEL 10 ppm TWA	10 ppm (25 mg/m3) PEL	None	None

Engineering controls:	Ensure adequate ventilation, especially in confined areas. Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Eye/face protection:	Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.
Skin protection:	Chemical resistant, impermeable gloves. Nitrile gloves. Butyl rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	Translucent
Odor:	Acetic acid
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	< 10 mm hg (20 °C (68°F))
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Specific gravity:	1.01 at 20 °C (68°F)
Vapor density:	Heavier than air.
Flash point:	> 93 °C (> 199.4 °F)
Flammable/Explosive limits - lower:	4 %
Flammable/Explosive limits - upper:	19.9 %
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Not determined
Partition coefficient (n-octanol/water):	Not available.
VOC content:	3.0 %; 30 g/l
Viscosity:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable
Sensitivity to Mechanical Impact:	Not available.
Sensitivity to static discharge:	Not available.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Acetic acid is liberated slowly upon contact with moisture. Formaldehyde.
Incompatible materials:	Acids. Bases. Oxidizing agents. Water.
Conditions to avoid:	Prolonged heating at temperatures above 150 °C. Exposure to moisture.

11. TOXICOLOGICAL INFORMATION

Toxicologically synergistic products: Not available.

Refer to the following for Irritancy of Product, Sensitization to Product, Carcinogenicity, Reproductive Toxicity, Teratogenicity, and Mutagenicity.

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)	ACGIH Carcinogen
Silicone Resin	No	No	No	No
Distillates (petroleum), hydrotreated middle	No	No	No	Group A4
Silicon dioxide	No	No	No	No
Triacetoxylethylsilane	No	No	No	No
Methylsilanetriyl triacetate	No	No	No	No
Acetic acid	No	No	No	No

Hazardous components	LD50s and LC50s	Health Effects/Target Organs
Silicone Resin	None	No Target Organs
Distillates (petroleum), hydrotreated middle	None	Irritant
Silicon dioxide	Oral LD50 (RAT) = > 22,500 mg/kg	Nuisance dust
Triacetoxylethylsilane	None	No Target Organs
Methylsilanetriyl triacetate	None	Irritant, Allergen
Acetic acid	Oral LD50 (RABBIT) = 1,200 mg/kg Oral LD50 (RAT) = 3.53 g/kg Oral LD50 (RAT) = 3.31 g/kg Dermal LD50 (RABBIT) = 1,060 mg/kg Inhalation LC50 (RAT, 4 h) = 11.4 mg/l	Allergen, Corrosive, Eyes, Gastrointestinal, Immune system, Irritant, Kidney

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended cleaning agents: Follow all local, state, federal and provincial regulations for disposal. Cured rubber can be incinerated or landfilled following EPA and local regulations.

Hazardous waste number: Not available.

14. TRANSPORT INFORMATION

Canada Transportation of Dangerous Goods - Ground

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

15. REGULATORY INFORMATION

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: Reviewed MSDS. Reissued with new date.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the MSDS contains all the information required by the CPR.

Prepared by: Timothy Pratt, Regulatory Affairs Specialist

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Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 16/04/2015

Revision date: 06/11/2015

Version: 1.1

1.1. Product identifier

Product form : Article
 Trade name : Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers
 Synonyms : Valve Action® Paint Marker White, Yellow, Black, Blue, Green, Aluminum, Purple, Light Blue, Light Green, Fluorescent Yellow, Fluorescent Green, Fluorescent Orange, Fluorescent Pink, Invisible UV, Red, Orange, Pink, Brown, Gold
 CERTIFIED Valve Action® Paint Marker White, Yellow, Red, Black

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

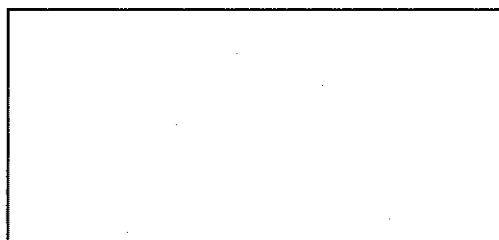
Main use category : Professional use
 Use of the substance/mixture : Marking.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LA-CO Industries Europe S.A.S.
 Parc Industriel de la Plaine de l'Ain - Allée des Combes.
 01150.BLYES.France.
 Phone: +33 (0)4 74 46 23 23
 Fax: +33 (0)4 74 46 23 29
 E-mail: info@eu.laco.com
 Web: http://www.markal.com



1.4. Emergency telephone number

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

EU Member State	Competent authority	Address	Phone number
AUSTRIA	Vergiftungsinformationszentrale (Poisons Information Centre)	Allgemeines Krankenhaus Waehringer Geurtel 16-20 1080 Wien	+43 1 406 43 43
BELARUS	The Belarus Republican Poisons Centre	Kizhevatova str. 58 220115 Minsk	+375 (0)17 201 9158
BELGIUM	Centre Anti-Poisons/Antigifocentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 B - 1120 Bruxelles/Brussel	+32 70 245 245
BULGARIA	Национален токсикологичен информационен център National Clinical Toxicology Centre, Emergency Medical Institute "Pirogov"	21 Tottleben Boulevard 1606 SOFIA	+359 2 9154 409
CROATIA	Poisons Control Centre Institute of Medical Research & Occupational Health	Ksaverska Cesta 2 P.O. Box 291 HR-10000 Zagreb	+385 1 234 8342
CZECH REPUBLIC	Toxikologické informační středisko Clinic For Occupational Medicine, 1st Medical Faculty, Charles University	Ná Bojišti 1 120 00 Praha 2	+42 2 2491 9293 +42 2 2491 5402
DENMARK	Gifflinjen Bispebjerg Hospital	Bispebjerg Bakke 23, 60, 1 DK-2400 København NV	+45 82 12 12 12 +45 35 31 55 55
ESTONIA	Mürgistusteabekeskus	Gonsiori 29 15027 Tallinn	+372 626 93 90
FINLAND	Myrkytystietokeskus	P.O.B 340 (Haartmaninkatu 4) HUS SF - 00029 Helsinki	+358 9 471 977
FRANCE	ORFILA		+33 1 45 42 59 59
GERMANY	Berliner Betrieb für Zentrale Gesundheitliche Aufgaben	Oranienburger Strasse 285 13437 Berlin	+49 30 19240
GERMANY	Informations und Beratungszentrum für Vergiftungsfälle	Kirberger Straße, Gebäude 9 D-66421 Homburg/Saar	+49 6841 19240
GERMANY	Beratungstelle bei Vergiftungen, Klinische Toxikologie und Beratungstelle bei Vergiftungen	Langenbeckstrasse 1 55131 Mainz	+49 6131 19240
GREECE	Poisons Information Centre	11527 Athens	+30 10 779 3777

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HUNGARY	Országos Kémiai Biztonsági Intézet (National Institute of Chemical Safety) Egészségügyi Toxikológiai Tájékoztató Szolgálat (Health Toxicological Information Service)	1437 Budapest PO Box 839 1097 Budapest, Nagyvárad tér 2	+36 80 20 11 99
ICELAND	Eitrunarmiðstöðin	Eitrunarmiðstöðin 108 Reykjavík	+354 543 22 22
IRELAND	National Poisons Information Centre	Beaumont Hospital PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2166
LATVIA	Valsts Toksikoloģijas centra Saindēšanās un zāļu informācijas centrs	2 Hipocrate Street LV 1036 Riga	+371 67 04 24 73
LITHUANIA	Apsinuodijimų kontrolės ir informacijos biuras	Siltnamiu 29 2043 Vilnius	+370 5 236 20 52/+370 687 53 378
MALTA	Medicines & Poisons Info Office	Mater Dei Hospital, Msida MSD 2090 Malta	25450000
NETHERLANDS	Nationaal Vergiftigingen Informatie Centrum National Institute for Public Health and the Environment, NB this service is only available to health professionals	Huispostnummer B.00.118, PO Box 85500 3508 GA Utrecht	+31 30 274 88 88
PORTUGAL	Centro de Informação Antivenenos Instituto Nacional de Emergência Médica (INEM)	Rua Almirante Barroso, 36 1000-013 Lisboa	808 250 143 (for use only in Portugal), +351 21 330 3284
ROMANIA	Biroul pentru Regulamentul Sanitar International si Informare Toxicologica	Str. Dr. Leonte Anastasievici Nr.1-3, Sector 5 50463 Bucuresti	+40 21 318 36 06
SLOVAKIA	Národné toxikologické informačné centrum University Hospital Bratislava	Limbóvá 5 833 05 Bratislava	+421 2 54 77 4 166
SPAIN	Servicio de Información Toxicológica Instituto Nacional de Toxicología, Departamento de Madrid	Calle Luis Cabrera 9 E-28002 Madrid	+34 91 562 04 20
SWEDEN	Giflinformationscentralen Swedish Poisons Information Centre, Karolinska Hospital	Box 60 500 SE-171 76 Stockholm	+46 8 33 12 31 (International) 112 (National)
SWITZERLAND	Centre Suisse d'Information Toxicologique	Freiestrasse 16 Postfach CH-8028 Zurich	+41 44 251 51 51 (International) 145 (National)

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH phrases : EUH210 - Safety data sheet available on request

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1-Methoxy-2-propanol	(CAS No) 107-98-2 (EC no) 203-539-1 (EC Index no) 603-064-00-3	40 – 75	Flam. Liq. 3, H226 STOT SE 3, H336
aluminium powder (stabilised)	(CAS No) 7429-90-5 (EC no) 231-072-3 (EC Index no) 013-001-00-1	0 – 65	Flam. Sol. 1, H228 Water-react. 2, H261
Titanium dioxide	(CAS No) 13463-67-7 (EC no) 236-675-5	1 – 25	Not classified
zinc sulphide	(CAS No) 1314-98-3 (EC no) 215-251-3	0 – 25	Not classified

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according to Regulation (EC) No. 453/2010

Name	Product Identifier	%	Classification according to Regulation (EC) No. 1272/2008 (GHS)
ethanol	(CAS No) 64-17-5 (EC no) 200-578-6 (EC index no) 603-002-00-5	5 – 20	Flam. Liq. 2, H225
2-methoxy-1-methylethyl acetate	(CAS No) 108-65-6 (EC no) 203-603-9 (EC index no) 607-195-00-7	0.01 – 2	Flam. Liq. 3, H226
4-[[4-(aminocarbonyl)phenyl]azo]-N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide, C.I. Pigment Red 170	(CAS No) 2786-76-7 (EC no) 220-509-3	0 – 5	Skin Sens. 1, H317 (Naphthol <1%)
Isopropanol	(CAS No) 67-63-0 (EC no) 200-661-7 (EC index no) 603-117-00-0	0 – 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Ethyl acetate	(CAS No) 141-78-6 (EC no) 205-500-4 (EC index no) 607-022-00-5	0.1 – 3	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Carbon black	(CAS No) 1333-86-4 (EC no) 215-609-9	0 – 3	Carc. 2, H351
4-Methyl-7-diethylaminocoumarin	(CAS No) 91-44-1 (EC no) 202-068-9	0 – 3	Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Aluminum hydroxide	(CAS No) 21645-51-2 (EC no) 244-492-7	0.01 – 2	Not classified
propyl acetate	(CAS No) 109-60-4 (EC no) 203-686-1 (EC index no) 607-024-00-6	0 – 2	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Butyl acetate	(CAS No) 123-86-4 (EC no) 204-658-1 (EC index no) 607-025-00-1	< 1	Flam. Liq. 3, H226 STOT SE 3, H336
(2-Methoxymethylethoxy)-propanol	(CAS No) 34590-94-8 (EC no) 252-104-2	< 1	Not classified
Aluminum oxide	(CAS No) 1344-28-1 (EC no) 215-691-6	< 1	Not classified
2-methoxypropyl acetate	(CAS No) 70657-70-4 (EC no) 274-724-2 (EC index no) 607-251-00-0	< 0.1	Flam. Liq. 3, H226 Repr. 1B, H360D STOT SE 3, H335
barium sulfate	(CAS No) 7727-43-7 (EC no) 231-784-4	< 0.1	Not classified
Toluene	(CAS No) 108-88-3 (EC no) 203-625-9 (EC index no) 601-021-00-3	< 0.1	Flam. Liq. 2, H225 Repr. 2, H361d Asp. Tox. 1, H304 STOT RE 2, H373 Skin Irrit. 2, H315 STOT SE 3, H336

Full text of R- and H-phrases: see section 16

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
First-aid measures after eye contact	: In case of contact, immediately flush eyes with plenty of water.
First-aid measures after ingestion	: Do NOT induce vomiting. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: May cause moderate irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry chemical. Inert gas. Foam. Water spray. Water fog.
Unsuitable extinguishing media	: Do not use a heavy water stream.

Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers

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according to Regulation (EC) No. 453/2010

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour. Burning produces irritating, toxic and noxious fumes.
 Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂). Hydrocarbon.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses. Eliminate all ignition sources if safe to do so.
 Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus. EN469.

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Avoid all eye and skin contact and do not breathe vapour and mist.

6.1.1. For non-emergency personnel

Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves.
 Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves.
 Emergency procedures : Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Eliminate all ignition sources. Stop the flow of material, if this is without risk.
 Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Take up in non-combustible absorbent material and shove into container for disposal.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
 Precautions for safe handling : No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid all eye and skin contact and do not breathe vapour and mist. Use only outdoors or in a well-ventilated area.
 Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep away from open flames, hot surfaces and sources of ignition.
 Incompatible products : Strong oxidizers.
 Incompatible materials : Heat sources.
 Heat and ignition sources : Keep away from heat, sparks and flame.
 Prohibitions on mixed storage : Keep away from incompatible materials.
 Storage area : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Marking.

8.1. Control parameters

1-Methoxy-2-propanol (4070332)		
EU	IOELV TWA (mg/m ³)	375 mg/m ³
EU	IOELV TWA (ppm)	100 ppm
EU	IOELV STEL (mg/m ³)	568 mg/m ³
EU	IOELV STEL (ppm)	150 ppm
EU	Notes	Skin

Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers

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1-Methoxy-2-propanol (107-99-2)		
Austria	MAK (mg/m ³)	187 mg/m ³
Austria	MAK (ppm)	50 ppm
Austria	MAK Short time value (mg/m ³)	187 mg/m ³
Austria	MAK Short time value (ppm)	50 ppm
Austria	Remark (AT)	(gemessen als Momentanwert), (H)
Belgium	Limit value (mg/m ³)	375 mg/m ³
Belgium	Limit value (ppm)	100 ppm
Belgium	Short time value (mg/m ³)	568 mg/m ³
Belgium	Short time value (ppm)	150 ppm
Belgium	Remark (BE)	D
Czech Republic	Expoziční limity (PEL) (mg/m ³)	270 mg/m ³
Czech Republic	Expoziční limity (PEL) (ppm)	73.17 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m ³)	550 mg/m ³
Czech Republic	Expoziční limity (NPK-P) (ppm)	149.05 ppm
Czech Republic	Remark (CZ)	D
Denmark	Grænseværdie (langvarig) (mg/m ³)	185 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	50 ppm
Denmark	Grænseværdie (kortvarig) (mg/m ³)	370 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	100 ppm
Finland	HTP-arvo (8h) (mg/m ³)	370 mg/m ³
Finland	HTP-arvo (8h) (ppm)	100 ppm
Finland	HTP-arvo (15 min)	560 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	150 ppm
Finland	Huomautus (FI)	iho
France	VME (mg/m ³)	188 mg/m ³
France	VME (ppm)	50 ppm
France	VLE (mg/m ³)	375 mg/m ³
France	VLE (ppm)	100 ppm
France	Note (FR)	Peau
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	370 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	100 ppm
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	740 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	200 ppm
Hungary	AK-érték	375 mg/m ³
Hungary	CK-érték	568 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	375 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	100 ppm
Ireland	OEL (15 min ref) (mg/m ³)	568 mg/m ³
Ireland	OEL (15 min ref) (ppm)	150 ppm
Lithuania	IPRV (mg/m ³)	190 mg/m ³
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m ³)	300 mg/m ³
Lithuania	TPRV (ppm)	75 ppm
Netherlands	Grænswaarde TGG 8H (mg/m ³)	375 mg/m ³
Netherlands	Grænswaarde TGG 15MIN (mg/m ³)	563 mg/m ³
Netherlands	Remark (MAC)	(H)
Poland	NDS (mg/m ³)	180 mg/m ³
Poland	NDSCh (mg/m ³)	360 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	375 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	100 ppm

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Slovakia	Upozornenie (SK)	(K)
Spain	VLA-ED (mg/m ³)	375 mg/m ³
Spain	VLA-ED (ppm)	100 ppm
Spain	VLA-EC (mg/m ³)	568 mg/m ³
Spain	VLA-EC (ppm)	150 ppm
Spain	Notes	vía dérmica, VLI
Sweden	nivågränsvärde (NVG) (mg/m ³)	190 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	300 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	75 ppm
Sweden	Anmärkning (SE)	H
United Kingdom	WEL TWA (mg/m ³)	375 mg/m ³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m ³)	560 mg/m ³
United Kingdom	WEL STEL (ppm)	150 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	180 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	50 ppm
Norway	Merknader (NO)	H
Switzerland	VME (mg/m ³)	360 mg/m ³
Switzerland	VME (ppm)	100 ppm 20 ppm (urina; fine dell'esposizione / del turno)
Switzerland	VLE (mg/m ³)	720 mg/m ³
Switzerland	VLE (ppm)	200 ppm
Ethyl acetate (141-78-6)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	1080 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	300 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	500 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	150 ppm
Spain	VLA-ED (mg/m ³)	1460 mg/m ³
Spain	VLA-ED (ppm)	400 ppm
United Kingdom	WEL TWA (mg/m ³)	730 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	1460 mg/m ³
Titanium dioxide (13463-67-7)		
Belgium	Remark (BE)	(dioxyde de)
Denmark	Grænseværdie (kortvarig) (mg/m ³)	12 mg/m ³
France	Note (FR)	inhalable aerosol
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Slovakia	NPHV (priemerná) (mg/m ³)	5 mg/m ³
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Spain	Notes	inhalable aerosol
Sweden	nivågränsvärde (NVG) (mg/m ³)	5 mg/m ³
Sweden	Anmärkning (SE)	total dust, 1
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ inhalable aerosol 4 mg/m ³ respirable aerosol
Switzerland	Remark (CH)	(respirable aerosol)
Aluminum oxide (1344-28-1)		
Austria	MAK (mg/m ³)	10 mg/m ³ (gemessen als einatembarer Aerosolanteil) 5 mg/m ³ (alveolengängiger Anteil)
Austria	MAK Short time value (mg/m ³)	20 mg/m ³ (gemessen als einatembarer Aerosolanteil) max. 2x60 min./Schicht 10 mg/m ³ (alveolengängiger Anteil) max. 2x60 min./Schicht
Belgium	Limit value (mg/m ³)	10 mg/m ³

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Aluminium oxide (1344-29-1)		
Belgium	Remark (BE)	(oxyde d') (en Al)
Denmark	Grænseværdie (langvarig) (mg/m³)	5 mg/m³ (total) 2 mg/m³ (respirabel)
Denmark	Grænseværdie (kortvarig) (mg/m³)	10 mg/m³ (total) 4 mg/m³ (respirabel)
France	VME (mg/m³)	10 mg/m³
France	Note (FR)	(respirable aerosol)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	3 mg/m³
Germany	Remark (TRGS 900)	(gemessen als alveolengängiger Staubanteil)
Hungary	AK-érték	6 mg/m³
Hungary	Megjegyzések (HU)	(respirable aerosol)
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³ (total inhalable dust) 4 mg/m³ (respirable dust)
Lithuania	IPRV (mg/m³)	2 mg/m³
Lithuania	Remark (LT)	(alveolinė frakcija, piūrėk IX skyriaus 3 pastabą.)
Poland	NDS (mg/m³)	2.5 mg/m³ (dymy, pyl całkowity) 1.2 mg/m³ (dymy, pyl respirabilny)
Slovakia	NPHV (priemerná) (mg/m³)	1.5 mg/m³ (respirabilná frakcia) 4 mg/m³ (inhalovateľná frakcia)
Spain	VLA-ED (mg/m³)	10 mg/m³
Sweden	nivågränsvärde (NVG) (mg/m³)	5 mg/m³ (inhalable aerosol) 2 mg/m³ (respirable aerosol)
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ (inhalable aerosol) 4 mg/m³ (respirable aerosol)
Norway	Gjennomsnittsverdier (AN) (mg/m³)	10 mg/m³
Norway	Merknader (NO)	1)
Switzerland	VME (mg/m³)	3 mg/m³
Switzerland	Remark (CH)	(respirable aerosol)
Aluminium hydroxide (21645-51-2)		
Austria	MAK (ppm)	10 ppm (gemessen als einatembarer Aerosolanteil) 5 ppm (alveolengängiger Anteil)
Austria	MAK Short time value (ppm)	20 ppm (gemessen als einatembarer Aerosolanteil) max. 2x60 min./Schicht 10 ppm (alveolengängiger Anteil) max. 2x60 min./Schicht
Poland	NDS (mg/m³)	2.5 mg/m³ dymy, pyl całkowity 1.2 mg/m³ dymy, pyl respirabilny
Slovakia	NPHV (priemerná) (mg/m³)	1.5 mg/m³ (respirabilná frakcia) 4 mg/m³ (inhalovateľná frakcia)
Switzerland	VME (mg/m³)	3 mg/m³
Switzerland	Remark (CH)	(alveolengängige Fraktion)
Ethyl acetate (123-86-4)		
Austria	MAK (mg/m³)	480 mg/m³
Austria	MAK (ppm)	100 ppm
Austria	MAK Short time value (mg/m³)	480 mg/m³
Austria	MAK Short time value (ppm)	100 ppm
Austria	Remark (AT)	(gemessen als Momentanwert)
Denmark	Grænseværdie (kortvarig) (mg/m³)	1420 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	300 ppm
Lithuania	IPRV (mg/m³)	500 mg/m³
Lithuania	IPRV (ppm)	100 ppm
Lithuania	TPRV (mg/m³)	700 mg/m³
Lithuania	TPRV (ppm)	150 ppm
Slovakia	NPHV (priemerná) (mg/m³)	500 mg/m³
Slovakia	NPHV (priemerná) (ppm)	100 ppm

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Butyl acetate (123-86-4)		
Spain	VLA-ED (mg/m ³)	724 mg/m ³
Spain	VLA-ED (ppm)	150 ppm
Spain	VLA-EC (mg/m ³)	965 mg/m ³
Spain	VLA-EC (ppm)	200 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	700 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	150 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	355 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	75 ppm
2-methoxy-1-methylethyl acetate (109-65-6)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	550 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	100 ppm
Finland	Huomautus (FI)	iho
France	Note (FR)	Peau
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	270 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	50 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	275 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	50 ppm
Slovakia	Upozornenie (SK)	(K)
Spain	VLA-ED (mg/m ³)	275 mg/m ³
Spain	VLA-ED (ppm)	50 ppm
Spain	VLA-EC (mg/m ³)	550 mg/m ³
Spain	VLA-EC (ppm)	100 ppm
Spain	Notes	VLI
Sweden	Anmärkning (SE)	H
2-methoxypropyl acetate (70657-70-4)		
Czech Republic	Remark (CZ)	D
Denmark	Grænseværdie (kortvarig) (mg/m ³)	220 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	40 ppm
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	224 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	40 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	110 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	20 ppm
Slovakia	Upozornenie (SK)	(K)
Spain	VLA-ED (mg/m ³)	28 mg/m ³
Spain	VLA-ED (ppm)	5 ppm
Spain	VLA-EC (mg/m ³)	220 mg/m ³
Spain	VLA-EC (ppm)	40 ppm
Spain	Notes	TR1B,r
(2-Methoxymethylethoxy)propanol (34590-94-8)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	600 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	100 ppm
Finland	Huomautus (FI)	iho
France	Note (FR)	Peau
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	310 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	50 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	308 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	50 ppm
Slovakia	Upozornenie (SK)	poznámka K
Spain	VLA-ED (mg/m ³)	308 mg/m ³
Spain	VLA-ED (ppm)	50 ppm
Spain	Notes	via dérmica, VLI

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(2-Methoxymethyl)ethylpropanol (34590-94-8)		
Sweden	Anmärkning (SE)	H
ethanol (64-17-5)		
Denmark	Grænseværdie (kortvarig) (mg/m³)	3800 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	2000 ppm
Slovakia	NPHV (priemerná) (mg/m³)	960 mg/m³
Slovakia	NPHV (priemerná) (ppm)	500 ppm
Spain	VLA-ED (mg/m³)	1910 mg/m³
Spain	VLA-ED (ppm)	1000 ppm
Spain	Notes	s,
isopropanol (67-63-0)		
Denmark	Grænseværdie (kortvarig) (mg/m³)	980 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	400 ppm
Germany	TRGS 903 (BGW)	50 mg/l Aceton (Blut; Expositionsende bzw. Schichtende)
Netherlands	Grenswaarde TGG 8H (mg/m³)	650 mg/m³
Netherlands	Grenswaarde TGG 8H (ppm)	250 ppm
Slovakia	NPHV (priemerná) (mg/m³)	500 mg/m³
Slovakia	NPHV (priemerná) (ppm)	200 ppm
Spain	VLA-ED (mg/m³)	500 mg/m³ VLB, s
Spain	VLA-ED (ppm)	200 ppm VLB, s 40 ppm F, I "(Acetona en orina; Final de la semana, laboral 1)"
Spain	VLA-EC (mg/m³)	1000 mg/m³ VLB, s
Spain	VLA-EC (ppm)	400 ppm VLB, s
propyl acetate (109-60-4)		
Austria	Remark (AT)	(gemessen als Momentanwert)
Czech Republic	Remark (CZ)	I
Denmark	Grænseværdie (kortvarig) (mg/m³)	1250 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	300 ppm
Slovakia	NPHV (priemerná) (mg/m³)	400 mg/m³
Slovakia	NPHV (priemerná) (ppm)	100 ppm
Spain	VLA-ED (mg/m³)	849 mg/m³
Spain	VLA-ED (ppm)	200 ppm
Spain	VLA-EC (mg/m³)	1060 mg/m³
Spain	VLA-EC (ppm)	250 ppm
aluminium powder (stabilised) (7429-90-5)		
Belgium	Limit value (mg/m³)	1 mg/m³
Belgium	Remark (BE)	(Aluminium, métal et composés insolubles, fraction alvéolaire)
Denmark	Grænseværdie (kortvarig) (mg/m³)	4 mg/m³ (respirabel) 10 mg/m³ (total)
Finland	HTP-arvo (8h) (mg/m³)	2 mg/m³
Finland	Huomautus (FI)	(Alumiini, liukoiset yhdisteet)
France	VME (mg/m³)	5 mg/m³ (pulvérulent) 10 mg/m³ (métal)
Germany	TRGS 903 (BGW)	200 µg/l
Germany	Remark (TRGS 903)	Aluminium (Urin; Expositionsende bzw. Schichtende)
Hungary	Megjegyzések (HU)	(respirabilis por)
Ireland	OEL (8 hours ref) (mg/m³)	1 mg/m³
Ireland	Notes (IE)	(respirable dust)
Lithuania	IPRV (mg/m³)	2 mg/m³ (alveoline frakcija) 1 mg/m³ (Aluminis (metalas) ir jo tirpus junginiai, kaip Al) 5 mg/m³ (akvepiamoji frakcija)

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aluminium powder (stabilised) (7429-90-6)		
Netherlands	Grenswaarde TGG 8H (mg/m³)	10 mg/m³
Poland	NDS (mg/m³)	2.5 mg/m³ (dymy, pyl calkowity) 1.2 mg/m³ (dymy, pyl respirabilny)
Slovakia	NPHV (priemerná) (mg/m³)	2 mg/m³
Slovakia	NPHV (priemerná) (ppm)	60 µg/g creatinine (Hlinik, M,a) 25 µg/g creatinine (Celkový, M.,d) 150 µg/g creatinine (Celkový,M,b)
Spain	VLA-ED (mg/m³)	10 mg/m³ (inhalable aerosol) 5 mg/m³ (respirable aerosol)
Sweden	nivågränsvärde (NVG) (mg/m³)	1 mg/m³ (Aluminium, lösliga föreningar, som Al) 5 mg/m³ (totaldamm, som Al) 2 mg/m³ (respirabelt damm, som Al)
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ (inhalable dust) 4 mg/m³ (respirable dust)
Norway	Merknader (NO)	(Aluminiumpulver, pyroteknikk)
Switzerland	VME (mg/m³)	3 mg/m³
Switzerland	Remark (CH)	(alveolengängiger Staub)
Carbon black (1333-86-4)		
Belgium	Limit value (mg/m³)	3.5 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	3.5 mg/m³
Denmark	Anmærkninger (DK)	K
Finland	HTP-arvo (8h) (mg/m³)	3.5 mg/m³
Finland	HTP-arvo (15 min)	7 mg/m³
France	VME (mg/m³)	3.5 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	3.5 mg/m³
Ireland	OEL (15 min ref) (mg/m³)	7 mg/m³
Spain	VLA-ED (mg/m³)	3.5 mg/m³
Sweden	nivågränsvärde (NVG) (mg/m³)	3 mg/m³
United Kingdom	Local name	Carbon black
United Kingdom	WEL TWA (mg/m³)	3.5 mg/m³
United Kingdom	WEL STEL (mg/m³)	7 mg/m³
Norway	Gjennomsnittsverdier (AN) (mg/m³)	3.5 mg/m³
zinc sulphide (1314-98-3)		
Lithuania	IPRV (mg/m³)	5 mg/m³
barium sulfate (7727-43-7)		
Belgium	Remark (BE)	(sulfate de)
Slovakia	NPHV (priemerná) (mg/m³)	1.5 mg/m³ (respirabilná frakcia) 4 mg/m³ (Inhalovateľná frakcia)
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ inhalable aerosol 4 mg/m³ respirable aerosol
Toluene (108-88-3)		
EU	IOELV TWA (mg/m³)	192 mg/m³
EU	IOELV TWA (ppm)	50 ppm
EU	IOELV STEL (mg/m³)	384 mg/m³
EU	IOELV STEL (ppm)	100 ppm
EU	Notes	Skin
Denmark	Grænseværdie (kortvarig) (mg/m³)	188 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	50 ppm
France	Note (FR)	Peau
Germany	TRGS 903 (BGW)	3 mg/l o-Kresol (Urin; bei Langzeitexposition/Expositionsende bzw. Schichtende) 1 mg/l Toluol (Blut; Expositionsende bzw. Schichtende)
Slovakia	NPHV (priemerná) (mg/m³)	192 mg/m³ (K)

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Toluene (108-88-3)		
Slovakia	NPHV (priemerná) (ppm)	50 ppm (K) 600 ppm (Toluén) 1,5 ppm (O-krezol) 2401 ppm (Kyselina hippurová)
Sweden	Anmärkning (SE)	(B,H)

8.2. Exposure controls

Appropriate engineering controls	: Provide local exhaust ventilation of closed transfer systems to minimize exposures.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: None under normal use. It is a good industrial hygiene practice to minimize skin contact. Wear suitable gloves, rubber. EN 374.
Eye protection	: No special eye protection equipment recommended under normal conditions of use. Eye protection should only be necessary where liquid could be splashed or sprayed. EN 166.
Respiratory protection	: No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges. EN 12083.
Consumer exposure controls	: Keep out of reach of children.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Solid marker containing liquid colored paint.
Colour	: Variable.
Odour	: Solvent.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: < 1
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 120 °C
Flash point	: 31 °C
Auto-ignition temperature	: 287 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour
Vapour pressure	: 11.8
Relative vapour density at 20 °C	: No data available
Relative density	: 1 - 1.33
Solubility	: insoluble in water.
Log Pow	: 0.7
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content	: 50 - 60 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Flammable liquid and vapour.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

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10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May release flammable gases. Burning produces irritating, toxic and noxious fumes. Carbon oxides (CO, CO₂).

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

1-Methoxy-2-propanol (107-98-2)	
LD50 oral rat	4016 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 inhalation rat (ppm)	> 7000 ppm 6 hr
ATE CLP (oral)	4016.000 mg/kg bodyweight
Ethyl acetate (141-78-6)	
LD50 oral rat	5620 mg/kg
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (mg/l)	> 18 mg/l/4h
ATE CLP (oral)	5620.000 mg/kg bodyweight
Titanium dioxide (13463-67-7)	
LD50 oral rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 6.82 mg/l/4h
Aluminum oxide (1344-28-1)	
LD50 oral rat	> 15900 mg/kg
LC50 inhalation rat (mg/l)	7.6 mg/l/4h
ATE CLP (vapours)	7.600 mg/l/4h
ATE CLP (dust,mist)	7.600 mg/l/4h
Butyl acetate (123-86-4)	
LD50 oral rat	10760 mg/kg
LD50 dermal rabbit	> 14112 mg/kg
LC50 inhalation rat (mg/l)	> 21 mg/l/4h
ATE CLP (oral)	10760.000 mg/kg bodyweight
2-Methoxy-1-methylethyl acetate (108-46-6)	
LD50 oral rat	8532 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (ppm)	4345 ppm 6 h
ATE CLP (oral)	8532.000 mg/kg bodyweight
2-methoxypropyl acetate (70657-70-4)	
LC50 inhalation rat (ppm)	2700 ppm 6 h
4-[[4-(aminocarbonyl)phenylazo]N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide; C.I. Pigment Red 170 (2786-78-7)	
LD50 oral rat	> 15000 mg/kg
LC50 inhalation rat (mg/l)	> 1580 mg/m ³ 4 h
(2-Methoxymethylethoxy)-propanol (34590-94-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 19020 mg/kg
LC50 inhalation rat (mg/l)	> 1667 mg/l/4h
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 1667 mg/l/4h
Ethanol (64-17-5)	
LD50 oral rat	10470 mg/kg
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (mg/l)	133.8 mg/l/4h
ATE CLP (oral)	10470.000 mg/kg bodyweight
ATE CLP (vapours)	133.800 mg/l/4h
ATE CLP (dust,mist)	133.800 mg/l/4h

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Isobutanol (97-63-0)	
LD50 oral rat	5840 mg/kg
LD50 dermal rabbit	16.4 ml/kg
LC50 inhalation rat (ppm)	> 10000 ppm/4h
ATE CLP (oral)	5840.000 mg/kg bodyweight

Propyl acetate (109-60-4)	
LD50 oral rat	8700 mg/kg
LD50 dermal rabbit	> 17800 mg/kg
LC50 inhalation rat (mg/l)	32 mg/l/4h
ATE CLP (oral)	8700.000 mg/kg bodyweight
ATE CLP (vapours)	32.000 mg/l/4h
ATE CLP (dust,mist)	32.000 mg/l/4h

aluminium powder (stabilised) (7429-90-5)	
LD50 oral rat	> 15900 mg/kg
LC50 inhalation rat (mg/l)	> 2.3 mg/l/4h No mortality observed in this study.

Carbon black (1333-86-4)	
LD50 oral rat	> 8000 mg/kg
LC50 inhalation rat (mg/l)	> 4.6 mg/m³ 4 h

zinc sulphide (1314-98-3)	
LD50 oral rat	> 15000 mg/kg
LC50 inhalation rat (mg/l)	> 5410 mg/m³ read-across Zinc

4-Methyl-7-diethylaminocoumarin (91-44-1)	
LD50 oral rat	> 5000 mg/kg
ATE CLP (dermal)	1100.000 mg/kg bodyweight
ATE CLP (dust,mist)	1.500 mg/l/4h

barium sulfate (7727-43-7)	
LD50 oral rat	307 g/kg
LD50 dermal rat	> 2000 mg/kg
ATE CLP (oral)	307000.000 mg/kg bodyweight

Toluene (108-88-3)	
LD50 oral rat	5580 mg/kg EU Method B.1 (Acute Toxicity (Oral))
LC50 inhalation rat (mg/l)	> 20 mg/l/4h OECD Guideline 403 (Acute Inhalation Toxicity)
ATE CLP (oral)	5580.000 mg/kg bodyweight

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified.

Titanium dioxide (13463-97-7)	
NOAEL (chronic, oral, animal/male, 2 years)	5 mg/kg bodyweight rat

barium sulfate (7727-43-7)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight
NOAEL (chronic, oral, animal/female, 2 years)	75 mg/kg bodyweight

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified.
 May cause drowsiness or dizziness
Specific target organ toxicity (repeated exposure) : Not classified

Toluene (108-88-3)	
LOAEL (inhalation, rat, gas, 90 days)	1250 ppmv/6h/day
NOAEL (oral, rat, 90 days)	625 mg/kg bodyweight/day EU Method B.26. Increased relative weights of liver and kidney are interpreted as toxicologically insignificant differences in the absence of histological findings.
NOAEL (inhalation, rat, gas, 90 days)	300 ppmv/6h/day OECD Guideline 453

Aspiration hazard : Not classified

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SECTION 12: Ecological Information

12.1. Toxicity

1-Methoxy-2-propanol (107-98-2)	
LC50 fish 1'	20800 mg/l
EC50 Daphnia 1	23300 mg/l
ErC50 (algae)	> 1000 mg/l
Ethyl acetate (141-78-6)	
LC50 fish 1	220 mg/l
EC50 Daphnia 1	1200 mg/l
NOEC chronic fish	< 9.35 mg/l
Aluminium oxide (1344-28-1)	
EC50 Daphnia 1	> 1470 mg/l
NOEC (acute)	> 50 mg/l
2-methoxy-1-methylethyl acetate (108-90-6)	
LC50 fish 1	100 - 180 mg/l
EC50 Daphnia 1	> 500 mg/l 48 h
ErC50 (algae)	> 1000 mg/l
4-[[4-(aminocarbonyl)phenyl]azo]-N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide, C.I. Pigment Red 170 (2786-76-7)	
LC50 fish 1	> 500 mg/l 96 h
EC50 Daphnia 1	> 110 mg/l 48 h
(2-Methoxymethyl)ethoxy-propanol (34590-94-8)	
LC50 fish 1	> 1000 mg/l <i>Poecilia reticulata</i>
ErC50 (algae)	> 1000 mg/l
ethanol (64-17-5)	
LC50 fish 1	14200 mg/l
EC50 Daphnia 1	5012 mg/l
isopropanol (67-63-0)	
LC50 fish 1	10000 mg/l
propyl acetate (109-60-4)	
LC50 fish 1	60 mg/l 96 h
EC50 Daphnia 1	91.5 mg/l 48 h
aluminium powder (stabilised) (7429-90-6)	
LC50 fish 1	> 218.64 mg/l ASTM 2000; test material: aluminium chloride hexahydrate; <i>Pimephales promelas</i>
EC50 Daphnia 1	1.4 mg/l OECD Guideline 202; test material: Aluminium hydroxide
LOEC (acute)	72.89 mg/l
NOEC (acute)	37.2 mg/l
zinc sulphide (1314-98-3)	
LC50 fish 1	> 0.25 mg/l 96 h
EC50 Daphnia 1	> 29 µg/l 48 h
barium sulfate (7727-43-7)	
LC50 fish 1	> 3.5 mg/l 96 h
EC50 Daphnia 1	14500 µg/l 48 h
Toluene (108-88-3)	
LC50 fish 1	5.5 mg/l
EC50 Daphnia 2	3.78 mg/l
ErC50 (algae)	134 mg/l
LOEC (chronic)	2.77 mg/l
NOEC chronic fish	1.39 mg/l
NOEC chronic crustacea	0.74 mg/l

12.2. Persistence and degradability

1-Methoxy-2-propanol (107-98-2)	
Persistence and degradability	Readily biodegradable.
Biodegradation	96 % 28 d

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Ethyl acetate (141-78-6)	
Persistence and degradability	Readily biodegradable.
2-methoxy-1-methylethyl acetate (108-65-6)	
Persistence and degradability	Readily biodegradable.
Biodegradation	89 % 10 d
4-[(4-aminocarbonyl)phenyl]azo)-N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide, C.I. Pigment Red 170 (2786-76-7)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	0 % 28 d
(2-Methoxymethyl)ethoxy)propanol (34860-94-8)	
Persistence and degradability	Readily biodegradable.
Glycol (64-17-5)	
Biodegradation	> 96 % 28 d
Isopropanol (67-63-0)	
Persistence and degradability	Readily biodegradable.
Propyl acetate (109-60-4)	
Persistence and degradability	Readily biodegradable.
Biodegradation	62 % 5 d
Carbon black (1333-86-4)	
Persistence and degradability	Not readily biodegradable.
Toluene (108-88-3)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers	
Log Pow	0.7
1-Methoxy-2-propanol (107-98-2)	
Bioaccumulative potential	Not expected to bioaccumulate.
Ethyl acetate (141-78-6)	
Bioaccumulative potential	Not expected to bioaccumulate.
2-methoxy-1-methylethyl acetate (108-65-6)	
Log Pow	0.43
4-[(4-aminocarbonyl)phenyl]azo)-N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide, C.I. Pigment Red 170 (2786-76-7)	
BCF fish 1	53 l/kg
Log Pow	1.28
Glycol (64-17-5)	
Bioaccumulative potential	Not expected to bioaccumulate.
Isopropanol (67-63-0)	
Bioaccumulative potential	Not expected to bioaccumulate.
Propyl acetate (109-60-4)	
Log Pow	1.23
Barium sulfate (7727-43-7)	
BCF fish 1	68.4 L/kg
Toluene (108-88-3)	
Bioconcentration factor (BCF REACH)	90
Log Kow	2.73

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers	
PBT: not yet assessed	
vPvB: not yet assessed	
Component	
Ethyl acetate (141-78-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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12.6. Other adverse effects

No additional information available

SECTION 13: Waste treatment methods

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapours are flammable.
European List of Waste (LoW) code : For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.
20 01 27* - paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1263
UN-No. (IATA) : 1263
UN-No. (IMDG) : 1263
UN-No. (ADN) : 1263

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Paint
Proper Shipping Name (IATA) : Paint
Proper Shipping Name (IMDG) : PAINT
Proper Shipping Name (ADN) : PAINT
Transport document description (ADR) : UN 1263 PAINT, 3, III, (D/E)

14.3. Transport hazard class(es)

Class (ADR) : 3
Classification code (ADR) : F1
Class (IATA) : 3
Class (IMDG) : 3
Class (ADN) : 3
Classification code (ADN) : F1

14.4. Packing group

Packing group (ADR) : III
Packing group (IATA) : III
Packing group (IMDG) : III
Packing group (ADN) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 30
Classification code (ADR) : F1
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : 3YE

14.6.2. Transport by sea

EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Stowage category (IMDG) : A

14.6.3. Inland waterway transport

Carriage prohibited (ADN) : No

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no substance on the REACH candidate list

VOC content : 50 - 60 %

15.1.2. National regulations

Germany

Water hazard class (WGK) : 1 - low hazard to waters

WGK remark : Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other Information

according to Regulation (EC) No. 453/2010

Indication of changes:
Added. Product.

Abbreviations and acronyms:

	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	PBT: Persistent, Bioaccumulative, Toxic
	TWA: Time Weight Average
	TSCA: Toxic Substances Control Act

Data sources : ESIS (European chemical Substances Information System; accessed at: <http://esis.jrc.ec.europa.eu/index.php?PGM=cla>.
European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.
Kriester Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition.
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 1	Flammable solids, Category 1
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2

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Skin Sens. 1	Sensitisation — Skin, category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
Water-react. 2	Substances and Mixtures which, in contact with water, emit flammable gases, Category 2
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H228	Flammable solid
H261	In contact with water releases flammable gases
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H360D	May damage the unborn child
H361d	Suspected of damaging the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
EUH208	Contains . May produce an allergic reaction
EUH210	Safety data sheet available on request
R10	Flammable
R11	Highly flammable
R15	Contact with water liberates extremely flammable gases
R20/21	Harmful by inhalation and in contact with skin
R36	Irritating to eyes
R36/38	Irritating to eyes and skin
R37	Irritating to respiratory system
R38	Irritating to skin
R40	Limited evidence of a carcinogenic effect
R43	May cause sensitisation by skin contact
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation
R61	May cause harm to the unborn child
R63	Possible risk of harm to the unborn child
R65	Harmful: may cause lung damage if swallowed
R66	Repeated exposure may cause skin dryness or cracking
R67	Vapours may cause drowsiness and dizziness
F	Highly flammable
Xi	Irritant
Xn	Harmful

LA-CO EU CLP SDS

SDS Prepared by: The Redstone Group, LLC
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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Safety Data Sheet



SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Way Oil Vistac 68, 220

Product Use: Industrial Oil

Product Number(s): 232511, 232512

Company Identification

Chevron Products Company
a division of Chevron U.S.A. Inc.
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevron.com
Product Information: 1 (800) 582-3835, LUBETEK@chevron.com

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Not classified as hazardous according to 29 CFR 1910.1200 (2012).

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 99 %wt/wt
Distillates, hydrotreated middle	64742-46-7	70 - 99 %wt/wt

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Most important symptoms and effects, both acute and delayed

IMMEDIATE SYMPTOMS AND HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR OTHER SYMPTOMS AND HEALTH EFFECTS: Not classified.

Indication of any immediate medical attention and special treatment needed

Not applicable.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this

material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown
Physical State: Liquid
Odor: Petroleum odor
Odor Threshold: No data available
pH: Not Applicable
Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)
Vapor Density (Air = 1): >1
Initial Boiling Point: 315°C (599°F)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: Not Applicable
Specific Gravity: 0.9117 @ 15.6°C (60.1°F) / 15.6°C (60.1°F) Minimum
Density: Not Applicable
Viscosity: 61.2 mm²/s @ 40°C (104°F) Minimum
Evaporation Rate: No data available
Decomposition temperature: No Data Available
Octanol/Water Partition Coefficient: No data available

FLAMMABLE PROPERTIES:

Flammability (solid, gas): No Data Available
Flashpoint: (Cleveland Open Cup) 170 °C (338 °F) (Min)
Autoignition: No data available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity: This material is not expected to react.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for product components.

Skin Corrosion/Irritation: The skin irritation hazard is based on evaluation of data for product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for product components.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for product components.

Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.

Carcinogenicity: The hazard evaluation is based on data for components or a similar material.

Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is not expected to be harmful to aquatic organisms. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material. The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material. The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: NOT REGULATED AS A HAZARDOUS MATERIAL UNDER 49 CFR

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1. Immediate (Acute) Health Effects:	NO
2. Delayed (Chronic) Health Effects:	NO
3. Fire Hazard:	NO
4. Sudden Release of Pressure Hazard:	NO
5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan).

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Lubricating oil)

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : INDUSTRIAL OIL 1 - IND1

REVISION STATEMENT: This revision updates the following sections of this Safety Data Sheet: 1-16
Revision Date: JUNE 03, 2014

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road San Ramon, CA 94583.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



WD-40



MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

<p>MANUFACTURER/SUPPLIER: WD-40 Products [Canada] Ltd. P.O. Box 220 Toronto, Ontario M9C 4V3</p> <p>Information Phone #: (416) 622-9881 Emergency Phone # 24 hr: Canutec: (613) 996-6666 Designated for use only in the event of chemical emergencies involving a spill, leak, fire exposure or accident involving chemicals</p>	<p>US Office: WD-40 Company 1061 Cudahy Place San Diego, CA 92110</p> <p>Information Phone #: (619) 275-1400 Emergency Phone # 24 hr: Chemtrec: (800) 424-9300 Designated for use only in the event of chemical emergencies involving a spill, leak, fire exposure or accident involving chemicals.</p>
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PRODUCT NAME: WD-40 Bulk Liquid
PRODUCT USE: Cleaner, lubricant.
MSDS DATE OF PREPARATION: March 27, 2014

SECTION 2 HAZARDS IDENTIFICATION

DANGER! Harmful or fatal if swallowed. Combustible Liquid. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition.

POTENTIAL HEALTH EFFECTS:

PRIMARY ROUTES OF ENTRY: Inhalation, skin and eye contact.

ACUTE EFFECTS:

INGESTION: This product has low oral toxicity. Swallowing may cause irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis.

EYES: Contact may be mildly irritating to eyes. May cause redness and tearing.

SKIN: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.

INHALATION: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. May aggravate existing respiratory conditions such as asthma. Intentional abuse may be harmful or fatal.

CHRONIC EFFECTS: None expected.

SECTION 3 COMPOSITION INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percent
Aliphatic Petroleum Distillates	64742-47-8	50-70%
	64742-88-7	
Petroleum Base Oil	64742-58-1	30-35%
	64742-53-6	
	64742-56-9	
	64742-65-0	
Non-Hazardous Ingredients	Proprietary	<10%

SECTION 4 FIRST AID MEASURES

For Medical Emergencies Call 1-888-324-7596 (24 hours/day)

INGESTION: Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.

EYE CONTACT: Flush thoroughly with water. Get medical attention if irritation persists.

SKIN CONTACT: Wash with soap and water. If irritation develops and persists, get medical attention.

INHALATION: If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water.

UNUSUAL FIRE/EXPLOSION HAZARDS: Combustible liquid and vapor. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

SECTION 6 ACCIDENTAL RELEASE MEASURES

SPILL RESPONSE: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

SECTION 7 HANDLING AND STORAGE

HANDLING: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use with adequate ventilation. Keep away from heat, sparks and open flames. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children.

STORAGE: Store away from heat, flames and incompatible materials.

SECTION 8 EXPOSURE CONTROLE/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS:

Aliphatic Petroleum Distillates	1200 mg/m3 TWA Manufacturer Recommended
Petroleum Base Oil	5 mg/m3 TWA ACGIH TLV 10 mg/m3 STEL ACGIH TLV
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product

Engineering Controls: Use in a well-ventilated area.

Personal Protection:

Eye Protection: Avoid eye contact. Safety glasses or goggles recommended.

Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended

Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Personal Protection:

Eye Protection: Safety goggles recommended where eye contact is possible.

Skin Protection: Wear chemical resistant gloves.

Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

Work/Hygiene Practices: Wash with soap and water after handling.

SECTION 9 PHYSICAL DATA

APPEARANCE AND ODOR: Light amber liquid with a mild odor.

Freezing Point:	Not Applicable	Odor Threshold:	Not Determined
Boiling Point:	361 - 369°F (183 - 187°C)	Specific Gravity:	0.78 – 0.82 @ 60°F
Solubility in Water:	Insoluble	pH:	Not Applicable
Vapor Pressure:	1 psi @38°C (100°F) ASTM D323	Vapor Density:	Greater than 1
Percent Volatile:	70-75%	VOC:	533 grams/liter (65%)
Coefficient of Water/Oil Distribution:	Not Determined	Kinematic Viscosity:	2.79-2.96cSt @ 100°F
Flash Point:	122°F (49°C) Tag Open Cup	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8.0%
Pour Point:	-63°C (-81.4°F) ASTM D-97	Explosion Impact:	None

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBILITY: Strong oxidizing agents. Avoid heat and open flames.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

SECTION 11 TOXICOLOGICAL INFORMATION

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

SECTION 12 ECOLOGICAL INFORMATION

No data is currently available.

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: If this product becomes a waste, it would be expected to meet the criteria of a hazardous waste based on flammability. However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT Hazard Classification: Excepted from Hazmat (49CFR 173.150 (F)) in non-bulk packagings. Bulk Packagings: Combustible Liquid, n.o.s. (contains Petroleum Distillates), NA1993, PG III

Canadian TDG Classification: Not regulated as a dangerous good when packages in a small means of containment (See 1.33 Class 3, Flammable Liquids: General Exemption).

IMDG Code Hazard Classification: UN1268, Petroleum Distillates, n.o.s. 3, PG III.

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills as required under federal, state and local regulations.

SARA TITLE III:

Hazard Category For Section 311/312: Acute Health, Fire Hazard

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

Section 302 Extremely Hazardous Substances (TPQ): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

CANADIAN REGULATIONS:

Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List or exempt from notification

Canadian WHMIS Classification: Class B-3 (Combustible Liquid).

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

SECTION 16 OTHER INFORMATION

HMIS Hazard Rating: Health – 1 (slight hazard), Fire Hazard – 2 (moderate hazard), Physical Hazard – 0 (minimal hazard)

Revision Date: 03/27/14

Supersedes: 03/10/13

Prepared By: Industrial Health & Safety Consultants, Inc. 1-203-929-3473

This MSDS complies with OSHA guidelines set by 29 CFR 1910.1200 and the Canadian WHMIS regulations. The foregoing information has been compiled from sources believed to be accurate but is not warranted to be. Recipients are advised to confirm in advance of need that data is correct. Standards change without notice. It is the responsibility of the recipient to insure that their personnel have been notified of any changes which may affect them. The data provided on this MSDS are not meant to be used as specifications, only as guideline information as to the safe use of this product. User should refer to applicable laws before use.

N/D = Not Determined N/E = Not Established N/A = Not Applicable

1071200/ No.0084302

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

Version 1.2

Print Date 03/24/2016

Revision Date 03/14/2016

SDS Number 350000014153

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

Recommended use : Hard Surface Cleaner

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252
Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.

Labelling

Precautionary statements

Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain hazardous chemicals at or above a reportable level as defined by OSHA 29 CFR 1910.1200

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : No special requirements

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

Version 1.2

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Revision Date 03/14/2016

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- Skin contact** : No special requirements
- Inhalation** : No special requirements.
- Ingestion** : No special requirements

5. FIREFIGHTING MEASURES

- Suitable extinguishing media** : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during firefighting** : Container may melt and leak in heat of fire.
- Further information** : Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Wash thoroughly after handling.
- Environmental precautions** : Outside of normal use, avoid release to the environment.
- Methods and materials for containment and cleaning up** : Dike large spills.
Clean residue from spill site.

7. HANDLING AND STORAGE

- Handling**
- Precautions for safe handling** : Avoid contact with skin, eyes and clothing.
For personal protection see section 8.
KEEP OUT OF REACH OF CHILDREN AND PETS.
- Advice on protection** : Normal measures for preventive fire protection.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

Version 1.2

Print Date 03/24/2016

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against fire and explosion

Storage

Requirements for storage areas and containers : Keep container closed when not in use.

Other data : Stable under normal conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients unless noted in the table above.

Personal protective equipment

Respiratory protection : No special requirements.

Hand protection : No special requirements.

Eye protection : No special requirements.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid

Color : blue

Odor : floral

Odour Threshold : Test not applicable for this product type

pH : 10.7
at (25 C)

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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- Melting point/freezing point** : 0 C
- Initial boiling point and boiling range** : 100 C
- Flash point** : does not flash
- Evaporation rate** : Test not applicable for this product type
- Flammability (solid, gas)** : Does not sustain combustion.
- Upper/lower flammability or explosive limits** : Test not applicable for this product type
- Vapour pressure** : Calculated 31.7 hPa
- Vapour density** : Test not applicable for this product type
- Relative density** : 1.00 g/cm³ at 25 C
- Solubility(ies)** : soluble
- Partition coefficient: n-octanol/water** : Test not applicable for this product type
- Auto-ignition temperature** : Test not applicable for this product type
- Decomposition temperature** : Heating can release hazardous gases.
- Viscosity, dynamic** : similar to water

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

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Print Date 03/24/2016

Revision Date 03/14/2016

SDS Number 350000014153

Viscosity, kinematic	:	similar to water	:
Oxidizing properties	:	Test not applicable for this product type	:
Volatile Organic Compounds Total VOC (wt. %)*	:	0.2 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations	:
Other information	:	None identified	:

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	If accidental mixing occurs and toxic gas is formed, exit area immediately. Do not return until well ventilated.
Conditions to avoid	:	Direct sources of heat.
Incompatible materials	:	Do not mix with bleach or any other household cleaners. Strong bases
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview	:	This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.
Acute oral toxicity	:	LD50 > 5000 mg/kg
Acute inhalation toxicity	:	LC50 > 10 mg/L
Acute dermal toxicity	:	LD50 > 5000 mg/kg

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	Oral
Acute toxicity	No classification proposed	Dermal
Acute toxicity	No classification proposed	Inhalation - Dust and Mist
Acute toxicity	No classification proposed	Inhalation - Vapour
Acute toxicity	No classification proposed	Inhalation - Gas
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

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Toxicity

The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

No environmental data required.

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

Land transport

Not classified as dangerous in the meaning of transport regulations.

Sea transport

Not classified as dangerous in the meaning of transport regulations.

Air transport

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

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Print Date 03/24/2016

Revision Date 03/14/2016

SDS Number 350000014153

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	0
Reactivity	0

NFPA Ratings

Health	1
Fire	0
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

Version 1.2

Print Date 03/24/2016

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This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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 FEDERATION EUROPEENNE DES
FABRICANTS DE PRODUITS ABRASIFS

Reference: 384142

Revision: 08.01.2014

Printing date: 18.06.2015

Page 1 of 5

**Voluntary product information based on the format of a safety data sheet
for organic bonded abrasives**

1. Identification of Product and Company

1.1 Product Identifier: 384142

41 CUT-OFF WHEEL,REINF.
115X1,2X22,23
TA60P-BFXA
special marking acc. to customer needs

1.2 Use of the product

Organic bonded abrasives used for grinding/cutting of different materials

1.3 Company identification:Company: **TYROLIT** Schleifmittelwerke Swarovski KGAddress: Swarovskistrasse 33
A-6130 Schwaz
 Phone: + +43 5242 606 2572
 Fax: + +43 5242 606 12572
 E-mail: umweltabteilung@tyrolit.com
1.4 Emergency telephone number:

Environmental Department + +43 664 8292 740

2. Hazards Identification**2.1. Classification**

Not applicable.
Abrasives are articles and not dangerous substances or mixtures according to directive 1999/45/EC or Regulation (EC) N° 1272/2008.
See also section 8 and 16.

2.2. Label elements

Abrasives are articles and not dangerous substances or mixtures and therefore no labelling is required according to directive 1999/45/EC or Regulation (EC) N° 1272/2008.

2.3. Other hazards

Not known.

3. Composition/Information on Ingredients

The product contains ingredients which are classified according to 67/548/EEC or Regulation (EC) Nr. 1272/2008 or for which a community occupational exposure limit value exists:

Substance	EC-N°	CAS-N°	Concentration (%)	Classification acc. to Regulation (EC) N° 1272/2008 (CLP)		Classification acc. to
				Hazard classes/ hazard categories	Hazard statements	
Potassium-Aluminium-	262-153-1	60304-36-1	< 15	Eye irrit. 2 Acute Tox. 4	H319 H332	Xn; R22 Xi; R36/37/38



Fluoride				Lact. STOT RE 1 Aquatic chronic 3	H362 H372 H412	
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(For the full text of the H-phrases and the R-phrases see section 16)

The wheel was produced without addition of fillers containing chlorine (Cl), sulfur (SO₄), iron (Fe), copper(Cu) and zinc (Zn).
Suitable for stainless steel conditioning.

4. First Aid Measures

See also section 8 and 16

4.1. Description of first aid measures

Inhalation: not possible, due to the form of the product
 Eye contact: not possible, due to the form of the product
 Skin contact: no harmful effects known
 Ingestion: not likely, due to the form of the product
 If necessary contact physician
 Note to physician: Not available.

4.2. Most important symptoms and effects, both acute and delayed

Not known.

4.3. Indication of any immediate medical attention and special treatment needed

Not relevant. Treat symptomatically.

5. Fire Fighting Measures

5.1. Extinguishing media

Extinguishing media: water, foam, sand, powder or CO₂ as appropriate for surrounding materials.

5.2. Special hazards arising from the product

Toxic fumes may occur. Use respiratory protective equipment.

5.3. Advice for fire fighters

Extinguishing materials should be selected according to the surrounding area.

6. Accidental release measures

Not applicable.

7. Handling and Storage

Follow instructions of grinding machine manufacturers and the relevant national regulations. In addition, observe the safety recommendations of the manufacturer.



FEDERATION EUROPEENNE DES
FABRICANTS DE PRODUITS ABRASIFS

Reference: 384142

Revision: 08.01.2014

Printing date: 18.06.2015

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8. Exposure Controls / Personal Protection

8.1. Control parameters

Before grinding it is recommended to perform a risk assessment and to use personal protection equipment accordingly.

Occupational exposure limit values and/or biological limit values

Keep exposure to the following components under surveillance.
(Observe also the regional official regulations)

Limit value type (country of origin)	Substance	EC-N°	CAS-N°	Occupational limit value				Peak limit	source, remark
				Long term		Short term			
				mg/m³	ml/m³ (ppm)	mg/m³	ml/m³ (ppm)		
MAK (A)	Fluoride	262-153-1	60304-36-1	2,5		12,5		GKV	

Note: Hazardous dust of workpiece material may be generated during grinding and/or sanding operations. National regulations for dust exposure limit values have to be taken into consideration.

8.2. Exposure controls

8.2.1. Individual protection measures

8.2.1.1. Respiratory protection: Use respiratory protective equipment (type depends on specific application and material being ground)

8.2.1.2. Hand protection: Wear protective gloves (type depends on specific application and material being ground)

8.2.1.3. Eye protection: Wear protective goggles or face shield (type depends on specific application and material being ground)

8.2.1.4. Hearing protection: Use hearing protection
(type depends on specific application and material being ground)

8.2.1.5. Body protection: Use protective clothing
(type depends on specific application and material being ground)

9. Physical and Chemical Properties

- 9.1 Physical state: solid
9.2 Colour: various
9.3 Solubility in water: not applicable

10. Stability and Reactivity

10.1. Reactivity

Abrasives are stable when handled or stored correctly.

10.2. Chemical stability

Abrasives are stable when handled or stored correctly.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

No decomposition in normal use.

10.5. Incompatible materials

No dangerous reactions known.

10.6. Hazardous decomposition products

At temperatures exceeding 250° C hazardous or toxic decomposition products may be generated.

11. Toxicological Information

No toxicological effects if inhaled or swallowed or with eye or skin contact are known.
See also section 8.

12. Ecological Information**12.1. Toxicity**

No effects known.

12.2. Persistence and degradability

No biodegradable potentials known.

12.3. Bioaccumulative potential

No potentials known

12.4. Mobility in soil

No potentials known.

12.5. Results of PBT and vPvB assessment

Not relevant.

12.6. Other adverse effects

No effects known.

13. Disposal Considerations**13.1. Product**

Follow national and regional regulations.

Due to the ingredients and properties disposal as hazardous waste (2000/532/EC) (EWC - Nr. 120120)

13.2. Packing

Follow national and regional regulations.

14. Transport Information

The product is not covered by international regulation on the transport of dangerous goods.

15. Regulatory Information**15.1. Safety, health and environmental regulations/legislation specific for the product**

No specific labelling requirements under respective EC directives.

15.2. Chemical safety assessment

Not relevant.

16. Other Information**Changes to the previous versions**

See sections 1 to 16.

Literature and data sources

Directive (1999/45/EC), amended by Regulation (EC) N° 1907/2006.

Directive (67/548/EWG), amended by Directive 2009/2/EC.

REACH Regulation (EC) Nr. 1907/2006, amended by Regulation (EC) N° 552/2009..

Regulation (EC) N° 1272/2008, amended by Regulation (EC) N° 790/2009.

Directive 2000/39/EG, amended by Directive 2009/161/EC.

Directive 75/324/EWG, amended by Regulation (EC) N° 219/2009.

Transport regulations according to ADR, RID und IATA..

Hazard statements referred to in section 2 and 3

According to Regulation (EC) N° 1272/2008:

FEDERATION EUROPEENNE DES
FABRICANTS DE PRODUITS ABRASIFS

Reference: 384142

Revision: 08.01.2014

Printing date: 18.06.2015

Page 5 of 5

- H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H362 May cause harm to breast-fed children.
H372 Causes damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

According to Directive 67/548/EWC:

- R20 Harmful by inhalation
R36 Irritating to eyes
R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R64 May cause harm to breast-fed babies

The above information is based on our current standard of knowledge and does not constitute any warranty of conditions of the product. The information does not form part of any contractual agreement. It remains the user's responsibility to adhere existing laws and regulations.

Issued by: Environmental Department
TYROLIT Schleifmittelwerke Swarovski KG

Contact: DI Antje Schwemberger
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Tel: + +43 5242 606 2572

2014
2015
2016
2017
2018





Safety Data Sheet

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Document Group:	24-2410-9	Version Number:	2.00
Issue Date:	03/12/15	Supersedes Date:	07/20/09

Product identifier

3M™ Dynatron Putty-Cote 592, 593

ID Number(s):

70-0080-0354-6, 70-0080-0355-3

Recommended use

Automotive, Autobody repair.

Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

26-9510-4, 24-2371-3

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3M™ Dynatron Putty-Cote 592, 593 03/12/15

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Document Group:	26-9510-4	Version Number:	9.01
Issue Date:	03/07/14	Supersedes Date:	02/19/14

SECTION 1: Identification

1.1. Product identifier

3M™ Blue Cream Hardener

Product Identification Numbers

LB-K100-0788-3, LB-K100-0801-2, 41-0003-6567-0, 41-0003-6575-3, 41-0003-6576-1, 41-0003-6577-9, 41-0003-6578-7, 41-0003-6610-8, 41-0003-6613-2, 41-0003-6614-0, 60-4550-4563-7, 60-4550-4689-0, 70-0080-0038-5, 70-0080-0373-6, 70-0080-0377-7, 70-0080-0380-1, 70-0080-0382-7, 70-0080-0386-8, 70-0080-0389-2, 70-0080-0609-3

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Hardener for Body Fillers

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Organic Peroxide: Type E.
Serious Eye Damage/Irritation: Category 2A.
Skin Sensitizer: Category 1.

2.2. Label elements

Signal word
Warning

Symbols

Flame | Exclamation mark |

Pictograms



Hazard Statements

Heating may cause a fire.

Causes serious eye irritation.
May cause an allergic skin reaction.

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep away from clothing and other combustible materials.
Keep only in original container.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves and eye/face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.

Storage:

Protect from sunlight.
Store at temperatures not exceeding 32C/90F. Keep cool.
Store away from other materials.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

Notes to Physician:

Not applicable

2.3. Hazards not otherwise classified

None.

8% of the mixture consists of ingredients of unknown acute dermal toxicity.
15% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Benzoyl Peroxide	94-36-0	30 - 60 Trade Secret *
Water	7732-18-5	10 - 30 Trade Secret *
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	10 - 30 Trade Secret *
Zinc Stearate	557-05-1	5 - 10 Trade Secret *
Calcium Sulfate	7778-18-9	3 - 7 Trade Secret *
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	9038-95-3	1 - 5 Trade Secret *
Ferric Ferrocyanide	14038-43-8	< 1 Trade Secret *
Ferric Ammonium Ferrocyanide	25869-00-5	< 1 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode. Part of the oxygen for combustion is supplied by the peroxide itself.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide
Toxic Vapor, Gas, Particulate

Condition

During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible using non-sparking tools. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing of dust created by cutting, sanding, grinding or machining. Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

Protect from sunlight. Store at temperatures not exceeding 32C/90F. Keep cool. Keep only in original container. Store away from other materials. Keep/store away from clothing and other combustible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Zinc Stearate	557-05-1	US Dept of Labor - OSHA	TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³	
Calcium Sulfate	7778-18-9	Amer Conf of Gov. Indust. Hyg.	TWA(inhalable fraction):10 mg/m ³	
Calcium Sulfate	7778-18-9	US Dept of Labor - OSHA	TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³	
Benzoyl Peroxide	94-36-0	Amer Conf of Gov. Indust. Hyg.	TWA:5 mg/m ³	
Benzoyl Peroxide	94-36-0	US Dept of Labor - OSHA	TWA:5 mg/m ³	

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists
 American Indust. Hygiene Assoc : American Industrial Hygiene Association
 Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

US Dept of Labor - OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Wear eye/face protection. Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Wear protective gloves.

Gloves made from the following material(s) are recommended: Nitrile Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Nitrile

Respiratory protection

Wear respiratory protection if ventilation is inadequate to prevent overexposure. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program.

Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure: Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	Blue paste with slight ester odor
Odor threshold	No Data Available
pH	No Data Available
Melting point	No Data Available
Boiling Point	Not Applicable
Flash Point	111 °C [Test Method: Estimated]
Evaporation rate	No Data Available
Flammability (solid, gas)	Organic Peroxide: Type E.
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	No Data Available

Vapor Density	No Data Available
Density	1.2 g/ml
Specific Gravity	1.2 [RefStd: WATER=1] [Details: @ 25 C]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	410 °C [Test Method: Estimated]
Decomposition temperature	No Data Available
Viscosity	70,000 centipoise - 150,000 centipoise
Hazardous Air Pollutants	2.0 % weight [Test Method: Calculated]
Volatile Organic Compounds	0 % weight [Test Method: calculated per CARB title 2]
Volatile Organic Compounds	0 g/l [Test Method: calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Accelerators

10.6. Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

May be harmful if inhaled. Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

May be harmful in contact with skin.

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE 4,386 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE 10.5 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Benzoyl Peroxide	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Benzoyl Peroxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 24.3 mg/l
Benzoyl Peroxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Benzoic Acid, C9-11-Branched Alkyl Esters	Dermal	Rabbit	LD50 > 2,000 mg/kg
Benzoic Acid, C9-11-Branched Alkyl Esters	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
Benzoic Acid, C9-11-Branched Alkyl Esters	Ingestion	Rat	LD50 > 5,000 mg/kg
Zinc Stearate	Dermal	Rabbit	LD50 > 2,000 mg/kg
Zinc Stearate	Ingestion	Rat	LD50 > 5,000 mg/kg
Calcium Sulfate	Ingestion	Rat	LD50 > 5,000 mg/kg
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Dermal	Rabbit	LD50 > 16,960 mg/kg
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5 mg/l
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Rat	LD50 4,240 mg/kg
Ferric Ammonium Ferrocyanide	Ingestion	Rat	LD50 > 5,110 mg/kg
Ferric Ferrocyanide	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
------	---------	-------

Benzoyl Peroxide	Rabbit	Minimal irritation
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Benzoyl Peroxide	Rabbit	Severe irritant
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Benzoyl Peroxide	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value
Benzoyl Peroxide	In Vitro	Not mutagenic
Benzoyl Peroxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Benzoyl Peroxide	Ingestion	Multiple animal species	Not carcinogenic
Benzoyl Peroxide	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Benzoyl Peroxide	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
Benzoyl Peroxide	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	prematuring & during gestation
Benzoyl Peroxide	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	prematuring & during gestation
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Not toxic to female reproduction	Rat	NOAEL 3,770 mg/kg/day	90 days
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Not toxic to male reproduction	Rat	NOAEL 3,770 mg/kg/day	90 days
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1 mg/l	2 weeks

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Oxirane, Polymer with Methyloxirane, Monobutyl	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for	Rat	NOAEL Not available	

Ether			classification			
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Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	endocrine system hematopoietic system liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL .005 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL .001 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	heart	All data are negative	Rat	NOAEL .5 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 145 mg/kg/day	90 days
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	hematopoietic system	All data are negative	Rat	NOAEL 500 mg/kg/day	2 years
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	heart endocrine system respiratory system	All data are negative	Rat	NOAEL 3,770 mg/kg/day	90 days

Aspiration Hazard

Name	Value

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Zinc Stearate (ZINC COMPOUNDS)	557-05-1	5 - 10
Benzoyl Peroxide	94-36-0	30 - 60

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 2 Instability: 0 Special Hazards: Oxidizer

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	26-9510-4	Version Number:	9.01
Issue Date:	03/07/14	Supersedes Date:	02/19/14

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determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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Document Group:	24-2371-3	Version Number:	6.02
Issue Date:	12/15/15	Supersedes Date:	05/26/15

SECTION 1: Identification

1.1. Product identifier

3M™ DYNATRON® PUTTY-COTE 592, 592T, 593

Product Identification Numbers

LB-K100-0587-6, LB-K100-0587-7, LB-K108-2014-3, 41-3701-1520-0

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Autobody repair.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Flammable Liquid: Category 3.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1B.
Carcinogenicity: Category 1A.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Flame | Corrosion | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Flammable liquid and vapor.

Causes serious eye damage.
May cause an allergic skin reaction.
May cause cancer.

Causes damage to organs:
liver |
sensory organs |

Causes damage to organs through prolonged or repeated exposure:
respiratory system |
sensory organs |

May cause damage to organs through prolonged or repeated exposure:
liver |

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting equipment.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves and eye/face protection.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Get medical advice/attention if you feel unwell.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

None.

36% of the mixture consists of ingredients of unknown acute oral toxicity.
41% of the mixture consists of ingredients of unknown acute dermal toxicity.
49% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Proprietary Polyester Resin	Trade Secret*	15 - 40 Trade Secret *
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro- .omega.-hydroxy-	25322-69-4	10 - 30 Trade Secret *
Styrene Monomer	100-42-5	10 - 30 Trade Secret *
Defoamer	Trade Secret*	10 - 30 Trade Secret *
2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	126-86-3	5 - 10 Trade Secret *
Limestone	1317-65-3	3 - 7 Trade Secret *
Polyester Polymer	Trade Secret*	3 - 7 Trade Secret *
Talc	14807-96-6	1 - 5 Trade Secret *
Titanium Dioxide	13463-67-7	1 - 5 Trade Secret *
Fatty Acid Amide	Trade Secret*	1 - 5 Trade Secret *
Thickening Agent	Trade Secret*	< 3 Trade Secret *
Quartz Silica	14808-60-7	< 0.5 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent loss of stabilizing materials. Protect from sunlight. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents. Store away from areas where product may come into contact with food or pharmaceuticals. Store in a dry place.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Styrene Monomer	100-42-5	ACGIH	TWA:20 ppm;STEL:40 ppm	A4: Not class. as human carcin
Styrene Monomer	100-42-5	OSHA	TWA:100 ppm;CEIL:200 ppm	
Limestone	1317-65-3	OSHA	TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m ³	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m ³	
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m ³	
Talc	14807-96-6	OSHA	TWA concentration(as total dust):0.3 mg/m ³ ;TWA concentration(respirable):0.1 mg/m ³ (2.4 millions of particles/cu. ft.);TWA:20 millions of particles/cu. ft.	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2 mg/m ³	A4: Not class. as human carcin
Talc	14807-96-6	CMRG	TWA(as respirable dust):0.5 mg/m ³	
Quartz Silica	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m ³	A2: Suspected human carcin.
Quartz Silica	14808-60-7	OSHA	TWA concentration(as total dust):0.3 mg/m ³ ;TWA concentration(respirable):0.1 mg/m ³ (2.4 millions of particles/cu. ft.)	
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-	25322-69-4	AIHA	TWA(as aerosol):10 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure

Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Full Face Shield
Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Paste
Odor, Color, Grade:	Solvent odor White Paste
Odor threshold	<i>No Data Available</i>
pH	<i>No Data Available</i>
Melting point	<i>No Data Available</i>
Boiling Point	293 °F
Flash Point	90 °F [<i>Test Method: Closed Cup</i>]
Flash Point	32 °C [<i>Test Method: SETAFLASH</i>]
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	<i>No Data Available</i>
Vapor Density	3.6 [<i>Ref Std: AIR=1</i>]
Density	2.75 g/ml
Specific Gravity	2.75 [<i>Ref Std: WATER=1</i>]
Solubility In Water	<i>No Data Available</i>

Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	352,000 - 476,000 centipoise
Hazardous Air Pollutants	0.55 lb HAPS/lb solids [<i>Test Method:</i> Calculated]
Volatile Organic Compounds	15.1 % weight [<i>Test Method:</i> calculated per CARB title 2]
Volatile Organic Compounds	414 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Percent volatile	13.2 % weight
Percent volatile	15.2 % volume
VOC Less H2O & Exempt Solvents	415 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable. Stable under normal conditions. May become unstable at elevated temperatures and/or pressure.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat
Sparks and/or flames

10.5. Incompatible materials

Strong oxidizing agents
Strong acids
Alkali and alkaline earth metals
Strong oxidizing agents
Strong bases

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

May be harmful if inhaled.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

May be harmful if swallowed.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Prolonged or repeated exposure may cause target organ effects:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
SILICA, CRYSTAL AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
Quartz Silica	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Styrene Monomer	100-42-5	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Styrene Monomer	100-42-5	Anticipated human carcinogen	National Toxicology Program Carcinogens
Titanium Dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
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Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE 20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
Styrene Monomer	Dermal	Rat	LD50 > 2,000 mg/kg
Styrene Monomer	Inhalation-Vapor (4 hours)	Rat	LC50 8.3 mg/l
Styrene Monomer	Ingestion	Rat	LD50 5,000 mg/kg
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-	Dermal	Rabbit	LD50 > 10,000 mg/kg
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-	Ingestion	Rat	LD50 > 2,000 mg/kg
2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Dermal	Rat	LD50 > 2,000 mg/kg
2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Ingestion	Rat	LD50 > 500 mg/kg
Limestone	Dermal	Rat	LD50 > 2,000 mg/kg
Limestone	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Limestone	Ingestion	Rat	LD50 6,450 mg/kg
Polyester Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg
Thickening Agent	Dermal		LD50 estimated to be > 5,000 mg/kg
Thickening Agent	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 12.6 mg/l
Thickening Agent	Ingestion	Rat	LD50 > 5,000 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Styrene Monomer	official classification	Mild irritant
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Rabbit	No significant irritation
Limestone	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Thickening Agent	Rat	No significant irritation
Quartz Silica	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Styrene Monomer	official classification	Moderate irritant
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Rabbit	No significant irritation
	Rabbit	Corrosive

Limestone	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Thickening Agent	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Styrene Monomer	Guinea pig	Not sensitizing
2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Mouse	Sensitizing
Titanium Dioxide	Human and animal	Not sensitizing

Respiratory Sensitization

Name	Species	Value
Talc	Human	Not sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Styrene Monomer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Styrene Monomer	In vivo	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Styrene Monomer	Ingestion	Mouse	Carcinogenic
Styrene Monomer	Inhalation	Human and animal	Carcinogenic
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	Inhalation	Human and animal	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Styrene Monomer	Ingestion	Not toxic to female reproduction	Rat	NOAEL 21 mg/kg/day	3 generation
Styrene Monomer	Inhalation	Not toxic to female reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene Monomer	Inhalation	Not toxic to male reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene Monomer	Ingestion	Some positive male reproductive data	Rat	NOAEL 400	60 days

		exist, but the data are not sufficient for classification		mg/kg/day	
Styrene Monomer	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	during gestation
Styrene Monomer	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2.1 mg/l	during gestation
Limestone	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Talc	Ingestion	Not toxic to development	Rat	NOAEL 1,600 mg/kg	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Styrene Monomer	Inhalation	auditory system	Causes damage to organs	Multiple animal species	LOAEL 4.3 mg/l	not available
Styrene Monomer	Inhalation	liver	Causes damage to organs	Mouse	LOAEL 2.1 mg/l	not available
Styrene Monomer	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	occupational exposure
Styrene Monomer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Styrene Monomer	Inhalation	endocrine system	All data are negative	Rat	NOAEL Not available	not available
Styrene Monomer	Inhalation	kidney and/or bladder	All data are negative	Multiple animal species	NOAEL 2.1 mg/l	not available
Limestone	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Styrene Monomer	Inhalation	eyes	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Styrene Monomer	Inhalation	auditory system	May cause damage to organs through prolonged or repeated exposure	Multiple animal species	NOAEL 1.3 mg/l	not available
Styrene Monomer	Inhalation	liver	May cause damage to organs through prolonged or repeated exposure	Mouse	LOAEL 0.85 mg/l	13 weeks
Styrene Monomer	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 1.1 mg/l	not available
Styrene Monomer	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.85 mg/l	7 days
Styrene Monomer	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.6 mg/l	10 days
Styrene Monomer	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 0.09 mg/l	not available
Styrene Monomer	Inhalation	heart bone, teeth, nails, and/or hair muscles kidney and/or bladder	All data are negative	Multiple animal species	NOAEL 4.3 mg/l	2 years
Styrene Monomer	Ingestion	nervous system	Some positive data exist, but the	Rat	LOAEL 500	8 weeks

			data are not sufficient for classification		mg/kg/day	
Styrene Monomer	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	not available
Styrene Monomer	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 677 mg/kg/day	6 months
Styrene Monomer	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 600 mg/kg/day	470 days
Styrene Monomer	Ingestion	heart respiratory system	All data are negative	Rat	NOAEL 35 mg/kg/day	105 weeks
Limestone	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 18 mg/m3	113 weeks
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact manufacturer for more information

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Styrene Monomer	100-42-5	Trade Secret 10 - 30

15.2. State Regulations

Contact manufacturer for more information

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	None	Carcinogen
Titanium Dioxide	13463-67-7	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact manufacturer for more information

15.4. International Regulations

Contact manufacturer for more information

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 3 Flammability: 3 Instability: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: *3 Flammability: 3 Physical Hazard: 1 Personal Protection: X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use

and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

Document Group:	24-2371-3	Version Number:	6.02
Issue Date:	12/15/15	Supersedes Date:	05/26/15

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Document Group:	07-1664-7	Version Number:	12.10
Issue Date:	09/24/15	Supersedes Date:	11/24/14

Product identifier

3M™ Panel Bonding Adhesive PN 08115

ID Number(s):

41-0003-6745-2, 41-0003-8009-1, 41-0003-8082-8, 41-9103-0505-5, 60-9800-3093-0, 60-9800-3246-4, 60-9800-4425-3, FS-9100-3423-0, FS-9100-3424-8, FS-9100-3425-5, FS-9100-5376-8

Recommended use

Automotive, Adhesive

Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket

ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

09-3599-9, 32-4327-6

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3M™ Panel Bonding Adhesive PN 08115 09/24/15

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Document Group:	09-3599-9	Version Number:	14.10
Issue Date:	09/24/15	Supersedes Date:	09/11/15

SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding (90 Minutes) Adhesive Part A (Accelerator) PN 08115, 38315, 58115

Product Identification Numbers

LB-K100-0010-6

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Use with Part B, MSDS 32-4327-6

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 1.

Skin Corrosion/Irritation: Category 1B.

Skin Sensitizer: Category 1B.

Reproductive Toxicity: Category 1B.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Causes severe skin burns and eye damage.
 May cause an allergic skin reaction.
 May damage fertility or the unborn child.

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe dust/fume/gas/mist/vapors/spray.
 Wear protective gloves, protective clothing, and eye/face protection.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF ON SKIN: Wash with plenty of soap and water.
 Immediately call a POISON CENTER or doctor/physician.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

May cause chemical gastrointestinal burns. Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

36% of the mixture consists of ingredients of unknown acute oral toxicity.
 37% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Polymeric Diamide	68911-25-1	15 - 40 Trade Secret *
Fused Silica	60676-86-0	10 - 30 Trade Secret *
Butadiene Acrylonitrile Copolymer	68683-29-4	9 - 30 Trade Secret *

Bis(3-Aminopropyl) Ether of Diethylene Glycol	4246-51-9	7 - 13 Trade Secret *
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	90-72-2	5 - 10 Trade Secret *
Amine Epoxy Curing Agent	288-32-4	1 - 5 Trade Secret *
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	1 - 5 Trade Secret *
Inorganic Salt - NJTSRN 04499600-6317	Trade Secret*	1 - 5 Trade Secret *
Bis[(Dimethylamino)Methyl]Phenol	71074-89-0	0.1 - 1.5 Trade Secret *
N-Aminoethylpiperazine	140-31-8	0.1 - 1.5 Trade Secret *
Toluene	108-88-3	< 0.5 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eye Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:

Rinse mouth. Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide

Carbon dioxide

Condition

During Combustion

During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Do not use in a confined area with minimal air exchange. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Toluene	108-88-3	CMRG	STEL:75 ppm	Skin Notation
Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft.	
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	CMRG	CEIL:5 mg/m ³	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft.	
Tris(2,4,6-Dimethylaminomethyl)Phen	90-72-2	CMRG	TWA:5 ppm	

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ACGIH : American Conference of Governmental Industrial Hygienists
 AIHA : American Industrial Hygiene Association
 CMRG : Chemical Manufacturer's Recommended Guidelines
 OSHA : United States Department of Labor - Occupational Safety and Health Administration
 TWA: Time-Weighted-Average
 STEL: Short Term Exposure Limit
 CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

- Full Face Shield
- Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

- Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Viscous liquid
Odor, Color, Grade:	Tan liquid, slight amine odor.
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	>=110 °C
Flash Point	110 °C [<i>Test Method: Closed Cup</i>]
Evaporation rate	<=1 [<i>Ref Std: BUOAC=1</i>]

Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	<=200 mmHg [@ 20 °C]
Vapor Density	No Data Available
Density	1.2 g/ml
Specific Gravity	1.2 [Ref Std: WATER=1]
Solubility In Water	No Data Available
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	100,000 - 225,000 centipoise [Test Method: Brookfield]
Hazardous Air Pollutants	0.01 lb HAPS/lb solids [Test Method: Calculated]
Volatile Organic Compounds	4 g/l [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds	0.4 % weight [Test Method: calculated per CARB title 2]
Percent volatile	0.4 % weight
VOC Less H2O & Exempt Solvents	4 g/l [Test Method: calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

May be harmful in contact with skin.

Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

May be harmful if swallowed.

Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE 2,000 - 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Fused Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fused Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Butadiene Acrylonitrile Copolymer	Dermal	Rabbit	LD50 > 3,000 mg/kg
Butadiene Acrylonitrile Copolymer	Ingestion	Rat	LD50 > 15,300 mg/kg
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Dermal	Rabbit	LD50 2,500 mg/kg
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Ingestion	Rat	LD50 3,160 mg/kg
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	Rat	LD50 1,280 mg/kg
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Ingestion	Rat	LD50 1,000 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Amine Epoxy Curing Agent	Dermal		LD50 estimated to be 200 - 1,000 mg/kg

Amine Epoxy Curing Agent	Ingestion	Rat	LD50 970 mg/kg
Inorganic Salt - NJTSRN 04499600-6317	Dermal	Rat	LD50 estimated to be > 5,000 mg/kg
Inorganic Salt - NJTSRN 04499600-6317	Ingestion	Rat	LD50 9,285 mg/kg
Bis[(Dimethylamino)Methyl]Phenol	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
N-Aminoethylpiperazine	Dermal	Rabbit	LD50 865 mg/kg
N-Aminoethylpiperazine	Ingestion	Rat	LD50 1,470 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	Corrosive
Polymeric Diamide	Rabbit	Irritant
Fused Silica	Rabbit	No significant irritation
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Rabbit	Corrosive
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Bis[(Dimethylamino)Methyl]Phenol	similar compounds	Corrosive
N-Aminoethylpiperazine	Rabbit	Corrosive
Toluene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	similar health hazards	Corrosive
Polymeric Diamide	similar health hazards	Corrosive
Fused Silica	Rabbit	No significant irritation
Bis(3-Aminopropyl) Ether of Diethylene Glycol	similar health hazards	Corrosive
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Bis[(Dimethylamino)Methyl]Phenol	similar compounds	Corrosive
N-Aminoethylpiperazine	Rabbit	Corrosive
Toluene	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Overall product	Guinea pig	Sensitizing
Polymeric Diamide	Guinea pig	Sensitizing
Fused Silica	Human and animal	Not sensitizing
Butadiene Acrylonitrile Copolymer	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product with Silica	Human and	Not sensitizing

N-Aminoethylpiperazine	animal Guinea pig	Sensitizing
Toluene	Guinea pig	Not sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Fused Silica	In Vitro	Not mutagenic
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	In Vitro	Not mutagenic
Dimethyl Siloxane, Reaction Product with Silica	In Vitro	Not mutagenic
N-Aminoethylpiperazine	In vivo	Not mutagenic
N-Aminoethylpiperazine	In Vitro	Some positive data exist, but the data are not sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Fused Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product with Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Fused Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
N-Aminoethylpiperazine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 598 mg/kg/day	prematuring & during gestation
N-Aminoethylpiperazine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 409 mg/kg/day	32 days
N-Aminoethylpiperazine	Ingestion	Not toxic to development	Rat	NOAEL 899 mg/kg/day	prematuring & during gestation
Toluene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

Toluene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
N-Aminoethylpiperazine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Fused Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	skin liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	auditory system hematopoietic system eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product with Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
N-Aminoethylpiperazine	Ingestion	heart endocrine system hematopoietic system liver nervous system kidney and/or bladder	All data are negative	Rat	NOAEL 598 mg/kg/day	28 days
Toluene	Inhalation	auditory system nervous system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	4 weeks

Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system vascular system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	4 weeks

Aspiration Hazard

Name	Value
Toluene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Inorganic Salt - NJTSRN 04499600-6317 (NITRATE COMPOUNDS (WATER DISSOCIABLE; REPORTABLE ONLY WHEN IN AQUEOUS SOLUTION))	Trade Secret	1 - 5

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Benzene	71-43-2	Male reproductive toxin
Benzene	71-43-2	Carcinogen
Benzene	71-43-2	Developmental Toxin
Toluene	108-88-3	Female reproductive toxin
Toluene	108-88-3	Developmental Toxin

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 3 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar

emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding Adhesive Part B PNs 08115, 38315, 58115

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Structural Panel Bonding Adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2A.

Skin Sensitizer: Category 1.

Carcinogenicity: Category 2.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Causes serious eye irritation.
 May cause an allergic skin reaction.
 Suspected of causing cancer.

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Avoid breathing dust/fume/gas/mist/vapors/spray.
 Wear protective gloves and eye/face protection.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

None.

34% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	30 - 60 Trade Secret *
Oxide Glass Chemicals	65997-17-3	10 - 30 Trade Secret *
Fused Silica	60676-86-0	7 - 13 Trade Secret *
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	7 - 13 Trade Secret *
Acrylate Polymer	Trade Secret*	5 - 10 Trade Secret *
Silica	7631-86-9	1 - 5 Trade Secret *
3-(Trimethoxysilyl)propyl Glycidyl Ether	2530-83-8	0.5 - 1.5 Trade Secret *
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	0.5 - 1.5 Trade Secret *
Carbon Black	1333-86-4	< 0.5 Trade Secret *

Epichlorohydrin	106-89-8	< 0.02 Trade Secret *
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*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent

material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from strong bases. Store away from oxidizing agents. Store away from amines.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Epichlorohydrin	106-89-8	ACGIH	TWA:0.5 ppm	A3: Confirmed animal carcin., Skin Notation
Epichlorohydrin	106-89-8	OSHA	TWA:19 mg/m3(5 ppm)	Skin Notation
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	CMRG	TWA:0.5 mg/m3	
Carbon Black	1333-86-4	OSHA	TWA:3.5 mg/m3	
3-(Trimethoxysilyl)propyl Glycidyl Ether	2530-83-8	CMRG	TWA:5 ppm	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Oxide Glass Chemicals	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m3	
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	CMRG	CEIL:5 mg/m3	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Silica	7631-86-9	CMRG	TWA(as respirable dust):3 mg/m3	
SILICA, AMORPHOUS	7631-86-9	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Black, Viscous Liquid.
Odor threshold	No Data Available
pH	No Data Available
Melting point	No Data Available
Boiling Point	>= 95 °F
Flash Point	>= 220 °F [Test Method: Closed Cup]
Evaporation rate	<= 1 Units not avail. or not appl. [Ref Std: BUOAC=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	<= 27 psia
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	10.014 lb/gal
Specific Gravity	1.2 [Ref Std: WATER=1]

Solubility in Water	Negligible
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	100,000 centipoise - 225,000 centipoise [<i>Test Method:</i> Brookfield]
Hazardous Air Pollutants	0.00162 lb HAPS/gal
Volatile Organic Compounds	15 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Volatile Organic Compounds	1.6 % weight [<i>Test Method:</i> calculated per CARB title 2]
Percent volatile	1.6 % weight
VOC Less H2O & Exempt Solvents	15 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Sparks and/or flames

10.5. Incompatible materials

Amines
 Strong acids
 Strong bases
 Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Aldehydes	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
Generic: GLASS FILAMENTS	65997-17-3	Anticipated human carcinogen	National Toxicology Program Carcinogens
Carbon Black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Epichlorohydrin	106-89-8	Grp. 2A: Probable human carc.	International Agency for Research on Cancer
Epichlorohydrin	106-89-8	Anticipated human carcinogen	National Toxicology Program Carcinogens

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE > 12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Oxide Glass Chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide Glass Chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Dermal	Rabbit	LD50 2,500 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Rat	LD50 2,450 mg/kg
Fused Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fused Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Acrylate Polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Acrylate Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
3-(Trimethoxysilyl)propyl Glycidyl Ether	Dermal	Rabbit	LD50 4,000 mg/kg
3-(Trimethoxysilyl)propyl Glycidyl Ether	Inhalation-Dust/Mist	Rat	LC50 > 5.3 mg/l

	(4 hours)		
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Rat	LD50 7,010 mg/kg
Dimethyl Siloxane, Reaction Product With Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl Siloxane, Reaction Product With Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg
Epichlorohydrin	Dermal	Rabbit	LD50 755 mg/kg
Epichlorohydrin	Inhalation-Vapor (4 hours)	Rat	LC50 1.7 mg/l
Epichlorohydrin	Ingestion	Rat	LD50 260 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Mild irritant
Oxide Glass Chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Professional judgement	Mild irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Minimal irritation
Silica	Rabbit	No significant irritation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Rabbit	Mild irritant
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Carbon Black	Rabbit	No significant irritation
Epichlorohydrin	Human and animal	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Moderate irritant
Oxide Glass Chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Professional judgement	Mild irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Mild irritant
Silica	Rabbit	No significant irritation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Carbon Black	Rabbit	No significant irritation
Epichlorohydrin	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human and animal	Sensitizing
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	similar compounds	Sensitizing
Fused Silica	Human and animal	Not sensitizing
Silica	Human and animal	Not sensitizing
3-(Trimethoxysilyl)propyl Glycidyl Ether	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	Human and animal	Not sensitizing
Epichlorohydrin	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In vivo	Not mutagenic
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Oxide Glass Chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
Fused Silica	In Vitro	Not mutagenic
Silica	In Vitro	Not mutagenic
3-(Trimethoxysilyl)propyl Glycidyl Ether	In vivo	Not mutagenic
3-(Trimethoxysilyl)propyl Glycidyl Ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	In Vitro	Not mutagenic
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification
Epichlorohydrin	In Vitro	Some positive data exist, but the data are not sufficient for classification
Epichlorohydrin	In vivo	Mutagenic

Carcinogenicity

Name	Route	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Oxide Glass Chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Fused Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
3-(Trimethoxysilyl)propyl Glycidyl Ether	Dermal	Mouse	Not carcinogenic
Dimethyl Siloxane, Reaction Product With Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic

Carbon Black	Inhalation	Rat	Carcinogenic
Epichlorohydrin	Dermal	Mouse	Not carcinogenic
Epichlorohydrin	Ingestion	Rat	Carcinogenic
Epichlorohydrin	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
Fused Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Epichlorohydrin	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.2 mg/l	10 weeks
Epichlorohydrin	Inhalation	Not toxic to development	Multiple animal species	NOAEL 0.09 mg/l	during organogenesis
Epichlorohydrin	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 160 mg/kg/day	during gestation
Epichlorohydrin	Ingestion	Toxic to male reproduction	Rat	LOAEL 6.25 mg/kg/day	23 days
Epichlorohydrin	Inhalation	Toxic to male reproduction	Rat	NOAEL 0.02 mg/l	10 weeks

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
------	-------	-----------------	-------	---------	-------------	-------------------

1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Epichlorohydrin	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL not available	occupational exposure
Epichlorohydrin	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Oxide Glass Chemicals	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure
Fused Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product With Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Carbon Black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Epichlorohydrin	Inhalation	liver	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.21 mg/l	19 days
Epichlorohydrin	Inhalation	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.04 mg/l	136 weeks
Epichlorohydrin	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.377 mg/l	4 weeks
Epichlorohydrin	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.211 mg/l	4 weeks
Epichlorohydrin	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.02 mg/l	98 days
Epichlorohydrin	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.002 mg/l	98 days
Epichlorohydrin	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.02 mg/l	13 weeks

Epichlorohydrin	Inhalation	blood	All data are negative	Rat	NOAEL 0.189 mg/l	90 days
Epichlorohydrin	Ingestion	heart blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 80 mg/kg/day	12 weeks
Epichlorohydrin	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25 mg/kg/day	90 days

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Epichlorohydrin	106-89-8	Male reproductive toxin
Epichlorohydrin	106-89-8	Carcinogen
Carbon Black	1333-86-4	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	32-4327-6	Version Number:	1.01
Issue Date:	09/23/15	Supersedes Date:	11/24/14

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Document Group:	11-3180-4	Version Number:	14.00
Issue Date:	04/16/15	Supersedes Date:	04/23/10

Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive DP100, Clear

ID Number(s):

62-3575-1430-6, 62-3575-1435-5, 62-3575-3530-1, 62-3575-3830-5

Recommended use

Structural adhesive

Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

10-3337-2, 10-3341-4

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Document Group:	10-3341-4	Version Number:	22.00
Issue Date:	04/16/15	Supersedes Date:	01/06/10

SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive DP100 Clear, Part A

1.2. Recommended use and restrictions on use

Recommended use

Accelerator for 2 part epoxy adhesive, Structural adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2A.

Skin Corrosion/Irritation: Category 2.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms



Hazard Statements

Causes serious eye irritation.
Causes skin irritation.

Precautionary Statements

Prevention:

Wear protective gloves and eye/face protection.
Wash thoroughly after handling.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Mercaptan Polymer (NJTS Reg. No. 04499600-6776)	Trade Secret*	80 - 95 Trade Secret *
2,4,6-tris((Dimethylamino)methyl)phenol	90-72-2	5 - 15 Trade Secret *
bis((Dimethylamino)methyl)phenol	71074-89-0	0.1 - 1.5 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Sulfide	During Combustion
Oxides of Nitrogen	During Combustion
Oxides of Sulfur	During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
2,4,6-tris((Dimethylamino)methyl)phenol	90-72-2	CMRG	TWA:5 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Butyl Rubber

Neoprene

Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

General Physical Form:	Liquid
Specific Physical Form:	Viscous
Odor, Color, Grade:	dark amber, strong mercaptan odor
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>

Melting point	<i>Not Applicable</i>
Boiling Point	≥ 257 °C
Flash Point	257 °C [<i>Test Method:</i> Closed Cup]
Evaporation rate	<i>Not Applicable</i>
Flammability (solid, gas)	<i>Not Applicable</i>
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	Negligible
Vapor Density	<i>Not Applicable</i>
Density	1.15 g/ml
Specific Gravity	1.15 [<i>Ref Std:</i> WATER=1]
Solubility in Water	Negligible
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	8,000 - 15,000 centipoise [@ 73 °F]
Hazardous Air Pollutants	0 % weight [<i>Test Method:</i> Calculated]
VOC Less H2O & Exempt Solvents	0 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1] [<i>Details:</i> when used as intended with Part B]
VOC Less H2O & Exempt Solvents	0 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1] [<i>Details:</i> as supplied]
VOC Less H2O & Exempt Solvents	0 % [<i>Test Method:</i> calculated SCAQMD rule 443.1] [<i>Details:</i> when used as intended with Part B]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be

reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:

May be harmful if swallowed.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
Mercaptan Polymer (NJTS Reg. No. 04499600-6776)	Dermal	Rabbit	LD50 > 10,200 mg/kg
Mercaptan Polymer (NJTS Reg. No. 04499600-6776)	Ingestion	Rat	LD50 2,600 mg/kg
2,4,6-tris((Dimethylamino)methyl)phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6-tris((Dimethylamino)methyl)phenol	Ingestion	Rat	LD50 1,000 mg/kg
bis((Dimethylamino)methyl)phenol	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	In vitro data	Irritant
2,4,6-tris((Dimethylamino)methyl)phenol	Rabbit	Corrosive
bis((Dimethylamino)methyl)phenol	similar compounds	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro data	Severe irritant
2,4,6-tris((Dimethylamino)methyl)phenol	Rabbit	Corrosive
bis((Dimethylamino)methyl)phenol	similar compounds	Corrosive

Skin Sensitization

Name	Species	Value
2,4,6-tris((Dimethylamino)methyl)phenol	Guinea pig	Some positive data exist, but the data are not sufficient for classification

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
2,4,6-tris((Dimethylamino)methyl)phenol	In Vitro	Not mutagenic

Carcinogenicity

For the component/components, either no data are currently available or the data are not sufficient for classification.

Reproductive Toxicity**Reproductive and/or Developmental Effects**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
2,4,6-tris((Dimethylamino)methyl)phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
2,4,6-tris((Dimethylamino)methyl)phenol	Dermal	skin liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
2,4,6-tris((Dimethylamino)methyl)phenol	Dermal	auditory system hematopoietic system eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 1 **Instability:** 1 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include

the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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Safety Data Sheet

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Issue Date:	04/16/15	Supersedes Date:	06/16/05

SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive DP100 Clear, Part B

Product Identification Numbers

DP-100

1.2. Recommended use and restrictions on use

Recommended use

Structural adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms

**Hazard Statements**

Causes eye irritation.
May cause an allergic skin reaction.

Precautionary Statements**Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Epoxy Resin	25068-38-6	100

SECTION 4: First aid measures

4.1. Description of first aid measures**Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls**8.2.1. Engineering controls**

No engineering controls required.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

Respiratory protection

None required.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

General Physical Form:	Liquid
Specific Physical Form:	Viscous
Odor, Color, Grade:	light straw colored, epoxy odor
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	>=249 °C
Flash Point	249 °C [<i>Test Method: Pensky-Martens Closed Cup</i>]
Evaporation rate	<i>Not Applicable</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	<=0.03 mmHg [<i>@ 70 °C</i>]
Vapor Density	<i>Not Applicable</i>
Density	1.17 g/ml
Specific Gravity	1.17
Solubility in Water	Nil

Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	10,000 - 30,000 centipoise [@ 73.4 °F] [Details: MITS data]
Hazardous Air Pollutants	0 % weight [Test Method: Calculated]
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part A]
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: as supplied]
VOC Less H2O & Exempt Solvents	0 % [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part A]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

Heat

10.5. Incompatible materials

Strong acids

Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

No health effects are expected.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Epoxy Resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy Resin	Ingestion	Rat	LD50 > 1,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Epoxy Resin	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Epoxy Resin	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Epoxy Resin	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value
Epoxy Resin	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Epoxy Resin	In vivo	Not mutagenic
Epoxy Resin	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Epoxy Resin	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Epoxy Resin	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Epoxy Resin	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Epoxy Resin	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
Epoxy Resin	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Epoxy Resin	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel

during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 1 Instability: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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MATERIAL SAFETY DATA SHEET
470 FEATHERSPRAY

Page : 1

SLUYTER COMPANY LTD.

375 Steelcase Road East
Markham, Ontario L3R 1G3 Canada
Tel (905) 475-6011 Fax (905) 475-3119

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER-----SLUYTER COMPANY LTD.
375 Steelcase Road East
Markham, Ontario L3R 1G3 Canada
Tel (905) 475-6011
PRODUCT NAME-----470 FEATHERSPRAY.
PRODUCT USES-----Foam adhesive.
CHEMICAL FAMILY-----Solvent based adhesive (Pressurized).

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS / %	CAS / TLV	LD/50, ROUTE, SPECIES	LC/50, ROUTE, SPECIES
ACETONE			
10 - 30	67-64-1 750 ppm	9750 mg/kg Oral (Rat)	16000 ppm 4 hours Inhalation (Rat)
CYCLOHEXANE			
10 - 30	110-82-7 300 ppm	12705 mg/kg Oral (Rat)	50 ppm 1 hour Inhalation (Rat)
HEXANE			
30 - 60	110-54-3 50 ppm	28710 mg/kg Oral (Rat)	120000 mg/m3 Inhalation MUS
ISOBUTANE			
10 - 30	75-28-5 800 ppm	Not Indicated	Not indicated
PROPANE			
10 - 30	74-98-6 1000 ppm	Not indicated	Not Indicated

SECTION 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:-----
SKIN CONTACT-----Can cause moderate skin irritation,
defatting and dermatitis.
SKIN ABSORPTION-----Not available.
INHALATION CHRONIC-----Breathing of high vapour concentrations
could cause dizziness, headache or even
unconsciousness. May be anesthetic which
could result in other central nervous system effects.
INGESTION-----Can cause gastro-intestinal irritation,
nausea, vomiting and diarrhea. Small
amounts of liquid aspirated into
respiratory system could cause severe
health effects (e.g. Bronchopneumonia or Pulmonary Edema).
EYE CONTACT-----Contains materials that are moderately
irritating to the eyes.
EFFECTS OF ACUTE EXPOSURE-----Refer to "ROUTE ENTRY" section.
EFFECTS OF CHRONIC EXPOSURE-----Prolonged or repeated exposure to N-Hexane
may damage peripheral nerve tissue of the
arms and legs, which may result in
muscular weakness or loss of sensation in
the extremities. Prolonged or repeated skin
contact may cause drying or cracking of the skin.

Ref: 0000201E

Preparation Date : May.07.2015

EMERGENCY - CALL CANUTEC (613) 996-6666 (Collect)

MATERIAL SAFETY DATA SHEET
470 FEATHERSPRAY

SECTION 04: FIRST AID MEASURES

EYE CONTACT-----Check for and remove any contact lenses.
Immediately flush with water for a minimum
of 20 minutes and get medical attention.

SKIN CONTACT-----Remove contaminated clothing. Wash
affected area with water and soap. Seek
medical attention if irritation occurs or persists.

INHALATION-----Remove patient to fresh air. If not
breathing, trained personnel should
administer artificial respiration. Get
medical attention.

INGESTION-----Do NOT induce vomiting. Get immediate
medical attention.

ADDITIONAL INFORMATION-----Contact your local poison control centre.

SECTION 05: FIRE FIGHTING MEASURES

FLAMMABILITY-----Flammable.

UNDER WHAT CONDITIONS-----Flammable aerosol. A dangerous fire hazard
when exposed to heat, flames or
sparks. CAUTION: CONTENTS UNDER PRESSURE.
Temperatures above 50°C may cause container to explode.

SPECIAL PROCEDURES-----A self-contained breathing apparatus is
required for fire fighting personnel. Use
water spray to cool fire exposed surfaces
and to protect personnel.

FLASH POINT (METHOD)----- -18°C TAG Closed Cup. Flame projection > 45 cm.

AUTO IGNITION TEMPERATURE-----Not available.

UPPER FLAMMABLE LIMIT (% VOL)-----7.00.

LOWER FLAMMABLE LIMIT (% VOL)-----0.60.

EXTINGUISHING MEDIA-----Alcohol foam, CO2 or dry chemical.

HAZARDOUS COMBUSTION PRODUCTS-----Oxides of Carbon (CO and CO2). Toxic fumes.

SENSITIVITY TO MECHANICAL-----Not available.

IMPACT

SENSITIVITY TO STATIC-----Not available.

DISCHARGE

SECTION 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL-----Ventilate. Remove all sources of ignition,
open flames, sparks and heaters. Wear
protective gear (See SECTION 8). Small
spills can be wiped. Large spills must be
collected for disposal. Use a
non-combustible absorbent inorganic
material. Clean thoroughly with solvent
based cleaner. Prevent run-off into drains,
sewers and other waterways.

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES-----Avoid skin and eye contact. Avoid breathing
vapours. Use adequate ventilation. Keep away
from heat, sparks and open flame.

STORAGE NEEDS-----Store in a cool area, away from all
sources of heat and ignition. Store in a
dry, well ventilated area. Do NOT store

MATERIAL SAFETY DATA SHEET
470 FEATHERSPRAY

above 49°C.

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:-----

EYE/TYPE-----Safety glasses.

RESPIRATORY/TYPE-----If used indoors on a continuous basis or
if the TLV is exceeded, the use of a
cartridge type respirator (NIOSH/MSHA
approved) is recommended.

GLOVES/ TYPE-----Not applicable.

CLOTHING/TYPE-----Wear adequate protective clothing.

FOOTWEAR/TYPE-----Safety boots as specified in workplace regulations.

OTHER/TYPE-----Eye bath and safety shower.

VENTILATION REQUIREMENTS-----Natural or mechanical (Explosion Proof)
ventilation to keep vapour levels well below the TLV.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE-----Aerosol Can.
ODOUR-----Petroleum Solvent Odour.
SPECIFIC GRAVITY-----0.75 - 0.85 (Liquid Contents).
ODOUR THRESHOLD (ppm)-----Not available.
VAPOUR PRESSURE-----90 psig @ 20°C.
VAPOUR DENSITY (AIR=1)----- > 1.00.
EVAPORATION RATE-----Not available.
BOILING POINT (deg C)-----56°C.
pH-----Not applicable.
SOLUBILITY IN WATER (% W/W)-----Negligible.
COEFFICIENT OF WATER\OIL-----Not available.
DISTRIBUTION
FREEZING POINT----- < 0°C.
MELTING POINT (deg C)-----Not applicable.
MOLECULAR WEIGHT-----Not applicable.

SECTION 10: STABILITY AND REACTIVITY

INCOMPATIBILITY-----Strong acids and strong bases. Oxidizing agents.
REACTIVITY CONDITIONS-----Excessive heat, sparks and open flame.
HAZARDOUS PRODUCTS OF-----Oxides of Carbon (CO and CO2). Toxic
DECOMPOSITION fumes. Smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL-----See "HAZARDOUS INGREDIENTS" in SECTION 2.
IRRITANCY OF MATERIAL-----Moderate.
SENSITIZING CAPABILITY OF-----Not available.
MATERIAL
CARCINOGENICITY OF MATERIAL-----No information is available and no adverse
carcinogenic effects are anticipated.
TERATOGENICITY-----No information is available and no adverse
teratogenicity effects are anticipated.
MUTAGENICITY-----No information is available and no adverse
mutagenicity effects are anticipated.
REPRODUCTIVE EFFECTS-----No information is available and no adverse
reproductive effects are anticipated.
SYNERGISTIC MATERIALS-----Not available.

SECTION 12: ECOLOGICAL INFORMATION

MATERIAL SAFETY DATA SHEET
470 FEATHERSPRAY

ENVIRONMENTAL-----Not available. Can be dangerous if allowed to enter drinking water intakes. Product has an unaesthetic appearance and can be a nuisance. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds and rivers.

BIODEGRADABILITY-----Not available. The solvent portion of this product is biodegradable and vaporizes rapidly.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL-----Contents under pressure. Do NOT puncture, incinerate or expose to heat, even when empty. Spilled material and water rinses are classified as chemical waste. To be disposed of in accordance with current Local, Provincial and Federal regulations.

SECTION 14: TRANSPORT INFORMATION

T.D.G. CLASSIFICATION----- SHIPPING NAME - Aerosols
WHMIS - Consumer Commodity
PACKAGING GROUP- Not Applicable
UN NUMBER - 1950
If the shipment exceeds 500 kg in weight - shipped as
CONSUMER COMMODITY - AEROSOLS FLAMMABLE CLASS 2.1.

SECTION 15: REGULATORY INFORMATION

CPR COMPLIANCE-----This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION-----Class A Class B Div.5 Flammable. Aerosol
Class D Div.2 Subdiv.B.

SECTION 16: OTHER INFORMATION

IMPORTANT:-----The information on this Material Safety Data Sheet is furnished without warranty, expressed or implied. All the information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations for the accuracy or sufficiency.

MATERIAL SAFETY DATA SHEET
476 SPRAY ADHESIVE

Page : 1

SLUYTER COMPANY LTD.

375 Steelcase Road East
Markham, Ontario L3R 1G3 Canada
Tel (905) 475-6011 Fax (905) 475-3119

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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375 Steelcase Road East
Markham, Ontario L3R 1G3 Canada
Tel (905) 475-6011
PRODUCT NAME-----476 SPRAY ADHESIVE
PRODUCT USES-----Foam adhesive.
CHEMICAL FAMILY-----Solvent based adhesive (Pressurized).

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS / %	CAS / TLV	LD/50, ROUTE, SPECIES	LC/50, ROUTE, SPECIES
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CYCLOHEXANE 10 - 30	110-82-7 300 ppm	12705 mg/kg Oral (Rat)	50 ppm 1 hour Inhalation (Rat)
HEXANE 30 - 60	110-54-3 50 ppm	28710 mg/kg Oral (Rat)	120000 mg/m3 Inhalation MUS
ISOBUTANE 10 - 30	75-28-5 800 ppm	Not Indicated	Not indicated
PROPANE 10 - 30	74-98-6 1000 ppm	Not indicated	Not Indicated

SECTION 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:-----
SKIN CONTACT-----Can cause moderate skin irritation,
defatting and dermatitis.
SKIN ABSORPTION-----Not available.
INHALATION CHRONIC-----Breathing of high vapour concentrations
could cause dizziness, headache or even
unconsciousness. May be anesthetic which
could result in other central nervous system effects.
INGESTION-----Can cause gastro-intestinal irritation,
nausea, vomiting and diarrhea. Small
amounts of liquid aspirated into
respiratory system could cause severe
health effects (e.g. Bronchopneumonia or Pulmonary Edema).
EYE CONTACT-----Contains materials that are moderately
irritating to the eyes.
EFFECTS OF ACUTE EXPOSURE-----Refer to "ROUTE ENTRY" section.
EFFECTS OF CHRONIC EXPOSURE-----Prolonged or repeated exposure to N-Hexane
may damage peripheral nerve tissue of the
arms and legs, which may result in
muscular weakness or loss of sensation in
the extremities. Prolonged or repeated skin
contact may cause drying or cracking of the skin.

Ref: 0000202E

Preparation Date : May.07.2015

EMERGENCY - CALL CANUTEC (613) 996-6666 (Collect)

MATERIAL SAFETY DATA SHEET
476 SPRAY ADHESIVE

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SECTION 04: FIRST AID MEASURES

EYE CONTACT-----Check for and remove any contact lenses.
Immediately flush with water for a minimum
of 20 minutes and get medical attention.

SKIN CONTACT-----Remove contaminated clothing. Wash
affected area with water and soap. Seek
medical attention if irritation occurs or persists.

INHALATION-----Remove patient to fresh air. If not
breathing, trained personnel should
administer artificial respiration. Get
medical attention.

INGESTION-----Do NOT induce vomiting. Get immediate
medical attention.

ADDITIONAL INFORMATION-----Contact your local poison control centre.

SECTION 05: FIRE FIGHTING MEASURES

FLAMMABILITY-----Flammable.

UNDER WHAT CONDITIONS-----Flammable aerosol. A dangerous fire hazard
when exposed to heat, flames or
sparks. CAUTION: CONTENTS UNDER PRESSURE.
Temperatures above 50°C may cause container to explode.

SPECIAL PROCEDURES-----A self-contained breathing apparatus is
required for fire fighting personnel. Use
water spray to cool fire exposed surfaces
and to protect personnel.

FLASH POINT (METHOD)----- -18°C TAG Closed Cup. Flame projection > 45 cm.

AUTO IGNITION TEMPERATURE-----Not available.

UPPER FLAMMABLE LIMIT (% VOL)-----7.00.

LOWER FLAMMABLE LIMIT (% VOL)-----0.60.

EXTINGUISHING MEDIA-----Alcohol foam, CO2 or dry chemical.

HAZARDOUS COMBUSTION PRODUCTS-----Oxides of Carbon (CO and CO2). Toxic fumes.

SENSITIVITY TO MECHANICAL-----Not available.

IMPACT

SENSITIVITY TO STATIC-----Not available.

DISCHARGE

SECTION 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL-----Ventilate. Remove all sources of ignition,
open flames, sparks and heaters. Wear
protective gear (See SECTION 8). Small
spills can be wiped. Large spills must be
collected for disposal. Use a
non-combustible absorbent inorganic
material. Clean thoroughly with solvent
based cleaner. Prevent run-off into drains,
sewers and other waterways.

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES-----Avoid skin and eye contact. Avoid breathing
vapours. Use adequate ventilation. Keep away
from heat, sparks and open flame.

STORAGE NEEDS-----Store in a cool area, away from all
sources of heat and ignition. Store in a
dry, well ventilated area. Do NOT store

MATERIAL SAFETY DATA SHEET
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above 49°C.

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:-----

EYE/TYPE-----Safety glasses.

RESPIRATORY/TYPE-----If used indoors on a continuous basis or
if the TLV is exceeded, the use of a
cartridge type respirator (NIOSH/MSHA
approved) is recommended.

GLOVES/ TYPE-----Not applicable.

CLOTHING/TYPE-----Wear adequate protective clothing.

FOOTWEAR/TYPE-----Safety boots as specified in workplace regulations.

OTHER/TYPE-----Eye bath and safety shower.

VENTILATION REQUIREMENTS-----Natural or mechanical (Explosion Proof)
ventilation to keep vapour levels well below the TLV.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE-----Aerosol Can.
ODOUR-----Petroleum Solvent Odour.
SPECIFIC GRAVITY-----0.75 - 0.85 (Liquid Contents).
ODOUR THRESHOLD (ppm)-----Not available.
VAPOUR PRESSURE-----90 psig @ 20°C.
VAPOUR DENSITY (AIR=1)----- > 1.00.
EVAPORATION RATE-----Not available.
BOILING POINT (deg C)-----56°C.
pH-----Not applicable.
SOLUBILITY IN WATER (% W/W)-----Negligible.
COEFFICIENT OF WATER\OIL-----Not available.
DISTRIBUTION
FREEZING POINT----- < 0°C.
MELTING POINT (deg C)-----Not applicable.
MOLECULAR WEIGHT-----Not applicable.

SECTION 10: STABILITY AND REACTIVITY

INCOMPATIBILITY-----Strong acids and strong bases. Oxidizing agents.
REACTIVITY CONDITIONS-----Excessive heat, sparks and open flame.
HAZARDOUS PRODUCTS OF-----Oxides of Carbon (CO and CO2). Toxic
DECOMPOSITION fumes. Smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL-----See "HAZARDOUS INGREDIENTS" in SECTION 2.
IRRITANCY OF MATERIAL-----Moderate.
SENSITIZING CAPABILITY OF-----Not available.
MATERIAL
CARCINOGENICITY OF MATERIAL-----No information is available and no adverse
carcinogenic effects are anticipated.
TERATOGENICITY-----No information is available and no adverse
teratogenicity effects are anticipated.
MUTAGENICITY-----No information is available and no adverse
mutagenicity effects are anticipated.
REPRODUCTIVE EFFECTS-----No information is available and no adverse
reproductive effects are anticipated.
SYNERGISTIC MATERIALS-----Not available.

SECTION 12: ECOLOGICAL INFORMATION

Ref: 0000202E

Preparation Date : May.07.2015

EMERGENCY - CALL CANUTEC (613) 996-6666 (Collect)

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ENVIRONMENTAL-----Not available. Can be dangerous if allowed to enter drinking water intakes. Product has an unaesthetic appearance and can be a nuisance. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds and rivers.

BIODEGRADABILITY-----Not available. The solvent portion of this product is biodegradable and vaporizes rapidly.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL-----Contents under pressure. Do NOT puncture, incinerate or expose to heat, even when empty. Spilled material and water rinses are classified as chemical waste. To be disposed of in accordance with current Local, Provincial and Federal regulations.

SECTION 14: TRANSPORT INFORMATION

T.D.G. CLASSIFICATION----- SHIPPING NAME - Aerosols
WHMIS - Consumer Commodity
PACKAGING GROUP- Not Applicable
UN NUMBER - 1950
If the shipment exceeds 500 kg in weight - shipped as
CONSUMER COMMODITY - AEROSOLS FLAMMABLE CLASS 2.1.

SECTION 15: REGULATORY INFORMATION

CPR COMPLIANCE-----This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION-----Class A Class B Div.5 Flammable. Aerosol
Class D Div.2 Subdiv.B.

SECTION 16: OTHER INFORMATION

IMPORTANT:-----The information on this Material Safety Data Sheet is furnished without warranty, expressed or implied. All the information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations for the accuracy or sufficiency.



Printing date 02/22/2016

Reviewed on 01/08/2016

1 Identification

- **Product identifier**
- **Trade name:** 39023 - 39583 TPO-Direct Bumper Coaters
- **Article number:**
39153, 39253, 39263, 39273, 39163, 39173, 39183, 39193, 39283, 39293, 39413, 39423, 39443, 39583, 39023, 39073, 39083, 39103
- **Application of the substance / the mixture** Coating
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SEM Products Inc.
1685 Overview Drive
Rock Hill, SC 29730
803 207 8225
- **Information department:**
cust_care@semproducts.com : SEM Products, Inc. 1685 Overview Dr. Rock Hill, SC 29730 : phone 1-800-831-1122, M - TH 7am - 4pm EDT
- **Emergency telephone number:** CHEMTREC 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 GHS04 Flame, Gas cylinder

Flam. Aerosol 1 H222 Extremely flammable aerosol.



GHS04 Gas cylinder

Press. Gas H280 Contains gas under pressure; may explode if heated.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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Trade name: 39023 - 39583 TPO-Direct Bumper Coaters

(Contd. of page 1)

Hazard pictograms



Signal word Danger

Hazard-determining components of labeling:

- toluene
- cyclohexane
- 2,6-dimethylheptan-4-one
- Carbon black

Hazard statements

- H222 Extremely flammable aerosol.
- H280 Contains gas under pressure; may explode if heated.
- H315 Causes skin irritation.
- H351 Suspected of causing cancer.
- H361 Suspected of damaging fertility or the unborn child.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H304 May be fatal if swallowed and enters airways.

Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P251 Do not pierce or burn, even after use.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P211 Do not spray on an open flame or other ignition source.
- P280 Wear protective gloves.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- P321 Specific treatment (see on this label).
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P314 Get medical advice/attention if you feel unwell.
- P331 Do NOT induce vomiting.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P405 Store locked up.
- P410+P403 Protect from sunlight. Store in a well-ventilated place.
- P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	1	Health = *1
FIRE	4	Fire = 4
REACTIVITY	3	Reactivity = 3

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:**
Mixture: consisting of the following components.
Weight percentages

· Dangerous components:		
115-10-6	dimethyl ether	40 - 60%
108-88-3	toluene	13 - 30%
110-19-0	isobutyl acetate	13 - 30%
110-82-7	cyclohexane	1.5 - 5%
108-83-8	2,6-dimethylheptan-4-one	1-1.5%
	NJ TSRN: 8009285004 Polyester Plasticizer	1-1.5%
1333-86-4	Carbon black	≤1%
13463-67-7	titanium dioxide	≤1%

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Do not spray on a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Keep respiratory protective device available.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

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· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

115-10-6 dimethyl ether

WEEL Long-term value: 1000 ppm

108-88-3 toluene

PEL Long-term value: 200 ppm
Ceiling limit value: 300; 500* ppm
*10-min peak per 8-hr shift

REL Short-term value: 560 mg/m³, 150 ppm
Long-term value: 375 mg/m³, 100 ppm

TLV Long-term value: 75 mg/m³, 20 ppm
BEI

110-19-0 isobutyl acetate

PEL Long-term value: 700 mg/m³, 150 ppm

REL Long-term value: 700 mg/m³, 150 ppm

TLV Short-term value: NIC-712 mg/m³, NIC-150 ppm
Long-term value: (713) NIC-238 mg/m³, (150) NIC-50 ppm

110-82-7 cyclohexane

PEL Long-term value: 1050 mg/m³, 300 ppm

REL Long-term value: 1050 mg/m³, 300 ppm

TLV Long-term value: 344 mg/m³, 100 ppm

108-83-8 2,6-dimethylheptan-4-one

PEL Long-term value: 290 mg/m³, 50 ppm

REL Long-term value: 150 mg/m³, 25 ppm

TLV Long-term value: 145 mg/m³, 25 ppm

· **Ingredients with biological limit values:**

108-88-3 toluene

BEI 0.02 mg/L
Medium: blood
Time: prior to last shift of workweek
Parameter: Toluene

0.03 mg/L
Medium: urine
Time: end of shift
Parameter: Toluene

0.3 mg/g creatinine
Medium: urine
Time: end of shift
Parameter: o-Cresol with hydrolysis (background)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

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Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Aerosol
· Color:	According to product specification
· Odor:	Characteristic
· Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	-24 °C

· **Flash point:** -42 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 235 °C

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· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	In use, may form flammable/explosive vapour-air mixture.
· Explosion limits:	
Lower:	1.2 Vol %
Upper:	18.6 Vol %
· Vapor pressure at 20 °C:	5200 hPa
· Density at 20 °C:	0.78383 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	89.8 %
VOC content:	89.8 %
	704.1 g/l / 5.88 lb/gl
· Solids content:	9.6 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

108-88-3 toluene

Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rabbit)

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Inhalative	LC50/4 h	5320 mg/l (mouse)
110-82-7 cyclohexane		
Oral	LD50	12705 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
108-88-3	toluene	3
1333-86-4	Carbon black	2B
13463-67-7	titanium dioxide	2B
1330-20-7	xylene	3
67-63-0	propan-2-ol	3
100-41-4	ethylbenzene	2B
7631-86-9	silicon dioxide, chemically prepared	3
14807-96-6	Talc	2B

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

68911-87-5	ALKYL QUATERNARY AMMONIUM MONTMORILLONITE
------------	---

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- **Water hazard class 3 (Self-assessment):** extremely hazardous for water
- **Water hazard class 2 (Self-assessment):** hazardous for water
- **Do not allow product to reach ground water, water course or sewage system.**
- **Danger to drinking water if even small quantities leak into the ground.**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

USA

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(Contd. of page 8)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1950
- **UN proper shipping name**
- **DOT, IATA** Aerosols, flammable
- **ADR** 1950 Aerosols
- **IMDG** AEROSOLS

· **Transport hazard class(es)**

· **DOT**



- **Class** 2.1
- **Label** 2.1

· **ADR**



- **Class** 2 5F Gases
- **Label** 2.1

· **IMDG, IATA**



- **Class** 2.1
- **Label** 2.1

· **Packing group**

- **DOT, ADR, IMDG, IATA** Void

· **Environmental hazards:**

- **Marine pollutant:** No

· **Special precautions for user**

Warning: Gases

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· EMS Number:	F-D,S-U
· Stowage Code	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 75 kg On cargo aircraft only: 150 kg
· ADR	
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1950 AEROSOLS, 2.1

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):	
None of the ingredient is listed.	
· Section 313 (Specific toxic chemical listings):	
108-88-3	toluene
110-82-7	cyclohexane
7429-90-5	aluminium
	ACRYLIC RESIN
1330-20-7	xylene
78-93-3	butanone
67-63-0	propan-2-ol
100-41-4	ethylbenzene
67-56-1	methanol
14807-96-6	Talc

(Contd. on page 11)



Trade name: 39023 - 39583 TPO-Direct Bumper Coaters

(Contd. of page 10)

· TSCA (Toxic Substances Control Act):	
115-10-6	dimethyl ether
108-88-3	toluene
110-19-0	isobutyl acetate
110-82-7	cyclohexane
108-83-8	2,6-dimethylheptan-4-one
1333-86-4	Carbon black
7429-90-5	aluminium
19549-80-5	4,6-dimethylheptan-2-one
64742-88-7	Solvent naphtha (petroleum), medium aliph.
13463-67-7	titanium dioxide
51274-00-1	YELLOW IRON OXIDE
1330-20-7	xylene
78-93-3	butanone
67-63-0	propan-2-ol
1332-37-2	Iron oxide

· Proposition 65

· Chemicals known to cause cancer:	
1333-86-4	Carbon black
13463-67-7	titanium dioxide
1330-20-7	xylene
100-41-4	ethylbenzene
25068-38-6	bisphenolA(chloro)oxirane polymer

· Chemicals known to cause reproductive toxicity for females:

108-88-3	toluene
----------	---------

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.	
------------------------------------	--

· Chemicals known to cause developmental toxicity:

108-88-3	toluene
67-56-1	methanol

· Cancerogenity categories

· EPA (Environmental Protection Agency)		
108-88-3	toluene	II
110-82-7	cyclohexane	I
1330-20-7	xylene	I
78-93-3	butanone	I
100-41-4	ethylbenzene	D

· TLV (Threshold Limit Value established by ACGIH)

108-88-3	toluene	A4
1333-86-4	Carbon black	A4
7429-90-5	aluminium	A4
13463-67-7	titanium dioxide	A4

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1330-20-7	xylene	A4
67-63-0	propan-2-ol	A4
100-41-4	ethylbenzene	A3
14807-96-6	Talc	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

1333-86-4	Carbon black
13463-67-7	titanium dioxide
67-56-1	methanol

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



· **Signal word** Danger

· **Hazard-determining components of labeling:**

- toluene
- cyclohexane
- 2,6-dimethylheptan-4-one
- Carbon black

· **Hazard statements**

- H222 Extremely flammable aerosol.
- H280 Contains gas under pressure; may explode if heated.
- H315 Causes skin irritation.
- H351 Suspected of causing cancer.
- H361 Suspected of damaging fertility or the unborn child.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H304 May be fatal if swallowed and enters airways.

· **Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P251 Do not pierce or burn, even after use.
- P260 Do not breathe dust/fume/gas/mist/vapors/spray.
- P211 Do not spray on an open flame or other ignition source.
- P280 Wear protective gloves.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- P321 Specific treatment (see on this label).
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P314 Get medical advice/attention if you feel unwell.
- P331 Do NOT induce vomiting.
- P302+P352 IF ON SKIN: Wash with plenty of water.

(Contd. on page 13)



Printing date 02/22/2016

Reviewed on 01/08/2016

Trade name: 39023 - 39583 TPO-Direct Bumper Coaters

(Contd. of page 12)

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P410+P403 Protect from sunlight. Store in a well-ventilated place.

P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

• **Department issuing SDS:** Environment protection department.

• **Contact:** Steve Gaver (sgaver@semproducts.com)

• **Date of preparation / last revision** 02/22/2016 / 8

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Aerosol 1: Flammable aerosols, Hazard Category 1

Press. Gas: Gases under pressure: Compressed gas

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Carc. 2: Carcinogenicity, Hazard Category 2

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

• *** Data compared to the previous version altered.**



1 Identification

- **Product identifier**
- **Trade name:** 39101-LV; 39104-LV Flexible Bumper Coater
- **Article number:** 39101-LV, 39104-LV
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Coating
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SEM Products Inc.
1685 Overview Drive
Rock Hill, SC 29730
803 207 8225
- **Information department:**
cust_care@semproducts.com : SEM Products, Inc. 1685 Overview Dr. Rock Hill, SC 29730 : phone 1-800-831-1122, M - TH 7am - 4pm EDT
- **Emergency telephone number:** CHEMTREC 1-800-424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.
Repr. 2 H361 Suspected of damaging fertility or the unborn child.
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07



GHS08

- **Signal word** Danger

Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 1)

· **Hazard-determining components of labeling:**

acetone
toluene
Carbon black
4-chloro-alpha,alpha,alpha-trifluorotoluene

· **Hazard statements**

H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves / eye protection / face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazard description:**

· **WHMIS-symbols:**

B2 - Flammable liquid
D2A - Very toxic material causing other toxic effects



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	*1	Health = *1
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 3)



Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 2)

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization:** Mixtures

· **Description:**

Mixture: consisting of the following components.

Weight percentages

· **Dangerous components:**

67-64-1	acetone	15-40%
98-56-6	4-chloro-alpha,alpha,alpha-trifluorotoluene	10-30%
108-88-3	toluene	3-7%
37244-96-5	NEPHELINE SYENITE	1-5%
	NJ TSRN: 8009285004 Polyester Plasticizer	1-5%
1333-86-4	Carbon black	1-5%
108-65-6	2-methoxy-1-methylethyl acetate	1-5%
2807-30-9	2-(propyloxy)ethanol	1-5%
67-56-1	methanol	≤ 1%

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.

· **For safety reasons unsuitable extinguishing agents:** Water with full jet

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

(Contd. on page 4)



Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 3)

- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

67-64-1 acetone

EL	Short-term value: 500 ppm Long-term value: 250 ppm
EV	Short-term value: 750 ppm Long-term value: 500 ppm

108-88-3 toluene

EL	Long-term value: 20 ppm R
EV	Long-term value: 20 ppm

1333-86-4 Carbon black

EL	Long-term value: 3 mg/m ³ IARC 2B
EV	Long-term value: 3.5 mg/m ³

(Contd. on page 5)

Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 4)

108-65-6 2-methoxy-1-methylethyl acetate	
EL	Short-term value: 75 ppm Long-term value: 50 ppm
EV	Long-term value: 270 mg/m ³ , 50 ppm
2807-30-9 2-(propyloxy)ethanol	
EV	Long-term value: 110 mg/m ³ , 25 ppm Skin
67-56-1 methanol	
EL	Short-term value: 250 ppm Long-term value: 200 ppm Skin
EV	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 6)

Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 5)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	According to product specification
· Odor:	Characteristic
· Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	40 °C

· Flash point: -18 °C

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 465 °C

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: In use, may form flammable/explosive vapour-air mixture.

· Explosion limits:

Lower:	2.6 Vol %
Upper:	13.0 Vol %

· Vapor pressure at 20 °C: 233 hPa

· Density at 20 °C: 1.02 g/cm³

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

· Solvent content:

Organic solvents: 74.8 %

(Contd. on page 7)



Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 6)

VOC content:	10.4 % 299.1 g/l / 2.50 lb/gl
Solids content:	25.3 %
Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
108-88-3 toluene		
Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rabbit)
Inhalative	LC50/4 h	5320 mg/l (mouse)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
108-88-3	toluene	3
1333-86-4	Carbon black	2B

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

68911-87-5	ALKYL QUATERNARY AMMONIUM MONTMORILLONITE
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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

(Contd. on page 8)

Trade name: 39101-LV; 39104-LV Flexible Bumper Coater



(Contd. of page 7)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, TDG, IMDG, IATA** UN1263
- **UN proper shipping name**
- **DOT** Paint
- **TDG** 1263 Paint, special provision 640D
- **IMDG, IATA** PAINT
- **Transport hazard class(es)**
- **DOT**
- 
- **Class** 3 Flammable liquids
- **Label** 3
- **TDG, IMDG, IATA**
- 
- **Class** 3 Flammable liquids
- **Label** 3

(Contd. on page 9)



Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 8)

· Packing group · DOT, TDG, IMDG, IATA	II
· Environmental hazards: · Marine pollutant:	No
· Special precautions for user · EMS Number:	Warning: Flammable liquids F-E,S-E
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information: · DOT · Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· TDG · Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN1263, Paint, special provision 640D, 3, II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):

None of the ingredient is listed.

· Section 313 (Specific toxic chemical listings):

	ACRYLIC RESIN
108-88-3	toluene
67-56-1	methanol

· TSCA (Toxic Substances Control Act):

67-64-1	acetone
98-56-6	4-chloro-alpha,alpha,alpha-trifluorotoluene
108-88-3	toluene
1333-86-4	Carbon black
108-65-6	2-methoxy-1-methylethyl acetate
2807-30-9	2-(propyloxy)ethanol
68911-87-5	ALKYL QUATERNARY AMMONIUM MONTMORILLONITE
67-56-1	methanol

(Contd. on page 10)

CA



Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 9)

7732-18-5	water, distilled, conductivity or of similar purity
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· **Proposition 65**

· **Chemicals known to cause cancer:**

1333-86-4	Carbon black
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· **Chemicals known to cause reproductive toxicity for females:**

108-88-3	toluene
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· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.	
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· **Chemicals known to cause developmental toxicity:**

108-88-3	toluene
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67-56-1	methanol
---------	----------

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

67-64-1	acetone	I
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108-88-3	toluene	II
----------	---------	----

· **TLV (Threshold Limit Value established by ACGIH)**

67-64-1	acetone	A4
---------	---------	----

108-88-3	toluene	A4
----------	---------	----

1333-86-4	Carbon black	A4
-----------	--------------	----

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

1333-86-4	Carbon black
-----------	--------------

67-56-1	methanol
---------	----------

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

67-64-1	acetone
---------	---------

98-56-6	4-chloro-alpha,alpha,alpha-trifluorotoluene
---------	---

108-88-3	toluene
----------	---------

37244-96-5	NEPHELINE SYENITE
------------	-------------------

1333-86-4	Carbon black
-----------	--------------

108-65-6	2-methoxy-1-methylethyl acetate
----------	---------------------------------

2807-30-9	2-(propyloxy)ethanol
-----------	----------------------

68911-87-5	ALKYL QUATERNARY AMMONIUM MONTMORILLONITE
------------	---

67-56-1	methanol
---------	----------

7732-18-5	water, distilled, conductivity or of similar purity
-----------	---

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.	
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· **Canadian Ingredient Disclosure list (limit 1%)**

67-64-1	acetone
---------	---------

108-88-3	toluene
----------	---------

1333-86-4	Carbon black
-----------	--------------

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 11)

Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 10)

· **Hazard pictograms**



GHS02 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

acetone
toluene
Carbon black
4-chloro-alpha,alpha,alpha-trifluorotoluene

· **Hazard statements**

H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves / eye protection / face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environment protection department.

· **Contact:** Steve Gaver (sgaver@semproducts.com)

· **Date of preparation / last revision** 02/17/2015 / 1

· **Abbreviations and acronyms:**

ICAO: International Civil Aviation Organisation
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)

(Contd. on page 12)



Printing date 02/17/2015

Reviewed on 02/17/2015

Trade name: 39101-LV; 39104-LV Flexible Bumper Coater

(Contd. of page 11)

HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Carc. 2: Carcinogenicity, Hazard Category 2
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

*** Data compared to the previous version altered.**

CA



1 Identification

- **Product identifier**
- **Trade name:** 39143 Trim Black
- **Article number:** 39143
- **Application of the substance / the mixture** Coating
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SEM Products Inc.
1685 Overview Drive
Rock Hill, SC 29730
803 207 8225
- **Information department:**
cust_care@semproducts.com : SEM Products, Inc. 1685 Overview Dr. Rock Hill, SC 29730 : phone 1-800-831-1122, M - TH 7am - 4pm EDT
- **Emergency telephone number:** CHEMTREC 1-800-424-9300

2 Hazard identification

- **Classification of the substance or mixture**



GHS02 GHS04 Flame, Gas cylinder

Flammable Aerosols - Category 1

H222

Extremely flammable aerosol.



GHS04 Gas cylinder

Gases Under Pressure - Compressed Gas

H280

Contains gas under pressure; may explode if heated.



GHS08 Health hazard

Carcinogenicity - Category 2

H351

Suspected of causing cancer.

Reproductive Toxicity - Category 2

H361-H362

Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.

Specific Target Organ Toxicity - Repeated Exposure - Category 2

H373

May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard - Category 1

H304

May be fatal if swallowed and enters airways.



GHS07

Skin Irritation - Category 2

H315

Causes skin irritation.

Eye Irritation - Category 2A

H319

Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure - Category 3

H336

May cause drowsiness or dizziness.

(Contd. on page 2)



Trade name: 39143 Trim Black

(Contd. of page 1)

· **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS04 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

toluene

acetone

butanone

n-butyl acetate

· **Hazard statements**

H222 *Extremely flammable aerosol.*

H280 *Contains gas under pressure; may explode if heated.*

H315 *Causes skin irritation.*

H319 *Causes serious eye irritation.*

H351 *Suspected of causing cancer.*

H361-H362 *Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.*

H336 *May cause drowsiness or dizziness.*

H373 *May cause damage to organs through prolonged or repeated exposure.*

H304 *May be fatal if swallowed and enters airways.*

· **Precautionary statements**

P263 *Avoid contact during pregnancy and while nursing.*

P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*

P251 *Do not pierce or burn, even after use.*

P260 *Do not breathe dust/fume/gas/mist/vapours/spray.*

P211 *Do not spray on an open flame or other ignition source.*

P280 *Wear protective gloves/protective clothing/eye protection/face protection.*

P264 *Wash thoroughly after handling.*

P270 *Do not eat, drink or smoke when using this product.*

P271 *Use only outdoors or in a well-ventilated area.*

P201 *Obtain special instructions before use.*

P202 *Do not handle until all safety precautions have been read and understood.*

P301+P310 *IF SWALLOWED: Immediately call a POISON CENTER/ doctor.*

P305+P351+P338 *IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

P321 *Specific treatment (see on this label).*

P304+P340 *IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

P312 *Call a POISON CENTER/doctor if you feel unwell.*

P308+P313 *IF exposed or concerned: Get medical advice/attention.*

P337+P313 *If eye irritation persists: Get medical advice/attention.*

P314 *Get medical advice/attention if you feel unwell.*

P331 *Do NOT induce vomiting.*

P302+P352 *IF ON SKIN: Wash with plenty of water.*

P362+P364 *Take off contaminated clothing and wash it before reuse.*

P405 *Store locked up.*

(Contd. on page 3)

Trade name: 39143 Trim Black

(Contd. of page 2)

P410+P403 Protect from sunlight. Store in a well-ventilated place.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/Information on ingredients

- **Chemical characterization: Mixtures**
- **Description:**
Mixture: consisting of the following components.
Weight percentages

· **Dangerous components:**

67-64-1	acetone	15-40% w/w
68476-86-8	Petroleum gases, liquefied, sweetened	10-30% w/w
108-88-3	toluene	10-30% w/w
110-19-0	isobutyl acetate	5-10% w/w
1330-20-7	xylene	1-5% w/w
78-93-3	butanone	1-5% w/w
123-86-4	n-butyl acetate	0.5-1.5% w/w
1333-86-4	Carbon black	≤ 1% w/w

4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

(Contd. on page 4)



Trade name: 39143 Trim Black

(Contd. of page 3)

- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

* 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Do not spray on a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Keep respiratory protective device available.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

(Contd. on page 5)



Trade name: 39143 Trim Black

(Contd. of page 4)

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/ Personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

67-64-1 acetone

EL Short-term value: 500 ppm
Long-term value: 250 ppm

EV Short-term value: 750 ppm
Long-term value: 500 ppm

108-88-3 toluene

EL Long-term value: 20 ppm
R

EV Long-term value: 20 ppm

110-19-0 isobutyl acetate

EL Long-term value: 150 ppm

EV Short-term value: 187 ppm
Long-term value: 150 ppm

1330-20-7 xylene

EL Short-term value: 150 ppm
Long-term value: 100 ppm

EV Short-term value: 650 mg/m³, 150 ppm
Long-term value: 435 mg/m³, 100 ppm

78-93-3 butanone

EL Short-term value: 100 ppm
Long-term value: 50 ppm

EV Short-term value: 885 mg/m³, 300 ppm
Long-term value: 590 mg/m³, 200 ppm

123-86-4 n-butyl acetate

EL Long-term value: 20 ppm

EV Short-term value: 950 mg/m³, 200 ppm
Long-term value: 710 mg/m³, 150 ppm

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

(Contd. on page 6)

Trade name: 39143 Trim Black

(Contd. of page 5)

· **Protection of hands:**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Aerosol
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	55 °C

· **Flash point:** -103 °C

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 405 °C

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** In use, may form flammable/explosive vapour-air mixture.

· **Explosion limits:**

Lower:	1.2 Vol %
Upper:	13.0 Vol %

(Contd. on page 7)



Trade name: 39143 Trim Black

(Contd. of page 6)

· Vapor pressure at 20 °C:	233 hPa
· Density at 20 °C:	0.74763 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	92.0 %
VOC content:	60.7 %
	645.1 g/l / 5.38 lb/gl
· Solids content:	7.9 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

108-88-3 toluene

Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rabbit)
Inhalative	LC50/4 h	5320 mg/l (mouse)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

(Contd. on page 8)

CA



Trade name: 39143 Trim Black

(Contd. of page 7)

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

108-88-3	toluene	3
1330-20-7	xylene	3
1333-86-4	Carbon black	2B
111-76-2	2-butoxyethanol	3
68855-54-9	diatomaceous earth	GROUP 1
9002-88-4	POLYETHYLENE	3
100-41-4	ethylbenzene	2B

· **NTP (National Toxicology Program)**

68855-54-9	diatomaceous earth	HUMAN CARCINOGEN
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.

· **Behavior in environmental systems:**

- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, TDG, IMDG, IATA** UN1950

(Contd. on page 9)

Trade name: 39143 Trim Black

(Contd. of page 8)

· **UN proper shipping name**
· **DOT, IATA** Aerosols, flammable
· **TDG** 1950 Aerosols
· **IMDG** AEROSOLS

· **Transport hazard class(es)**

· **DOT**



· **Class** 2.1
· **Label** 2.1
· **TDG (Transport dangerous goods):**



· **Class** 2 5F Gases
· **Label** 2.1

· **IMDG, IATA**



· **Class** 2.1
· **Label** 2.1

· **Packing group**

· **DOT, TDG, IMDG, IATA** Void

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special precautions for user**

· **EMS Number:**

· **Stowage Code**

Warning: Gases

F-D,S-U

SW1 Protected from sources of heat.

SW22 For AEROSOLS with a maximum capacity of 1 litre:

Category A. For AEROSOLS with a capacity above 1 litre:

Category B. For WASTE AEROSOLS: Category C, Clear of living

quarters.

· **Segregation Code**

SG69 For AEROSOLS with a maximum capacity of 1 litre:

Segregation as for class 9. Stow "separated from" class 1 except for

division 1.4. For AEROSOLS with a capacity above 1 litre:

Segregation as for the appropriate subdivision of class 2. For

WASTE AEROSOLS: Segregation as for the appropriate subdivision

of class 2.

· **Transport in bulk according to Annex II of**

MARPOL73/78 and the IBC Code

Not applicable.

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Trade name: 39143 Trim Black

(Contd. of page 9)

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**

On passenger aircraft/rail: 75 kg

On cargo aircraft only: 150 kg

· **TDG**

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **UN "Model Regulation":**

UN 1950 AEROSOLS, 2.1

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

108-88-3	toluene
	ACRYLIC RESIN
1330-20-7	xylene
78-93-3	butanone
111-76-2	2-butoxyethanol
67-56-1	methanol
100-41-4	ethylbenzene

· **TSCA (Toxic Substances Control Act):**

67-64-1	acetone
68476-86-8	Petroleum gases, liquefied, sweetened
108-88-3	toluene
110-19-0	isobutyl acetate
1330-20-7	xylene
78-93-3	butanone
123-86-4	n-butyl acetate
16883-83-3	benzyl 3-isobutryloxy-1-isopropyl-2-2-dimethylpropyl phthalate
1333-86-4	Carbon black
68611-44-9	Modified Silica
111-76-2	2-butoxyethanol
68855-54-9	diatomaceous earth
9002-88-4	POLYETHYLENE

(Contd. on page 11)



Trade name: 39143 Trim Black

(Contd. of page 10)

67-56-1	methanol
100-41-4	ethylbenzene

· **Proposition 65**

· **Chemicals known to cause cancer:**

1330-20-7	xylene
1333-86-4	Carbon black
68855-54-9	diatomaceous earth
100-41-4	ethylbenzene

· **Chemicals known to cause reproductive toxicity for females:**

108-88-3	toluene
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· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

108-88-3	toluene
67-56-1	methanol

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

67-64-1	acetone	I
108-88-3	toluene	II
1330-20-7	xylene	I
78-93-3	butanone	I
111-76-2	2-butoxyethanol	NL
100-41-4	ethylbenzene	D

· **TLV (Threshold Limit Value established by ACGIH)**

67-64-1	acetone	A4
108-88-3	toluene	A4
1330-20-7	xylene	A4
1333-86-4	Carbon black	A4
111-76-2	2-butoxyethanol	A3
100-41-4	ethylbenzene	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

1333-86-4	Carbon black
67-56-1	methanol

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

67-64-1	acetone
68476-86-8	Petroleum gases, liquefied, sweetened
108-88-3	toluene
110-19-0	isobutyl acetate
1330-20-7	xylene
78-93-3	butanone
123-86-4	n-butyl acetate

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Trade name: 39143 Trim Black

(Contd. of page 11)

16883-83-3	benzyl 3-isobutryloxy-1-isopropyl-2-2-dimethylpropyl phthalate
1333-86-4	Carbon black
68611-44-9	Modified Silica
111-76-2	2-butoxyethanol
68855-54-9	diatomaceous earth
9002-88-4	POLYETHYLENE
67-56-1	methanol
100-41-4	ethylbenzene

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

67-64-1	acetone
108-88-3	toluene
110-19-0	isobutyl acetate
78-93-3	butanone
123-86-4	n-butyl acetate

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS04 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

toluene

acetone

butanone

n-butyl acetate

· **Hazard statements**

H222 *Extremely flammable aerosol.*

H280 *Contains gas under pressure; may explode if heated.*

H315 *Causes skin irritation.*

H319 *Causes serious eye irritation.*

H351 *Suspected of causing cancer.*

H361-H362 *Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.*

H336 *May cause drowsiness or dizziness.*

H373 *May cause damage to organs through prolonged or repeated exposure.*

H304 *May be fatal if swallowed and enters airways.*

· **Precautionary statements**

P263 *Avoid contact during pregnancy and while nursing.*

P210 *Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.*

P251 *Do not pierce or burn, even after use.*

P260 *Do not breathe dust/fume/gas/mist/vapours/spray.*

P211 *Do not spray on an open flame or other ignition source.*

P280 *Wear protective gloves/protective clothing/eye protection/face protection.*

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Trade name: 39143 Trim Black

(Contd. of page 12)

- P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P301+P310 **IF SWALLOWED: Immediately call a POISON CENTER/ doctor.**
 P305+P351+P338 **IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
 P321 Specific treatment (see on this label).
 P304+P340 **IF INHALED: Remove person to fresh air and keep comfortable for breathing.**
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P308+P313 **IF exposed or concerned: Get medical advice/attention.**
 P337+P313 **If eye irritation persists: Get medical advice/attention.**
 P314 Get medical advice/attention if you feel unwell.
 P331 Do NOT induce vomiting.
 P302+P352 **IF ON SKIN: Wash with plenty of water.**
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P405 Store locked up.
 P410+P403 Protect from sunlight. Store in a well-ventilated place.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.

· **Contact:** Steve Gaver (sgaver@semproducts.com)

· **Date of preparation / last revision** 02/22/2016 / 8

· **Abbreviations and acronyms:**

ICAO: International Civil Aviation Organisation

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

Flammable Aerosols - Category 1: Flammable aerosols, Hazard Category 1

Gases Under Pressure - Compressed Gas: Gases under pressure: Compressed gas

Skin Irritation - Category 2: Skin corrosion/irritation, Hazard Category 2

Eye Irritation - Category 2A: Serious eye damage/eye irritation, Hazard Category 2A

Carcinogenicity - Category 2: Carcinogenicity, Hazard Category 2

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Safety Data Sheet
according to HPR, Schedule 1



Printing date 02/22/2016

Reviewed on 02/04/2016

Trade name: 39143 Trim Black

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*Reproductive Toxicity - Category 2: Reproductive toxicity, Hazard Category 2**Specific Target Organ Toxicity - Single Exposure - Category 3: Specific target organ toxicity - Single exposure, Hazard Category 3**Specific Target Organ Toxicity - Repeated Exposure - Category 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2**Aspiration Hazard - Category 1: Aspiration hazard, Hazard Category 1**· * **Data compared to the previous version altered.***

CA

Section 1. Identification

Product name : Acrysol™ High Performance Body Solvent!
Product code : P60170
Other means of identification : Not available.
Product type : Aerosol.
Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Kent Automotive
8770 W. Bryn Mawr Ave., Suite 900
Chicago, IL 60631-3515

Emergency telephone number of the company : (888) 426-4851

Product Information Telephone Number : (888) 937-5368

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 68.8%

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

Hazard statements	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Harmful if inhaled. Causes serious eye irritation. Causes skin irritation. Suspected of causing cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling.
Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Lt. Aliphatic Hydrocarbon Solvent	56.0	64742-89-8
Xylene	16.1	1330-20-7
Propane	12.8	74-98-6
Butane	12.3	106-97-8
Ethylbenzene	2.9	100-41-4

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical

- : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products

- : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters

- : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters

- : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

- : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

- : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Xylene	ACGIH TLV (United States, 4/2014). TWA: 100 ppm 8 hours. TWA: 434 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m ³ 15 minutes. OSHA PEL (United States, 2/2013). TWA: 100 ppm 8 hours. TWA: 435 mg/m ³ 8 hours.

Section 8. Exposure controls/personal protection

Propane	<p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
Butane	<p>NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 4/2014). STEL: 1000 ppm 15 minutes.</p>
Ethylbenzene	<p>ACGIH TLV (United States, 4/2014). TWA: 20 ppm 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.</p>

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 1.5 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%
Upper: 9.5%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.55 [Air = 1]
- Relative density** : 0.69
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): <0.07 cm²/s (<7 cSt)
Kinematic (40°C (104°F)): <0.07 cm²/s (<7 cSt)

Aerosol product

- Type of aerosol** : Spray
- Heat of combustion** : 0.00004051 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : No specific data.

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LC50 Inhalation Gas. LD50 Oral	Rat Rat	5000 ppm 4300 mg/kg	4 hours -
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Ethylbenzene	LD50 Dermal LD50 Oral	Rabbit Rat	>5000 mg/kg 3500 mg/kg	- -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Ethylbenzene	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
Ethylbenzene	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	6847.2 mg/kg
Inhalation (gases)	9690.9 ppm

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
Ethylbenzene	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours

Section 12. Ecological information

Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Xylene	-	8.1 to 25.9	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

Date of issue/Date of revision : 3/6/2015. Date of previous issue : No previous validation. Version : 1 11/13

Section 14. Transport information

Additional information	Special provisions LIMITED QUANTITY	Special provisions LIMITED QUANTITY	Special provisions (ERG#126)	Special provisions LIMITED QUANTITY	Emergency schedules (EmS) LIMITED QUANTITY, F-D, S-U
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Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		4
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA).

The customer is responsible for determining the PPE code for this material.

Section 16. Other information

[Notice to reader](#)

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.



SAFETY DATA SHEET

1. Identification

Product identifier	Air Tool Oil
Other means of identification	
Product code	SL2531, SL2533
Recommended use	Lubricant for pneumatic equipment
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufactured or sold by:	
Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency (CHEMTREC)	800-424-9300 (US) 703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use. Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates (petroleum), Hydrotreated Light Naphthenic		64742-53-6	90 - 100
Distillates (petroleum), solvent-refined heavy naphthenic		64741-96-4	3 - 5
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts		68649-42-3	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	Wash off with plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	Rinse immediately with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Drink 1 or 2 glasses of water. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	Cool containers exposed to heat with water spray and remove container, if no risk is involved.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>The product is immiscible with water and will spread on the water surface.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewer, basements or confined areas.</p>
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Wear appropriate personal protective equipment. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. When using, do not eat, drink or smoke. Wash contaminated clothing before reuse. Use appropriate container to avoid environmental contamination. For product usage instructions, please see the product label.
Conditions for safe storage, including any incompatibilities	Keep away from heat and sources of ignition. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	PEL	5 mg/m ³	Mist.
		2000 mg/m ³ 500 ppm	
Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)	PEL	5 mg/m ³	Mist.
		2000 mg/m ³ 500 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	TWA	5 mg/m ³	Inhalable fraction.
Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)	TWA	5 mg/m ³	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	Ceiling	1800 mg/m ³	
	STEL	10 mg/m ³	Mist.
Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)	Ceiling	1800 mg/m ³	
	STEL	10 mg/m ³	Mist.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear protective gloves such as: Nitrile. Polyvinyl chloride (PVC).

Other

Wear suitable protective clothing.

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Color	Amber.
Odor	Mild petroleum.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	680 °F (360 °C) estimated
Flash point	320 °F (160 °C) Cleveland Open Cup
Evaporation rate	Slow.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	> 1 (air = 1)
Relative density	0.9 - 0.92
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	500 °F (260 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	22.5 - 27.5 mm ² /s (104 °F (40 °C))
Percent volatile	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged or excessive inhalation may cause respiratory tract irritation.
Skin contact	Prolonged skin contact may cause temporary irritation. Repeated exposure may cause skin dryness or cracking.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not available.
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Product	Species	Test Results
Air Tool Oil		
Acute		
Dermal		
LD50	Rabbit	5100 mg/kg estimated
Inhalation		
LC50	Rat	2295 mg/m ³ , 4 hours estimated
Oral		
LD50	Rat	5097 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Not available.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not available.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Prolonged inhalation may be harmful.
Further information	This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results	
Air Tool Oil			
Aquatic			
Crustacea	EC50	Daphnia	99.9848 mg/l, 48 hours estimated
Fish	LC50	Fish	549.3577 mg/l, 96 hours estimated
Components			
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1 - 5 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	1 - 5 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products	This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Empty containers may be recycled. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with all applicable regulations.
Hazardous waste code	Not regulated.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)

CERCLA Hazardous Substance List (40 CFR 302.4)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3) Listed.

CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Distillates (petroleum), Hydrotreated Light Naphthenic (CAS 64742-53-6)
Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Distillates (petroleum), Hydrotreated Light Naphthenic (CAS 64742-53-6)

Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)

US. New Jersey Worker and Community Right-to-Know Act

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)

US. Rhode Island RTK

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Volatile organic compounds (VOC) regulations**EPA****VOC content (40 CFR 51.100(s))** Not determined**Consumer products (40 CFR 59, Subpt. C)** Not regulated**State****Consumer products** Not regulated**VOC content (CA)** 0 %**VOC content (OTC)** 0 %**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	10-23-2015
Prepared by	Allison Cho
Version #	01
Further information	Not available.
HMIS® ratings	Health: 1 Flammability: 1 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 1 Flammability: 1 Instability: 0

NFPA ratings**Disclaimer**

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.

SECTION I-MATERIAL IDENTIFICATION AND USE

Material Name/Identifier:	Air Tool Oil	Stock No.	4168/4169/4170
Manufacturer's Name:	Kleen-Flo Tumbler Industries Ltd	Street Address:	75 Advance Blvd.
City:	Brampton	Province:	Ontario
Postal Code:	L6T 4N1	Emergency Phone #:	CANUTEC:- 613-996-6666 (24HR)
Chemical Name:	N.Ap. (mixture)	Chemical Family:	N.Ap. (mixture)
Chemical Formula:	N.Ap. (mixture)	Trade Names & Synonyms:	None
Material Use:	Lubricant	Molecular Weight:	N.Ap. (mixture)

SECTION II-HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	Approximate Concentration, %	C.A.S.	LD50 Species & Route	LC50 Species & Route
Hydrotreated petroleum oil	60-100	64742-58-1	>2000 mg/kg rat-oral	N/Av.
Naphthenic Oil	1 -10	64742-52-5	>2000 mg/kg rat-oral	N/Av.
Hydrocarbon Distillate	1 -10	8052-41-3	> 5 g/kg rat-oral	> 5 g/m3 rat-inh.
Zinc C1-C14 alkyldithiophosphates	<1	68649-42-3	N/Av.	N/Av.

SECTION III-PHYSICAL DATA FOR MATERIAL

Physical State:	Liquid	Odour/Appearance:	Pleasant odour/ Clear, red oil
Specific Gravity:	0.84	Odour Threshold(p.p.m.):	N/E
Boiling Point:	>129°C	Evaporation Rate:	N/E
Freezing Point:	N/E	Solubility in Water:	Insoluble
% Volatile(by volume):	N/Av.	Vapour Pressure(mm)Hg:	N/E
Vapour Density(Air=1):	N/E	Coefficient of Water/Oil Distribut:	N/E
pH:	N/Av.		

SECTION IV-FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability (Yes/No)	Yes	If yes under which conditions: combustible liquid, may form combustible vapours at or above flash point
Auto Ignition Temperature:	N/E	Means of Extinction: Carbon dioxide, dry chemical, foam, water fog
Flash Point, Tag. C.C	69°C	Hazardous Combustion Products: oxides of carbon, sulfur, zinc, phosphorous, calcium. Hydrogen sulfide, alkyl mercaptans.
Upper Flammable Limit (%vol)	15-16	Lower Flammable Limit (% by volume): 1
Explosion Data:	Sensitivity to Mechanical Impact: No.	Sensitivity to Static Discharge: No

SECTION V-REACTIVITY DATA

Chemical Stability Yes/No:	Yes	If NO under r which conditions?
Incompatibility to Other Substances Yes/No:	Yes	If so which ones? Strong oxidizing agents
Reactivity and under what conditions?	Not reactive under normal condition	
Hazardous Decomposition Products:	Oxides of carbon, Sulfur, Phosphorous, Calcium & Zinc.	

N/E: not established

N.Ap.:not applicable

N/Av.: not available

SECTION VI-TOXICOLOGICAL PROPERTIES OF PRODUCT

Route of Entry:	--SKIN CONTACT -x-SKIN ABSORPTION -x-EYE CONTACT -x-INHALATION -x-INGESTION		
Effects of Acute Exposure:	May cause skin, eye irritation, dizziness, headache, vomiting, nausea, cough, pulmonary irritation		
Effects of Chronic Exposure:	Prolong, repeated eye and skin contact can cause severe eye irritation, dermatitis.		
LD 50 of Product:	N/E	LC 50 of Product:	N/E
Irritancy of Product:	Eyes, skin	Exposure Limits of Product:	N/E
Sensitization of Product:	None known	Toxicologically Synergistic Materials:	N/E
--CARCINOGENICITY --REPRODUCTIVE EFFECTS --TERATOGENICITY --MUTAGENICITY			None Known

SECTION VII-PREVENTIVE MEASURES

Personal Protective Equipment to be used:

Gloves(specify):	Nitrile, chemical resistant gloves	Eye (specify):	Safety Glasses
Respiratory(specify):	Not required in normal use	Clothing:	Not required
Respiratory Protection:	If used indoors or on a continuous basis, use of NIOSH approved cartridge type respirator is recommended		
Engineering Controls:	Local or mechanical ventilation		
Leak and Spill Procedure:	Dike and absorb spill with inert absorbant material, keep spill out of sewers.		
Waste Disposal:	Dispose according to federal, state (Provincial) and local regulations		
Storage Requirements:	Keep at room temperature. Keep container closed when not in use.		
Handling Procedures and	Keep away from children. Handle with care. Do not inhale or ingest.		
Equipment:	Keep away from excessive heat, open flame, source of ignition.		
DSL listing:	All components are listed on the inventory.		
TDG Classification:	Not regulated		
WHMIS Classification:	B3, D2B	Complies with CCCR 2001. (non-controlled)	

SECTION VIII-FIRST AID MEASURES

Eye:	Flush immediately with running water for at least 15 minutes. Consult physician immediately.
Skin:	Remove contaminated clothing. Rinse with plenty of soapy. See doctor if irritation persist.
Inhalation	Remove to fresh air. Restore breathing if required. See doctor if discomfort persist.
Ingestion:	DO NOT INDUCE VOMITING. If person conscious, give a glasses of water. See doctor immediately.

SECTION IX-PREPARATION DATE OF M.S.D.S.

Additional Info/Comments:		Sources Used: Handbook of Poisoning By: R.H. Dreisbach
Phone Number:	(905) 793-4311	Prepared By: Quality Control Laboratory
Date Prepared:	Janauary 2, 2015.	Kleen-Flo Tumbler Industries Limited

THIS SHEET SUPERSEDES ANY OTHER M.S.D.S. PREVIOUSLY PREPARED

SAFETY DATA SHEET

1. IDENTIFICATION AND GENERAL INFORMATION

P/N#: **Allegro 70% IPA Hygienic Wipe (1001, 1001-05, 1001-10)**
Nomenclature: **Personal Respirator Cleaning Pad**
Recommended Use of the Chemical & Restrictions on Use:
Uses: Personal protective equipment cleaner. Respirator cleaner.
Company Name: Allegro Industries
Address: 1360 Shiloh Church Rd
Piedmont, SC 29673
864-846-8740
Chemtrac: 800-424-9300

2. HAZARDS IDENTIFICATION

Appearance: White solid
Physical State: Solid containing liquid Moist paper
Odor: Mild alcohol odor

Classification:

The information below is for the liquid in industrial quantities when used in an industrial setting. The solution as packed in a consumer quantity is considered a consumer good and when used as intended is unlikely to present a hazard

Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Flammable Liquids	Category 2

Signal Word: Danger

Hazard Statements:

May cause respiratory irritation. May cause drowsiness or dizziness. Highly flammable liquid and vapor.



Precautionary Statements - Prevention:

Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Precautionary Statements - Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IN CASE OF FIRE: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage:

Store in a well-ventilated place. Keep container tightly closed
Keep cool

Precautionary Statements - Disposal:

Dispose of contents/container to an approved waste disposal plant

SAFETY DATA SHEET

3. COMPOSITION

Chemical Name	CAS No	Weight-%
Isopropyl Alcohol	67-63-0	60-75

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

- Eye Contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eyes wide open while rinsing. If symptoms persist, call a physician.
- Skin Contact:** Wash with soap and water. If irritation persists or an allergic reaction occurs, call a physician.
- Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. If symptoms persist, call a physician.
- Ingestion:** Drink plenty of water. Never give anything by mouth to a person who is unconscious or convulsing. Consult a physician.
- Most important symptoms and effects:**
- Symptoms: Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause central nervous system effects. May cause gastrointestinal irritation, nausea, diarrhea, and vomiting.
- Indication of any immediate medical attention and special treatment needed:**
- Notes to Physician: Chronic exposure may aggravate pre-existing skin conditions, impaired liver, kidney or pulmonary function.

5. FIRE FIGHTING MEASURES

- Suitable Extinguishing Media:**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable Extinguishing Media:**
Not determined.
- Specific Hazards Arising from the Chemical:**
Flammable material.
- Hazardous Combustion Products:**
Carbon Oxides
- Sensitivity to Mechanical Impact:**
Not sensitive
- Sensitivity to Static Discharge:**
Yes
- Protective equipment and precautions for firefighters:**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures:**
- Personal Precautions: Use personal protective equipment as required. Avoid contact with eyes and skin. Remove all sources of ignition.
- Methods and material for containment and cleaning up:**
- Methods for Containment: Extinguish all sources of ignition and ventilate area. Prevent further leakage or spillage if safe to do so.
- Methods for Clean-Up: Use personal protective equipment as required. Soak up with absorbent material. Pick up and transfer to properly labeled containers.

SAFETY DATA SHEET

7. HANDLING AND STORAGE

Precautions for safe handling:

Advice on Safe Handling: Wash face, hands, and any exposed skin thoroughly after handling. Wear eye/face protection.
 Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep container tightly closed.
 Ground/bond container and receiving equipment. Use explosion proof equipment. Use only non-sparking tools.
 Take precautionary measures against static discharges. Keep cool. Avoid contact with skin, eyes or clothing.
 Keep out of the reach of children. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities:

Storage Conditions: Store in a well-ventilated place. Keep cool. Keep container tightly closed. P210 - Keep away from open flames/hot surfaces.
 - No smoking. Keep out of reach of children. Keep away from animals.
 Incompatible Materials: Strong oxidizing agents. Acids. Avoid contact with Aluminum, Zinc and other reactive metals.

8. EXPOSURE CONTROLS

Exposure Guidelines:

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Isopropyl Alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m3 (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m3 (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m3	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m3 STEL: 500 ppm STEL: 1225 mg/m3

Appropriate engineering controls:

Engineering Controls: Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment:

Eye/Face Protection: Wear eye/face protection.
 Skin and Body Protection: Protective gloves.
 Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.
 Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations.
 Respiratory protection must be provided in accordance with current local regulations.
 General Hygiene
 Considerations: When using do not eat, drink or smoke. Remove and wash contaminated clothing before reuse.
 Provide regular cleaning of equipment, work areas and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid containing liquid Moist paper
Appearance: White solid
Color: White
Odor: Mild alcohol odor
Odor Threshold: No information available
pH: No information available
Melting Point/Freezing Point: No information available
Boiling Point/Boiling Range: No information available
Flash Point: 12 °C / 54 °F
Evaporation Rate: No information available
Flammability (Solid, Gas): Not determined
Upper Flammability Limits: No information available
Lower Flammability Limit: No information available
Vapor Pressure: No information available
Vapor Density: No information available
Specific Gravity: No information available
Water Solubility: No information available
Solubility in other solvents: No information available

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Partition Coefficient: Not determined
Auto-ignition Temperature: No information available
Decomposition
Temperature: No information available
Kinematic Viscosity: Not determined
Dynamic Viscosity: Not determined
Explosive Properties: Not determined
Oxidizing Properties: Not determined
VOC Content: No information available

10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions.
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous
Reactions: Hazardous polymerization does not occur.
Hazardous Polymerization: Hazardous polymerization does not occur.
Conditions to Avoid: Incompatible Materials. Heat, flames and sparks.
Incompatible Materials: Strong oxidizing agents. Acids. Avoid contact with Aluminum, Zinc and other reactive metals.
Hazardous Decomposition
Products: Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Product Information: May be harmful by inhalation, ingestion, or skin absorption
Eye Contact: Causes serious eye irritation.
Skin Contact: May cause mild skin irritation.
Inhalation: May cause respiratory irritation. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.
Ingestion: May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Component Information:

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Isopropyl Alcohol 67-63-0	= 4396 mg/kg (Rat)	= 12800 mg/kg (Rat) = 12870 mg/kg (Rabbit)	= 72.6 mg/L (Rat) 4 h

Information on physical, chemical and toxicological effects:

Symptoms: Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Serious eye damage/eye

Irritation: Causes serious eye irritation.

Carcinogenicity: Isopropyl Alcohol (IPA) is an IARC Monograph Group 3 chemical. IPA is a Group 1 when manufactured by the strong-acid process.

Chemical Name	ACGIH	IARC	NTP	OSHA
Isopropyl Alcohol 67-63-0		Group 3		X

Legend

IARC (International Agency for Research on Cancer)

Group 3 IARC components are "not classifiable as human carcinogens"

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

STOT - single exposure: May cause respiratory irritation. May cause drowsiness or dizziness.

Chronic Toxicity: May cause skin effects.

Numerical measures

of toxicity: Not determined

SAFETY DATA SHEET

12. ECOLOGICAL INFORMATION

Ecotoxicity: The environmental impact of this product has not been fully investigated.

Component Information:

Chemical Name	Algae/aquatic plants	Fish	Toxicity to micro-organisms	Crustacea
Isopropyl Alcohol 67-63-0	1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50	9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50		13299: 48 h Daphnia magna mg/L EC50

Persistence/Degradability: Not determined

Bioaccumulation: Not determined

Mobility:

Chemical Name	Partition Coefficient
Isopropyl Alcohol 67-63-0	0.05

Other Adverse Effects: Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods:

Disposal of Wastes: This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging: Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status:

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Isopropyl Alcohol 67-63-0	Toxic Ignitable

SAFETY DATA SHEET

14. TRANSPORT INFORMATION

Note: Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT:

UN/ID No: UN1219
Proper Shipping Name: Isopropyl alcohol solution
Hazard Class: 3
Packing Group: II

IATA: Not regulated

UN/ID No: UN1219
Proper Shipping Name: Isopropyl alcohol solution
Hazard Class: 3
Packing Group: II

IMDG: Not regulated

UN/ID No: UN1219
Proper Shipping Name: Isopropyl alcohol solution
Hazard Class: 3
Packing Group: II

15. REGULATORY INFORMATION

International Inventories:

TSCA: Complies
DSL: Does not comply
NDSL: Does not comply
EINECS: Does not comply
ELINCS: Does not comply
ENCS: Does not comply
IECSC: Does not comply
KECL: Does not comply
PICCS: Does not comply
AICS: Does not comply

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations:

CERCLA:

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 311/312 Hazard Categories:

Acute Health Hazard: Yes
Chronic Health Hazard: Yes
Fire Hazard: Yes
Sudden Release of Pressure Hazard: No
Reactive Hazard: No

SARA 313:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SAFETY DATA SHEET

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Isopropyl Alcohol - 67-63-0	67-63-0	65-75	1.0

US State Regulations:

U.S. State Right-to-Know Regulations:

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Isopropyl Alcohol 67-63-0	X	X	X

16. OTHER INFORMATION

NFPA

Health Hazards: 1
Flammability: 3
Instability: Not determined
Special Hazards: Not determined

HMIS

Health Hazards: 1
Flammability: 3
Physical Hazards: 0
Personal Protection: B- Safety Glasses, Gloves

Revised August 31, 2015 Rev. H

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SAFETY DATA SHEET

122000013012

Bactine Original First Aid Liquid

Version 1.0

Revision Date 05/29/2015

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**Product information****Product Name:** Bactine Original First Aid Liquid

SDS Number: 122000013012

Use : Medicinal products**Company**

BAYER HEALTHCARE LLC

Consumer Care

100 Bayer Boulevard PO Box 915

Whippany, NJ 07981-0915

USA

(800) 743-5423

In case of emergency: (800) 331-4536

Chemtec: (800) 424-9300

BAYER INFORMATION PHONE:(800) 331-4536 OR (800) 743-5423

2. HAZARDS IDENTIFICATION**Emergency Overview****Colour:** clear, cloudy, colourless **Form:** liquid **Odour:** characteristic.
GHS Classification:

Not a dangerous substance / mixture according to GHS.

GHS Label element:This material is not subject to the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Weight percent	Components	CAS-No.
2.49%	Lidocaine Hydrochloride	73-78-9

SAFETY DATA SHEET
Bactine Original First Aid Liquid

122000013012

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Label Ingredients: Benzakonium Chloride; Lidocaine hydrochloride; Edetate Disodium; Nonoxynol 9; 1,2-Propanediol; Water;

Other Ingredients

Weight percent	Components	CAS-No.
5 - 10%	Propane-1,2-diol	57-55-6

4. FIRST AID MEASURES

General advice: Take off all contaminated clothing immediately.

If inhaled: Remove to fresh air. Call a physician immediately.

In case of skin contact: If skin reactions occur, contact a physician.

In case of eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed: If swallowed, seek medical advice immediately and show this container or label.

Contact Number: Use the Bayer Emergency Number in Section 1

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting: Fire may cause evolution of: Carbon monoxide (CO)
Carbon dioxide (CO₂)

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment.

Methods for cleaning up: Cover spilled product with liquid-binding material (sand, silica gel, acid binder, universal binder, hybilat). Take up mechanically and fill into labeled, closable containers.

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Additional advice: No special precautions required.

Further Accidental Release Notes No special precautions required.

7. HANDLING AND STORAGE

Handling:

Keep this and all drugs out of the reach of children. Avoid contact with eyes. Store in a dry place away from excessive heat. Reseal containers immediately after use. Use normal precautions for storage of a drug.

Keep away from open flames, hot surfaces and sources of ignition.

Storage:

Storage temperature: 59 - 77 °F (15 - 25 °C)

Do not use after expiration date.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Propane-1,2-diol (57-55-6)

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides
Time Weighted Average (TWA): 10 mg/m³ (Aerosol.)

Propane-1,2-diol (57-55-6)

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides
Time Weighted Average (TWA): 10 mg/m³ (Aerosol.)

Respiratory protection:

Recommended Filter type: Organic vapor with prefilter

None required for consumer use of this product.

Hand protection:

Chemically resistant gloves.

None required for consumer use of this product.

Eye protection:

Safety glasses

None required for consumer use of this product.

Hygiene measures:

Cleanliness Guidelines (GMP) for manufacturing of drugs must be observed!

Other protective measures:

Wear suitable protective equipment.

Please consult label for end-user requirements.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	liquid
Colour:	clear, cloudy, colourless
Odour:	characteristic
Odour Threshold:	No applicable information is available
Melting point:	No applicable information is available
Boiling point/boiling range:	No applicable information is available
Density:	No applicable information is available
Bulk density:	No applicable information is available
Vapour pressure:	No applicable information is available
Viscosity, dynamic:	No applicable information is available
Viscosity, kinematic:	No applicable information is available
Flow time:	No applicable information is available
Surface tension:	No applicable information is available
Miscibility with water:	No applicable information is available
Water solubility:	completely soluble
pH:	6 - 6.8
Relative density:	No applicable information is available
Partition coefficient:	No applicable information is available
Solubility(ies):	No applicable information is available
Flash point:	No applicable information is available
Flammability (solid, gas):	No applicable information is available
Ignition temperature:	No applicable information is available
Explosion limits:	No applicable information is available

10. STABILITY AND REACTIVITY

Conditions to avoid: No data available

Materials to avoid: Oxidizing agents

Hazardous reactions: None known.

Thermal decomposition:

No data available

Hazardous decomposition products:

Carbon monoxide (CO), Carbon dioxide (CO₂)

Oxidizing properties:

No statements available.

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Impact sensitivity:

No data available

11. TOXICOLOGICAL INFORMATION

Other information on toxicity:

No data is available on the product itself.

Acute oral toxicity:

Acute toxicity estimate (ATE) > 2,000 mg/kg

The substance or mixture has no acute oral toxicity

Method: Calculation method

Calculated for GHS Classification and Labelling.

Acute inhalation toxicity:

Propane-1,2-diol

LC50 Rabbit: > 317 mg/l, 2 h

The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity:

Propane-1,2-diol

LD50 Rabbit: > 5,000 mg/kg

The substance or mixture has no acute dermal toxicity

Acute toxicity (other routes of administration):

Lidocaine Hydrochloride

TDL0 intravenous human: 7.1 mg/kg

LD50 intraperitoneal Rat: 122 mg/kg

LD50 subcutaneous Rat: 570 mg/kg

LD50 intravenous Rat: 21 mg/kg

LDL0 intravenous Dog: 65.7 mg/kg

LD50 intravenous Rabbit: 25.6 mg/kg

LD50 intravenous Mouse: 22 mg/kg

LD50 intraperitoneal Mouse: 119 mg/kg

LD50 intramuscular Mouse: 260 mg/kg

Skin irritation:

Propane-1,2-diol

Rabbit

Result: No skin irritation

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Lidocaine Hydrochloride

Rabbit

Result: Moderate skin irritation

Method: Draize Test

According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Eye irritation:

Propane-1,2-diol

Rabbit

Result: No eye irritation

Lidocaine Hydrochloride

Rabbit

Result: Moderate eye irritation

Method: Draize Test

No eye irritation

Sensitisation:

Propane-1,2-diol

Human experience

Result: Does not cause skin sensitisation.

guinea pig

Result: Does not cause skin sensitisation.

Method: OECD 406

Subacute, subchronic and prolonged toxicity:

Propane-1,2-diol

NOEL 50,000 mg/kg, Rat Oral, Exposure time 24 month

NOEL 1 mg/l, Rat Inhalation, Exposure time 3 month

Number of exposures: once daily

Genotoxicity in vitro:

Propane-1,2-diol

Ames test Bacteria

Dose: yes

Result: negative

Method: OECD 471

Mammalian cells

Result: negative

Method: OECD 476

Lidocaine Hydrochloride

Ames test Salmonella typhimurium

Result: negative

Hamster ovary-cells

Result: negative

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Genotoxicity in vivo:

Propane-1,2-diol

Result: negative
Method: OECD 478

Carcinogenicity:

Propane-1,2-diol

Rat:

Exposure time: 2 a
Number of exposures: once daily
Result: negative

Reproductive toxicity:

Propane-1,2-diol

Application Route: Oral

Rat, female: Test period: 18 d

NOAEL: 1600 mg/kg

Result: Animal testing did not show any effects on fertility.

Teratogenicity:

Propane-1,2-diol

Rat, male: Number of exposures: once daily

Test period: 15 d

NOAEL: 1600 mg/l

Result: No indication of teratogenic effects.

Lidocaine Hydrochloride

Application Route: subcutaneous

Rat: NOAEL: 30 mg/kg 72 mg/kg/day

Result: Did not show teratogenic effects in animal experiments.

Application Route: intraperitoneal

Rat: NOAEL: 56 mg/kg/day

Result: Did not show teratogenic effects in animal experiments.

Pharmaceutic effects:

Analgesic Antiseptic

Carcinogenicity:

No Carcinogenic substances as defined by IARC, NTP and/or OSHA

STOT - single exposure:

No data available

STOT - repeated exposure:

No data available

12. ECOLOGICAL INFORMATION

General advice:

Do not allow to enter surface waters or groundwater. No data is available on the product itself.

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Toxicity to fish:

Propane-1,2-diol

Acute Fish toxicity: LC50 40,613 mg/l

Test species: Pimephales promelas (fathead minnow) Duration of test: 96 h

Toxicity to daphnia and other aquatic invertebrates:

Propane-1,2-diol

LC50 18,340 mg/l

Test species: Ceriodaphnia dubia (water flea) Duration of test: 48 h

Toxicity to algae:

Propane-1,2-diol

IC50 19,100 mg/l

tested on: Pseudokirchneriella subcapitata (green algae)

Toxicity to bacteria:

Propane-1,2-diol

NOEC 20,000 mg/l

tested on: Pseudomonas putida

Duration of test: 18 h

Biodegradability:

Propane-1,2-diol

87 - 92 %, 28 d rapidly biodegradable

Method: OECD 301 C

Bioaccumulation:

Propane-1,2-diol

Bioconcentration factor (BCF)

0.09

13. DISPOSAL CONSIDERATIONS

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

14. TRANSPORT INFORMATION

Land transport (CFR)

non-regulated

US Sea transport (IMDG)

non-regulated

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US Air transport (ICAO / IATA cargo aircraft only)
non-regulated

US Air transport (ICAO / IATA passenger and cargo aircraft)
non-regulated

International IATA **non-regulated**
IMDG non-regulated

15. REGULATORY INFORMATION

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components

None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components

None

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components

None

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists

Weight percent	Components	CAS-No.
5 - 10%	Propane-1,2-diol	57-55-6

California Prop. 65

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

OSHA Hazcom Standard Rating Not subject to OSHA

16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

BD1108

Section 1. Identification

Product name : BD7-77 PLUS Penetrant
Product code : BD1108
Other means of identification : Not available.
Product type : Aerosol.
Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Class C Solutions Group
a business of MSC Industrial Supply Co.
75 Maxess Road
Melville, NY 11747-3151

Emergency telephone number of the company : (303) 623-5716

Product Information Telephone Number : (866) 438-6767

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 57%

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
Causes skin irritation.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling.

Response : Get medical attention if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Med. Aliphatic Hydrocarbon Solvent	49.3	64742-88-7
Kerosine, petroleum	15.0	8008-20-6
2-Butoxyethanol	10.5	111-76-2
Heavy Paraffinic Oil	8.0	64742-65-0
Propane	7.7	74-98-6
Butane	7.3	106-97-8
Calcium Dinonylnaphthalene Sulfonate	1.0	57855-77-3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First aid measures

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :

Section 6. Accidental release measures

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not breathe vapor or mist. Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Med. Aliphatic Hydrocarbon Solvent	OSHA PEL (United States, 2/2013). TWA: 100 ppm 8 hours. TWA: 400 mg/m ³ 8 hours.
Kerosine, petroleum	NIOSH REL (United States, 10/2013). TWA: 100 mg/m ³ 10 hours. ACGIH TLV (United States, 4/2014). Absorbed through skin. TWA: 200 mg/m ³ , (as total hydrocarbon vapor) 8 hours.

Section 8. Exposure controls/personal protection

2-Butoxyethanol	<p>ACGIH TLV (United States, 4/2014). TWA: 20 ppm 8 hours.</p> <p>NIOSH REL (United States, 10/2013). Absorbed through skin. TWA: 5 ppm 10 hours. TWA: 24 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). Absorbed through skin. TWA: 50 ppm 8 hours. TWA: 240 mg/m³ 8 hours.</p>
Heavy Paraffinic Oil	<p>ACGIH TLV (United States, 4/2014). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction</p> <p>NIOSH REL (United States, 10/2013). TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist</p> <p>OSHA PEL (United States, 2/2013). TWA: 5 mg/m³ 8 hours.</p>
Propane	<p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
Butane	<p>NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 4/2014). STEL: 1000 ppm 15 minutes.</p>

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 1 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.7%
Upper: 10.6%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.55 [Air = 1]
- Relative density** : 0.74
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): <0.07 cm²/s (<7 cSt)
Kinematic (40°C (104°F)): <0.07 cm²/s (<7 cSt)

Aerosol product

- Type of aerosol** : Spray
- Heat of combustion** : 0.00003961 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).

Section 10. Stability and reactivity

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Kerosine, petroleum 2-Butoxyethanol	LD50 Oral	Rat	15 g/kg	-
	LCLo Inhalation Vapor	Guinea pig	>3.1 mg/l	1 hours
Heavy Paraffinic Oil	LD50 Dermal	Guinea pig	>2000 mg/kg	-
	LD50 Oral	Rat	1300 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Butane	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Calcium Dinonylnaphthalene Sulfonate	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Kerosine, petroleum	Skin - Moderate irritant	Rabbit	-	0.5 Milliliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 Percent	-
2-Butoxyethanol	Skin - Severe irritant	Rabbit	-	500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
Calcium Dinonylnaphthalene Sulfonate	Skin - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	0.5 Milliliters	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Kerosine, petroleum	-	3	-
2-Butoxyethanol	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Kerosine, petroleum	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Butoxyethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Heavy Paraffinic Oil	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Kerosine, petroleum	Category 2	Not determined	Not determined
2-Butoxyethanol	Category 2	Not determined	Not determined
Heavy Paraffinic Oil	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	5330 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-Butoxyethanol	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 800000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Menidia beryllina	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-Butoxyethanol	-	-	Readily

Section 12. Ecological information

Bioaccumulative potential

Not available.

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	Special provisions LIMITED QUANTITY	Special provisions LIMITED QUANTITY	Special provisions (ERG#126)	Special provisions LIMITED QUANTITY	Emergency schedules (EmS) LIMITED QUANTITY, F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :
[State regulations](#)

[California Prop. 65](#)

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

[Hazardous Material Information System \(U.S.A.\)](#)

Health	2
Flammability	4
Physical hazards	0

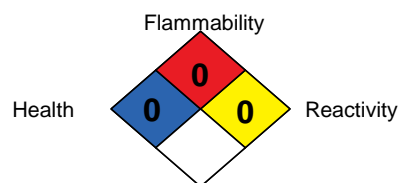
Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

[Notice to reader](#)

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Section 16. Other information



0 = Minimum 1 = Light 2 = Moderate 3 = Serious 4 = Extreme

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	BIO-RUST
Product Identifier	53-G 241 (1,5L), 53-G 247 (20L), 53-G 248 (208L), 53-G 249 (1000L)
MSDS No.	L-134E
Product Family	Cleaning and Degreasing
Manufacturer / Supplier	Walter Surface Technologies Inc., 5977 Trans-Canada Highway, Pointe-Claire, Qc, H9R 1C1, 1-888-592-5837, www.walter.com
Emergency Contact	CANUTEC (Canadian Transport Emergency Centre), (613) 996-6666, 24 hours / 7 days
Information Use	Non-corrosive rust remover

2. HAZARDS IDENTIFICATION

WHMIS Classification	Not a WHMIS controlled product.
Potential Health Effects	
Route of Exposure	Skin contact; eye contact; ingestion
Skin Contact	Not irritating
Eye Contact	May cause slight eye irritation.
Ingestion	May cause slight nausea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Contains no hazardous ingredients.

4. FIRST AID MEASURES

First Aid Procedures

Eye Contact	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If irritation or pain persists, see a doctor.
Ingestion	Have victim rinse mouth with water. Give plenty of water to drink. DO NOT INDUCE VOMITING. Call a Poison Centre or doctor if the victim feels unwell.

5. FIRE FIGHTING MEASURES

Flammable Properties	Does not burn.
Suitable Extinguishing Media	Carbon dioxide, dry chemical powder or appropriate foam.
Unsuitable Extinguishing Media	None known
Specific Hazards Arising from the Chemical	This product presents no unusual hazards in a fire situation.
Protective Equipment and Precautions for Firefighters	No special precautions are necessary. Review Section 6 (Accidental Release Measures) for important information on responding to leaks/spills.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Slippery after spillage or leakage.
Environmental Precautions	No special precautions are necessary.
Methods for Containment and Clean-up	Contain and soak up spill with absorbent that does not react with spilled product. Flush spill area. Review Section 13 (Disposal Considerations) of this MSDS.

7. HANDLING AND STORAGE

Handling	No special handling precautions are necessary.
Storage	Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	Provide eyewash in work area, if contact or splash hazard exists.
Personal Protective Equipment (PPE)	
Eye/Face Protection	Wear chemical safety goggles or face shield when contact is possible.
Skin Protection	Wear chemical protective gloves for long lasting skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear yellow liquid
Odour	Mild
Boiling Point	< 93 °C (199 °F)
Freezing Point	0 °C (32 °F)
Relative Density (water = 1)	1
Specific gravity	1.1 - 1.2
Solubility in Water	Soluble
pH	~ 5,2
Evaporation Rate	> 1 (diethyl ether = 1)
Flash Point	Not applicable
Lower Flammable/Explosive Limit	Not applicable
Upper Flammable/Explosive Limit	Not applicable
Auto-ignition Temperature	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability	Normally stable
Conditions to Avoid	High temperatures
Incompatible Materials	Strong oxidizing agents (e.g. perchloric acid). And other reactive materials.
Hazardous Decomposition Products	Carbon oxide.

11. TOXICOLOGICAL INFORMATION

Eye Irritation / Corrosion	Slight irritation of eyes possible.
Effects of Short-Term (Acute) Exposure	
Ingestion	May cause slight nausea.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Studies were not located.
Persistence and Degradability	No information was located.
Bioaccumulation / Accumulation	No information was located.

Mobility Studies are not available.

13. DISPOSAL CONSIDERATIONS

Eliminate while respecting municipal, provincial and federal regulations.

14. TRANSPORT INFORMATION

Shipping Information Not regulated under Canadian TDG Regulations. Not regulated under US DOT Regulations.

Other Transport Information

Special Shipping Information Please note: Protect from freezing.

15. REGULATORY INFORMATION

Canada

Domestic Substances List (DSL) All ingredients are listed on the DSL.

CEPA - National Pollutant Release Inventory (NPRI) Not specifically listed.

USA

US OSHA Regulatory Status While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Additional USA Regulatory Lists

CERCLA: RQ: None
SARA Title III - Section 302: None
SARA Title III - Section 311/312: None
SARA Title III - Section 313: None
New Jersey Right To Know: None
Section 112: Hazardous Air Pollutants (HAPS): None

16. OTHER INFORMATION

MSDS Prepared By Project Manager, Environmental Solutions and MRO
Phone No. 1-888-592-5837
Date of Preparation February 2015

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



BON AMI® POWER FOAM GLASS CLEANER

Version 2.0

Print Date 11/17/2015

Revision Date 09/29/2015

MSDS Number 350000021130

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name : BON AMI® POWER FOAM GLASS CLEANER

Use of the Substance/Mixture : Hard Surface Cleaner

Company : S.C. Johnson and Son, Limited
1 Webster Street
Brantford ON N3T 5R1

Emergency telephone number : 24 Hour Transport & Medical Emergency Phone (866) 231-5406
24 Hour International Emergency Phone (952) 852-4647
24 Hour Canadian Transport Emergency Phone (CANUTEC) (613) 996-6666

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor : translucent / aerosol Compressed gas / characteristic

Immediate Concerns

: Caution
Avoid contact with skin, eyes and clothing.
Keep away from heat, sparks and flame.
Do not puncture or incinerate.
Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.
Contents under pressure.

Potential Health Effects

Exposure routes : Eye, Skin, Inhalation, Ingestion.

Eyes : May cause:
Mild eye irritation

Skin : Prolonged or repeated contact may dry skin and cause irritation.

Inhalation : No adverse effects expected when used as directed.

Ingestion : May cause irritation to mouth, throat and stomach.
May cause abdominal discomfort.

Aggravated Medical Condition : Persons with pre-existing skin disorders may be more susceptible to irritating effects.

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according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous chemicals present at or above reportable levels as defined by OSHA 29 CFR 1910.1200 or the Canadian Controlled Products Regulations are listed in this table:

Chemical Name	CAS-No.	Weight percent
Isobutane	75-28-5	1.00 - 5.00
Propylene glycol monobutyl ether	5131-66-8	1.00 - 5.00

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

- Eye contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.
- Skin contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.
- Inhalation : Remove to fresh air. If breathing is affected, get medical attention.
- Ingestion : Rinse mouth with water.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during firefighting : Aerosol Product - Containers may rocket or explode in heat of fire.
- Further information : Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.
- Flash point : < -7 C
< 19.4 °F
Method: Tag Closed Cup (TCC)
Note: Propellant
- Lower explosion limit : Note: No data available

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Upper explosion limit : Note: No data available

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Remove all sources of ignition.
Wear personal protective equipment.
- Environmental precautions : Outside of normal use, avoid release to the environment.
- Methods for cleaning up : If damage occurs to aerosol can:
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Use only non-sparking equipment.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

- Advice on safe handling : Do not puncture or incinerate.
Avoid breathing vapours, mist or gas.
Do not spray toward face.
Do not use in areas without adequate ventilation.
Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.

- Advice on protection against fire and explosion : Keep away from heat and sources of ignition.

Storage

- Requirements for storage areas and containers : Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.
Keep container closed when not in use.
Keep in a dry, cool and well-ventilated place.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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MSDS Number 350000021130

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Isobutane	75-28-5	-	1,000 ppm	-	ACGIH STEL

Personal protective equipment

- Respiratory protection** : No personal respiratory protective equipment normally required.
- Hand protection** : No special requirements.
- Eye protection** : No special requirements.
- Skin and body protection** : No special requirements.
- Hygiene measures** : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form : aerosol
Compressed gas
- Color : translucent
- Odor : characteristic
- pH : 11
at 25 C(undiluted)
- Melting point : No data available
- Boiling point : No data available
- Freezing point : No data available
- Flash point : < -7 C
< 19.4 °F
Method: Tag Closed Cup (TCC)
Propellant

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Evaporation rate	:	No data available
Flammability (solid, gas)	:	Does not sustain combustion.
Auto-ignition temperature	:	not auto-flammable
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Vapour pressure	:	No data available
Density	:	8.327 lb/gal at 20 C
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Relative vapour density	:	No data available
Volatile Organic Compounds Total VOC (wt. %)*	:	6.9 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations

10. STABILITY AND REACTIVITY

Conditions to avoid	:	Heat, flames and sparks.
Materials to avoid	:	Strong acids
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.
Thermal decomposition	:	Note: No data available
Hazardous reactions	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 Measured > 5,000 mg/kg
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Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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Acute inhalation toxicity : LC50
Measured
> 5.59 mg/l

Acute dermal toxicity : LD50
Measured
> 5,000 mg/kg

Chronic effects

Carcinogenicity : No data available

Mutagenicity : No data available

Reproductive effects : No data available

Teratogenicity : No data available

Sensitisation : Did not cause sensitisation on laboratory animals.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects : No data available

13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Land transport

- **U.S. DOT and Canadian TDG Surface Transportation:**
Proper shipping name AEROSOLS, Flammable, 2.1

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Class: 2.1
UN number: 1950
Packaging group: None.
Note: Limited quantities derogation may be applicable to this product, please check transport documents.

Sea transport

▪ *IMDG:*
Proper shipping name: AEROSOLS, Flammable, 2.1
Class: 2
UN number: 1950
Packaging group: None.
EmS: F-D, S-U
Note: Limited quantities derogation may be applicable to this product, please check transport documents.

Air transport

▪ *ICAO/IATA:*
Proper shipping name: AEROSOLS, Flammable, 2.1
Class: 2.1
UN/ID No.: UN 1950
Packaging group: None.
Note: SC Johnson typically does not ship products via air. Refer to IATA/ICAO Dangerous Goods Regulations for detailed instructions when shipping this item by air.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.

Canada Regulations : This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

HMIS Ratings

Health

1

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



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MSDS Number 350000021130

Flammability	4
Reactivity	0

NFPA Ratings

Health	1
Fire	4
Reactivity	0
Special	-

This information is being provided in accordance with Occupational Safety and Health Administration (OSHA) and Canada's Workplace Hazard Material Information System (WHMIS) regulations. The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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Safety Data Sheet (SDS)

Preparation Date 2013/02/05

Revision Date 2014/04/24

Section 1 – CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier ZL-W01
 Product Code ZL-W010001
 Company Name Pentel of America, LTD.
 Address 2715 Columbia Street, Torrance Ca. 90503
 Company Contact Michael Storie, TQC Manager 909.975.2238
 Phone Number 800.421.1419 EXT. 2238
 Fax Number 909.975.2291
 Mail Address 4000 East Airport Drive, Suite C Ontario California 91761
 Emergency Phone Number 800-421-1972
 Recommended Use and Restriction on Use Correction fluids

XEZL31-W, ZL31-WK, XEZL1-W, ZL1-WK, XZL6-W, XEZL61-W, XEZL21-W, XZL7F1C, XZL7F1AD

Section 2 – HAZARDS IDENTIFICATION

GHS Classification

Physicochemical Hazards Flammable liquids Category 2
 Health Hazards Acute toxicity – inhalation (vapour) Category 4
 Serious eye damage/eye irritation Category 2B
 Carcinogenicity Category 2
 Specific target organ toxicity (single exposure) Category 3(narcotic effect)
 Environmental Hazards Hazard to the aquatic environment (acute hazard) Category 2
 Hazard to the aquatic environment (long-term hazard) Category 2
 Other hazards than mentioned above are Not applicable or No data available.

GHS Label Elements

Symbols



Signal Word Danger
 Hazard Statements H225 Highly flammable liquid and vapour
 H320 Causes eye irritation
 H332 Harmful if inhaled
 H336 May cause drowsiness and dizziness
 H351 Suspected of causing cancer
 H411 Toxic to aquatic life with long lasting effects
 Precautionary Statements Prevention
 Precautionary Statements Keep container tightly closed.(P233)

Avoid breathing mist, vapours and spray.(P261)
 Wear protective gloves, eye protection and face protection.(P280)

Response
 Precautionary
 Statements

Wash hand thoroughly after handling.(P264)
 IF ON SKIN or hair: Remove or take off immediately all contaminated clothing. Rinse skin with water or shower.(P303+P361+P353)
 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.(P304+P340)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.(P305+P351+P338)
 Call a doctor if you feel unwell.(P312)
 If eye irritation persists: Get medical advice and attention.(P337+P313)
 In case of fire: Use appropriate media for extinction.(P370+P378)

Storage
 Precautionary
 Statements

Store in a well-ventilated place. Keep cool.(P403+P235)

Section 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Distinction of Substance
 or Mixture

mixture

Chemical Name or Generic Name	Concentration or Its Ranges	Formula	ENCs No./ISHL No.		CAS RN
			ENCs No.	ISHL No.	
1-Propanol, 2-methyl-	0.4%	C4H10O	(2)-3049	Existing	78-83-1
Methylcyclohexane	42.4%	C7H14	(3)-2230	Existing	108-87-2
Titanium dioxide(IV)	40.5%	TiO2	(1)-558,(5)-5225	Existing	13463-67-7
Silicon dioxide	1.3%	SiO2	(1)-548	Existing	7631-86-9

Impurities and/or
 Stabilizing Additives which
 Contribute to the

No information available

Section 4 – FIRST AID MEASURES

Inhalation

Get medical advice and attention if you feel unwell.

呼吸が困難な場合には、新鮮な空気のある場所に移動し、呼吸しやすい姿勢で休憩させること。

Skin Contact

Call a doctor if you feel unwell.
 Wash with plenty of soap and water.
 If skin irritation occurs: Get medical advice and attention.

Eye Contact

Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do.
 Continue rinsing.
 When the ocular stimulation lasts, Seek medical treatment and advice.

Ingestion

Rinse mouth. Do NOT induce vomiting.
 Get medical advice and attention if you feel unwell.

Section 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Dry chemicals, CO2, fog, sand or regular foam.

Unsuitable Extinguishing Media

Straight streams.

Protection of Fire Fighter

In fire fighting, wear respiratory protection and chemical protective clothing.

Section 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions,
Protective Equipment and
Emergency Procedures

Wear appropriate personal protective equipment (Refer to "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION") and avoid inhalation or contact with eyes and skin.

Environmental
Precautions
Methods and Equipment
for Containment and
Cleaning up
Prevention Measures for
Secondary Accidents

Pay attention not to cause the influence on the environment by discharging into rivers.
Allow material to solidify, and scrape up.

Prevent flowing into drain, sewage, basement, and closed area.

Section 7 – HANDLING AND STORAGE

Handling

Technical Measures

Provide ventilation system and use necessary personal protective equipment as described in "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION".

Precautions for Safe
Handling

Prohibit use of heat, sparks, and fire in the surrounding area.

Avoid contact with eyes and skin.

Avoid swallowing.

Wash hand thoroughly after handling.

Handle at a well-ventilated place.

Prevents Handling of
Incompatible
Substances or
Mixtures

Refer to "Section 10 – STABILITY AND REACTIVITY".

Storage Precautionary
Statements

Technical Measures

The storage facility should be provided with necessary lighting, lighting equipment, and ventilator to store and handle dangerous goods. Refer to "Section 10 – STABILITY AND REACTIVITY".

Store in a well-ventilated and cool place keeping container tightly closed.

Store locked up.

Material Used in
Packaging/Container

Keep only in original container.

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Good general ventilation should be sufficient to control airborne levels.

Personal Protective
Equipment

Respiratory
Protection

Use personal respiratory equipment as required.

Hand Protection
Eye Protection

Use personal gloves as required.

Protection glasses (ordinary glasses, ordinary glasses with side shields, and goggles).

Use personal eye protection as required.

Skin and Body
Protection

Use personal protective clothing and face protection as required.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State

liquid

Form

liquid

Colour

white

Odour

characteristic

Odour threshold	No data available
pH	No data available
Melting Point/Freezing Point	No data available
Initial Boiling Point and Boiling Ranges	No data available
Flash Point	-4.4°C (Tag Closed Cup)
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Flammability or Explosive Limits	No data available
	Lower Limit
	Upper Limit
Vapour Pressure	No data available
Vapour Density	No data available
Specific Gravity (Density)	No data available
Partition Coefficient : n-Octanol/Water	No data available
Auto-Ignition	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Kinematic viscosity	No data available
Flammability or Explosive Limits	No data available
Section 10 – STABILITY AND REACTIVITY	
Reactivity	No data available
Chemical stability	No data available
Possibility of Hazardous Reaction	No data available
Conditions to Avoid	No data available
Incompatible Substances or Mixtures	No data available
Hazardous Decomposition Products	No data available
Section 11 – TOXICOLOGICAL INFORMATION	
Acute Toxicity	No information available
Skin Corrosion/Irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or Skin Sensitization	No data available
Germ Cell Mutagenicity	No data available
Carcinogenicity	No data available
Reproductive Toxicity	No data available
Specific target organ toxicity (single exposure)	No data available
Specific target organ toxicity (repeated exposure)	No data available
Aspiration Hazard	No data available
Section 12 – ECOLOGICAL INFORMATION	
Hazard to the aquatic environment (acute)	No data available
Hazard to the aquatic environment (long-term hazard)	No data available
Hazard to the ozone layer	No data available

Section 13 – DISPOSAL CONSIDERATIONS

Residual Waste

Disposal should be in accordance with applicable regulations and standards by the respective local governments.

Commission a waste disposal company, or a local public body who are licensed by local or regional government, to dispose of the material.

Contaminated Container and Packaging

Recycle containers after cleansing, or carry out the disposal under the related laws and regulations and the standards of the local governments.

Section 14 – TRANSPORT INFORMATION

International Regulations

Regulatory Information by Sea

Conform to the provisions of IMO.

UN No. 1263

Proper Shipping Class PAINT

3

Packing Group II

Marine Pollutant Not applicable

Transport in bulk Not applicable

according to

MARPOL

73/78,Annex II ,and

the IBC code

Regulatory

Conform to the provisions of ICAO/IATA.

Information by Air

UN No. 1263

Proper Shipping Class PAINT

3

Packing Group II

Regulations in Japan

Regulatory Information by Road

Not applicable

or Rail

Regulatory

Conform to the provisions of the Ship Safety Law.

Information by Sea

UN No. 1263

Proper Shipping Name. PAINT

Class 3

Packing Group II

Marine Pollutant Not applicable

Transport in bulk Not applicable

according to

MARPOL

73/78,Annex II ,and

the IBC code

Regulatory

Conform to the provisions of the Ship Safety Law.

Information by Air

UN No. 1263

Proper Shipping Name. PAINT

Class 3

Packing Group II

Emergency Response

128

Guide Number

Section 15 – REGULATORY INFORMATION

Regulatory information with regard to this product in your country or in your region should be

examined by your own responsibility.

Section 16 – OTHER INFORMATION

Information Contact

Other Property

No information available

This information is furnished without warranty
express or implied.

This information is believed to be accurate to the
best knowledge of PENTEL Co., Ltd. but not
assumes leagal responsibility for use of or reliance
upon this information.

MATERIAL SAFETY DATA SHEET

Date Revised: 07/11/2013

Cream Hardener

Page: 1

MSDS Number: 120001

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Cream Hardener
Product Numbers: Red- 100358,
Blue- 100354, 100359, 100360, 100361,
101474 and 101475, 196185, 196174
White- 100340, and 101607
Product Use: Polymerization initiator

Company

ITW Evercoat
a Division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, Ohio USA 45242
Phone: 513-489-7600

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666

Prepared By: Safety Department

Packaged By:

Rocket Plastics Co.
P.O. Box 429514
Montgomery, Ohio USA 45242

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	EINECS Number	% (by weight)
Benzoyl Peroxide	94-36-0	202-327-6	48 – 51
Plasticizer, non-phthalate	Proprietary	Proprietary	25 – 30
Water	7732-18-5	231-791-2	15 – 20
Silica, amorphous	7631-86-9	231-545-4	0 – 2
Calcium Carbonate	1317-65-3	215-279-6	0 – 2
Pigments	Various	Various	0 – 2

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! CAUSES EYE AND SKIN IRRITATION. HARMFUL IF SWALLOWED. OXIDIZER.

Potential Health Effects

Acute Effects (Short Term):

Eye: Contact with paste may result in irritation, redness, tearing, blurred vision, and/or swelling. .

MATERIAL SAFETY DATA SHEET

Date Revised: 07/11/2013
Cream Hardener

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MSDS Number: 120001

Skin: May cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include minor itching, redness, burning, drying and cracking of skin, and skin burns. May be readily absorbed through the skin.

Swallowing: Ingestion of this material may cause gastro-intestinal irritation, nausea, diarrhea, and vomiting.

Inhalation: Inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache possible unconsciousness, and/or asphyxiation. Aspiration of this material into the lungs due to vomiting may produce chemical pneumonitis which can be fatal. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs.

Chronic Effects of Overexposure (Long Term):

Benzoyl Peroxide: Repeated or prolonged contact may cause skin sensitization. Overexposure to this material has been known to cause the following effects in lab animals: skin damage. Benzoyl Peroxide has caused tumorigenic effects in laboratory animals.

Cancer Information: This product does not contain any substance, which is listed as a carcinogen by NTP, IARC or OSHA in quantities greater than 0.1%.

Primary Route(s) of Entry: Inhalation, Skin contact, Eye contact, Ingestion, skin absorption.

SECTION 4. FIRST AID MEASURES

Eyes: Flush eyes gently with water for at least 15 minutes. Seek medical attention.

Skin: Immediately remove contaminated clothing. Wash exposed area with soap and water. Seek medical attention. Launder clothing before reuse.

Swallowing: Consult a physician or poison control center immediately. DO NOT INDUCE VOMITING. Give victim a glass of water. If individual is drowsy or unconscious, Do Not give anything by mouth; place individual on the left side with the head down. If possible, do not leave individual unattended.

MATERIAL SAFETY DATA SHEET

Date Revised: 07/11/2013

Page: 3

Cream Hardener

MSDS Number: 120001

Inhalation: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm, but not hot and keep quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: 184 °F (84 °C)

Explosive Limit: Lower: N/D Upper: N/D

Autoignition Temperature: Not Determined

OSHA Flammability Class: Combustible Liquid – Class IIIA

Hazardous Products of Combustion: May form toxic and corrosive gases: carbon dioxide, carbon monoxide, benzoic acid and various hydrocarbons.

Fire and Explosion Hazards: Fire hazard increases when material becomes dry. Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point.

Extinguishing Media: Regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions: Fight fire like a fuel oil fire. Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus NIOSH approved with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

NFPA Rating: Health - 2, Flammability - 2, Reactivity - 2

SECTION 6. ACCIDENTAL RELEASE MEASURES

In Case of Spill: Spill, Leak or Release: Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate the area. Wear proper protective equipment (Section 8). Avoid breathing vapors. Collect with an inert absorbant and dispose of properly.

SECTION 7. HANDLING AND STORAGE

Handling: All hazard precautions given in the data sheet must be observed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only with adequate ventilation. Do not breathe vapors or spray mist. Do not take internally. Close container after each use. **Keep out of reach of children.**

MATERIAL SAFETY DATA SHEET

Date Revised: 07/11/2013
Cream Hardener

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MSDS Number: 120001

Storage: Store material in a cool, well-ventilated area. For maximum product quality, do not store product above 100°F/38°C. Do not flame, cut, braze, weld or melt empty containers. Keep product away from heat, open flame, and other sources of ignition. Do not use or store near heat, sparks, or open flame. Keep container tightly closed. Avoid contact with incompatible materials such as strong acids, alkalis and oxidizers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Chemical splash goggles in compliance with OSHA regulations are recommended.

Skin Protection: Protective gloves and proper clothing should be worn to prevent skin contact. Gloves should be made of neoprene or natural rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection: Use a NIOSH approved respirator designed to remove particulate matter and organic solvent vapors.

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below acceptable limits. Explosion-proof ventilation system is acceptable.

Exposure Guidelines:

Hazardous Ingredients	CAS Number	OSHA PEL/TWA	ACGIH TLV
Benzoyl Peroxide	94-36-0	5 mg/m ³	5 mg/m ³
Calcium Carbonate	1317-65-3	15 mg/m ³	10 mg/m ³
Silica, amorphous	7631-86-9	20 mppcf	N/E

Mppcf- millions of particles per cubic foot of air

N/E-Not Established

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	Decomposes explosively	Vapor Density:	(Air=1) >1
Specific Gravity / Density:	1.2 / 10.0 lbs/gal	Percent Volatiles by weight:	10-20%
Evaporation Rate:	Slower than ethyl ether.	Physical State:	Paste
Melting Point:	217 °F / 103 °C (decomposes)	pH:	Neutral
Odor:	Slight ester odor.	Solubility:	Insoluble
Vapor Pressure:	(mmHg): N/E	Appearance:	Red, White, or Blue Paste

MATERIAL SAFETY DATA SHEET

Date Revised: 07/11/2013

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Cream Hardener

MSDS Number: 120001

Octanol/Water Partition Coefficient:	Unknown	VOC* (as packaged-less exempts and water):	0 lbs/gal or 0 g/L
VHAP Content by weight – as packaged:	0%		

*NOTE: This material is used as a catalyst with a variety of products. Refer to the other MSDS for additional VOC information for the mixture.

SECTION 10. STABILITY AND REACTIVITY

Hazardous Polymerization: Product will not undergo polymerization under normal conditions of use.

Hazardous Decomposition: May form toxic and corrosive gases: carbon dioxide, carbon monoxide, benzoic acid and various hydrocarbons.

Chemical Stability: Stable under normal handling conditions.

Incompatibility: Avoid contact in uncontrolled conditions with: organic materials, inorganic acids, strong oxidizing agents, accelerators, reducing materials, alcohols, amines and strong bases.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Data:

Ingredient	CAS #	LD₅₀ Oral-Rat	LC₅₀ Inhalation-Rat
Benzoyl Peroxide	94-36-0	7,710 mg/kg	N/E
Calcium Carbonate	1317-65-3	6,450 mg/kg	N/E

Carcinogenicity: See Cancer Information, Section 3.

Mutagenicity: No significant evidence found.

Teratogenicity: No significant evidence found.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: The ecological toxicity of this product is not known.

SECTION 13. DISPOSAL CONSIDERATION

RCRA Hazardous Waste: This material as supplied, if discarded, would be regulated as a hazardous waste under RCRA (40 CFR 261). Dispose of in accordance with applicable federal, state, and local regulations. Incineration is the preferred method for disposal. DO NOT incinerate in closed containers.

RCRA Hazard Class: This material would be regulated as EPA Hazardous

MATERIAL SAFETY DATA SHEET

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Cream Hardener

MSDS Number: 120001

Waste Number D001 based on the characteristic of ignitability (oxidizer).

SECTION 14. TRANSPORT INFORMATION

DOT Description: The DOT Classification for shipping is dependant on quantity, type of packaging (a kit may include other components), or method of shipment.

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (USA) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

None

SARA Title III: Section 302- Extremely Hazardous Substances

None

SARA Title III: Section 313- Toxic Chemical List

<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
Benzoyl Peroxide	94-36-0	45-50%

EPA Hazardous Air Pollutants (HAPS) 40 CFR 63

None

International Regulations

EINECS (Europe) The intentional ingredients of this product are listed.

DSL (Canada) The intentional ingredients of this product are listed.

WHMIS Classification

Health Hazard: D2B, C, F (Toxic Effects, Oxidizer, Dangerously Reactive Materials)

Physical Hazard: B3 (Combustible)

State and Local Regulations

California Proposition 65:

This product contains the following chemical(s) known to the state of California to cause cancer. NONE

This product contains the following chemical(s) known to the state of California to cause birth defects or reproductive harm. NONE

SECTION 16. OTHER INFORMATION

HMIS Rating: Health – 2, Flammability - 2, Reactivity - 2
Key- 0=Least, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme, *=Chronic Effects

Other Precautions for Use: DO NOT return unused material to the original container. DO NOT contaminate product with foreign materials, it may cause hazardous decomposition. DO NOT add to hot material. This product must be mixed with other components prior to use. Please refer to the Material Safety Data Sheet for all components before using.

MATERIAL SAFETY DATA SHEET

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Additional Information may be obtained by calling the Evercoat MSDS Hotline at 1-800-729-7600.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances.



Safety Data Sheet (SDS)

4.

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

1.) Identification of the Mixture and of the Company

Product identifier: **Crown General Purpose Silicone Lubricant - Bulk**

Product name:

8034 General Purpose Silicone Lubricant

Relevant identified uses of the substance: May be used on wood, nylon, metal, rubber, canvas, leather, and chrome. Ideal for windows, doors, hinges, locks, weather stripping, seals, zippers, etc.

Uses advised against: Avoid materials with strong oxidizing agents, and strong acids or bases. May adversely affect certain plastics.

CAS No:	Not Applicable (mixture)
EC No:	Not Applicable (mixture)
Index No:	Not Applicable (mixture)
Manufacturer/Supplier:	AerVOE Industries Incorporated
Street address/P.O. Box:	1100 Mark Circle
Country ID/Postcode/Place:	Gardnerville, Nevada 89410
Telephone number:	001 (0) 1-775-782-0100
e-mail:	mailbox@aerVOE.com
National contact:	AerVOE industries Incorporated
For Product Information:	001 (0) 1-800-227-0196
Emergency telephone number:	001 (0) 1-800-424-9300 (CHEMTREC – 24 hrs) English Language Service

2. Hazards identification

Classifications

Physical Hazards: **Flammable liquid- Category 1**

Health Hazards:

**Asp. Tox. 1
Carc. 1B
Muta. 1B**

Environmental Hazards: **N/AV**

Labeling

Signal Word: **Danger**

Hazard Statements:

**H224 – Extremely flammable liquid and vapour.
H304 – May be fatal if swallowed and enters airways
H340 – May cause genetic defects
H350 – May cause cancer**



Safety Data Sheet (SDS)

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

- Precautionary Statements:
- P101 - If medical advice is needed, have product container or label at hand
 - P102 - Keep out of reach of children
 - P103 - Read label before use
 - P210 - Keep away from heat/sparks/open flames/hot surfaces - no smoking
 - P211 - Do not spray on an open flame or other ignition source
 - P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
 - P262 - Do not get in eyes, on skin, or on clothing
 - P264 - Wash ... thoroughly after handling
 - P280 - Wear protective gloves/eye protection/face protection

 - P303+P361+P353 - If on skin or hair, remove/takeoff immediately all contaminated clothing. Rinse skin with water/shower.
 - P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F
 - P501 - Dispose of contents/container in accordance with local/regional/national/international regulation



Symbols/Pictograms:

3. Composition / Information on Ingredients

Composition

Chemical	Synonyms	CAS Number	EINECS Number	Weight Percent	Hazard Category	H-Code
Aliphatic Petroleum Distillates	Solvent Naphtha	64742-89-8	265-192-2	60-100%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
Dimethylsiloxane	N/AV	63148-62-9	270-705-8	3-7%	N/AV	N/AV

Other Product Information

Chemical Identity: Mixture

4.) First Aid Measures

General Advice: If symptoms persist, always call a doctor.



Safety Data Sheet (SDS)

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

- Inhalation First Aid:** Remove victim to fresh air and provide oxygen if breathing is difficult. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention immediately.
- Skin Contact First Aid:** Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.
- Eye Contact First Aid:** If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids open. Get medical attention immediately.
- Ingestion First Aid:** If swallowed, wash out mouth with water provided the person is conscious. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Most Important Symptoms/Effects:** Exposure may cause slight irritation to the skin, eyes, and respiratory tract. Excessive exposure may cause central nervous system effects.

5. Fire Fighting Measures

- Flammable Properties:** Flammable liquid
- Auto Ignition Temperature:** Not Available
- Suitable extinguishing media:** Carbon dioxide, dry chemical, water spray.
- Unsuitable extinguishing media:** None known
- Special hazards arising from the substance or mixture:** None known
- Hazardous combustion products:** Carbon dioxide, Carbon monoxide
- Fire & Explosion Hazards:** Closed Containers may rupture due to the buildup of pressure from extreme temperatures.

Precautions for fire-fighters: Use water spray to cool containers exposed to heat or fire to prevent pressure build up. In the event of a fire, wear full protective clothing and NIOSH- approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

PERSONAL PRECAUTIONARY MEASURES:

- 1) Follow personal protective equipment recommendations found in section 8.
- 2) Maintain adequate ventilation.

SPILL CLEAN-UP PROCEDURES:

- 1.) Evacuate unprotected personnel from the area.
- 2.) Remove sources of ignition if safe to do so.
- 3.) Pickup spilled materials using non-sparking tools and place in an appropriate container for disposal.
- 4.) Contain spill to prevent material from entering sewage or ground water systems.
- 5.) Always dispose of waste materials in accordance with all EU, National and Local Regulations.



Safety Data Sheet (SDS)

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

7. Handling and Storage

Handling:

Flammable liquid, use in a well ventilated area.
Do not use near sources of ignition.
Do not to eat, drink and smoke while working with this material.
Wash hands after use.

Conditions for safe storage, including any incompatibilities:

Store out of direct sunlight.
Storage Temperature: 32° to 120°F (0° to 49°C).
No known incompatibilities.

8. Exposure Controls / Personal Protection

Appropriate engineering controls:

Ensure adequate ventilation. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.
Keep away from sources of ignition.
Take precautionary measures against static discharge.

Personal Protection:

Eye & face protection devices such as safety glasses, safety goggles or face shield are recommended.

Skin protection

Wear the appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection:

Use only in an adequately ventilated area. For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA).

Hazardous Ingredient	CAS Number	ACGIH TLV (TWA)	ACGIH TLV (STEL)	OSHA PEL (TWA)	OSHA PEL (STEL)
Aliphatic Petroleum Distillates	64742-89-8	N/AV	N/AV	N/AV	N/AV
Dimethylsiloxane	63148-62-9	N/AV	N/AV	N/AV	N/AV

*Values are based on the 2014 Guide to Occupational Exposure Values by ACGIH

9. Information on Basic Physical and Chemical Properties



Safety Data Sheet (SDS)

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

Appearance: Clear	Odor: Hydrocarbon Odor
Odor Threshold: N/AV	pH: Not Applicable (solvent Base)
Melting Point: N/AV	Freezing Point: N/AV
Initial Boiling Point: N/AV	Boiling Point Range: N/AV
Flash Point: 53° F (12° C)	Evaporation Rate: Faster than n-Butyl Acetate
Flammability Solid/Gas: Flammable liquid	Upper LEL: 1.1% Lower LEL: 9.5%
Vapor Pressure: N/AV	Vapor Density: Heavier Than Air
Relative Density: N/AV	Solubility: Negligible
Partition Coefficient: n-octanol/ water: N/AV	Auto-ignition Temperature: N/AV
Decomposition Temperature: N/AV	Viscosity: N/AV
Explosive Properties: N/AV	Oxidizing Properties: N/AV

10. Stability & Reactivity

Possibility of hazardous reactions: Hazardous polymerization will not occur under normal conditions
 Chemical stability: Stable under normal conditions
 Conditions to avoid: Heat and ignition sources
 Incompatible materials: Strong Oxidizing Agents
 Hazardous decomposition products: Will not occur

11. Toxicological Information

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood

Routes of exposure: Eyes, skin, ingestion, and/or inhalation

Acute toxicological data: N/AV

Eye irritation data: N/AV

Skin irritation/sensitization/absorption data: N/AV

Reproductive toxicity data: N/AV

Mutagenicity data: N/AV

Symptoms associated with physical contact: N/AV

Acute/chronic effects from short/long term exposure: Irritating to skin. Prolonged/repeated contact may



Safety Data Sheet (SDS)

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

cause defatting of the skin which can lead to dermatitis. Not expected to be a skin sensitizer.

Known reportable carcinogens via the following agencies:

NTP: N/AV
IARC: N/AV
OSHA: N/AV

* Petroleum distillates may contain chemical carcinogens in limited quantities (< 0.01%). These quantities are determined by the supplier/fraction/purity of the distillate during the manufacturing process. Chemicals that may be present within distillates are listed on California's prop 65 list such as ETHYLBENZENE, BENZENE, and TOLUENE.

12. Ecological Information

Ecotoxicity: **No Data Available**
Persistence and degradability: **No Data Available**
Bioaccumulative potential: **No Data Available**
Mobility in soil: **No Data Available**
Results of PBT and vPvB assessment: **No Data Available**
Other adverse effects: **No Data Available**

13. Disposal Considerations

Waste Disposal: Dispose of material in accordance with EU, national and local requirements. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.

Product / Packaging disposal: Dispose of packaging in accordance with federal, state and local requirements, regulations and/or laws governing your location.

14. Transportation Information

US DOT

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1993	FLAMMABLE LIQUID, N.O.S. (LIGHT ALIPHATIC PETROLEUM NAPHTHA)	3	PGII	Not Applicable	Reference 49 CFR 172.101

IMDG



Safety Data Sheet (SDS)

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1993	FLAMMABLE LIQUID, N.O.S. (LIGHT ALIPHATIC PETROLEUM NAPHTHA)	3	PGII	Not Applicable	Reference IMDG code part 3

IATA:

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1993	FLAMMABLE LIQUID, N.O.S. (LIGHT ALIPHATIC PETROLEUM NAPHTHA)	3	PGII	Not Applicable	Reference IATA Dangerous Goods Regulation

15. Regulatory Information

Workplace classification:

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200). The Occupational Safety and Health Administration's interpretation of the product's hazard to workers.

SARA Title 3:

Section 311/312 Categorizations (40 CFR 372): This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard. Superfund Amendment and Reauthorization Act (SARA) category. SARA requires reporting any spill of any hazardous substance.

TSCA status: All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the (M)SDS contains all of the information required by the CPR.

PROP 65 (CA): WARNING: This product may contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

This SDS has been completed in accordance with GHS Rev04 (2011): U.S OSHA, CMA, ANSI, Canadian WHMIS standards, and European Directives.

Date of Preparation/Revision: 9/10/2014

Supersedes: (-)

To the best of our knowledge, the information contained herein is believed to be accurate. However, the above data does not imply any guarantee or warranty of any kind, expressed or implied. The final determination of the suitability of any material is the sole responsibility of the user. All materials made



Safety Data Sheet (SDS)

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

present un-known hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards existing.



Revision Number: 005.0

Issue date: 05/20/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE SF 7387 AE known as LOCTITE® 7387 DEPEND® ACTIVATO	IDH number:	209714
Product type:	Activator	Item number:	21088
Restriction of Use:	None identified	Region:	United States
Company address:	Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	Contact information:	Telephone: (860) 571-5100 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: CONTENTS UNDER PRESSURE.
FLAMMABLE AEROSOL.
CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE AEROSOL.	2
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention:

Keep away from heat, sparks, open flames, hot surfaces - no smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing mist or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves.

Response:

IF ON SKIN: Wash with plenty of soap and water. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.

Storage:

Disposal:

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
n-Heptane	142-82-5	30 - 60
Aldehyde-amine condensate	Proprietary	10 - 30
Isobutane	75-28-5	10 - 30
2-Propanol	67-63-0	10 - 30
Methylcyclohexane	108-87-2	1 - 5
Octane	111-65-9	1 - 5

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin contact:	Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). Get medical attention. Wash clothing before reuse.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms develop and persist, get medical attention.
Ingestion:	Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back. Contents under pressure. Exposure to temperatures above 49°C (120°F) may cause container to burst. Do not puncture or incinerate pressurized containers.

Hazardous combustion products: Oxides of carbon. Oxides of nitrogen. Hydrocarbons. Irritating organic vapours.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods: Remove all sources of ignition. Ensure adequate ventilation. Keep unnecessary personnel away. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Store in a partly filled, closed container until disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling: During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Do not puncture or incinerate pressurized containers. Refer to Section 8.

Storage: For safe storage, store between 0 °C (32°F) and 38 °C (100.4 °F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
n-Heptane	400 ppm TWA 500 ppm STEL	500 ppm (2,000 mg/m3) PEL	None	None
Aldehyde-amine condensate	None	None	None	None
Isobutane	1,000 ppm STEL	None	None	None
2-Propanol	200 ppm TWA 400 ppm STEL	400 ppm (980 mg/m3) PEL	None	None
Methylcyclohexane	400 ppm TWA	500 ppm (2,000 mg/m3) PEL	None	None
Octane	300 ppm TWA	500 ppm (2,350 mg/m3) PEL	None	None

Engineering controls: Use explosion-proof mechanical ventilation and local exhaust to control contaminants to within their occupational exposure limits during the use of this product.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

Skin protection: Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Neoprene gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid, Aerosol
Color:	Amber
Odor:	Aliphatic
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	35 mm hg (20 °C (68°F))
Boiling point/range:	49 °C (120.2 °F) Approximately
Melting point/ range:	Not available.
Specific gravity:	0.7694
Vapor density:	Not available.
Flash point:	-4 °C (24.8 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	83.84 %; 645.1 g/l EPA Method 24
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Irritating organic vapours.
Incompatible materials:	Strong oxidizing agents. Strong acids and strong bases. Amines. Alkalis. Aldehydes. Chlorine. Halogens. Ethylene oxide. Isocyanates.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition. Store away from incompatible materials. Do not puncture, incinerate, or expose to temperatures above 48.9 °C (120 °F).

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes, Ingestion
-------------------------------------	-----------------------------------

Potential Health Effects/Symptoms

Inhalation: May cause dizziness, incoordination, headache, nausea, and vomiting.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye irritation.
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspirated material can enter the lungs and result in pneumonitis.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
n-Heptane	Inhalation LC50 (RAT, 4 h) = 103 mg/l	Central nervous system, Irritant
Aldehyde-amine condensate	None	No Records
Isobutane	Inhalation LC50 (RAT, 15 min) = 570000 ppm	Cardiac, Central nervous system, Lung
2-Propanol	Oral LD50 (RAT) = 5,045 mg/kg Oral LD50 (RABBIT) = 6,410 mg/kg Oral LD50 (RAT) = 4.7 g/kg Oral LD50 (RABBIT) = 8.0 g/kg Oral LD50 (RABBIT) = 5.03 g/kg Dermal LD50 (RABBIT) = 12,800 mg/kg	Allergen, Blood, Brain, Central nervous system, Irritant, Kidney, Liver, Spleen
Methylcyclohexane	None	Central nervous system, Irritant, Kidney, Liver
Octane	Inhalation LC50 (RAT, 4 h) = 118 mg/l	Central nervous system, Irritant, Lung

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
n-Heptane	No	No	No
Aldehyde-amine condensate	No	No	No
Isobutane	No	No	No
2-Propanol	No	No	No
Methylcyclohexane	No	No	No
Octane	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: D001: Ignitable.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Exceptions: ID8000, May Qualify as Consumer Commodity, (Not more than 500 ml)

Water Transportation (IMO/IMDG)

Proper shipping name: AEROSOLS (n-Heptane)
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Marine pollutant: n-Heptane
Exceptions: Limited quantity (Not more than 1 L).

15. REGULATORY INFORMATION**United States Regulatory Information**

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire, Sudden Release
CERCLA/SARA Section 313: None above reporting de minimis
CERCLA Reportable quantity: n-Heptane (CAS# 142-82-5) 100 lbs. (45.4 kg)
Isobutane (CAS# 75-28-5) 100 lbs. (45.4 kg)
2-Propanol (CAS# 67-63-0) 100 lbs. (45.4 kg)
Methylcyclohexane (CAS# 108-87-2) 100 lbs. (45.4 kg)
Octane (CAS# 111-65-9) 100 lbs. (45.4 kg)

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Sheila Gines, Regulatory Affairs Specialist

Issue date: 05/20/2014

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

MATERIAL SAFETY DATA SHEET

DA1600
12 00

DATE OF PREPARATION
Jul 11, 2015

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

DA1600

PRODUCT NAME

DUPLI-COLOR® Acrylic Enamel Aerosol Paint, Gloss Black (OSHA)

MANUFACTURER'S NAME

Dupli-Color Products Company
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3270 www.dupli-color.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
15	74-98-6	Propane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	1000 PPM	
14	106-97-8	Butane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	800 PPM	
20	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
31	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
3	763-69-9	Ethyl 3-Ethoxypropionate		
		ACGIH TLV	Not Available	1.11 mm
		OSHA PEL	Not Available	
0.8	1333-86-4	Carbon Black		
		ACGIH TLV	3.5 MG/M3	
		OSHA PEL	3.5 MG/M3	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

HMIS Codes	
Health	2*
Flammability	3
Reactivity	0

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists. Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES**FLASH POINT**

Propellant < 0 °F

LEL

1.0

UEL

12.8

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE**STORAGE CATEGORY**

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.14 lb/gal	735 g/l
SPECIFIC GRAVITY	0.74	
BOILING POINT	<0 - 342 °F	<-18 - 172 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	90%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)	Volatile Weight 53.31% Less Water and Federally Exempt Solvents	

SECTION 10 — STABILITY AND REACTIVITY**STABILITY — Stable****CONDITIONS TO AVOID**

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION**CHRONIC HEALTH HAZARDS**

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
67-64-1	Acetone	LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
763-69-9	Ethyl 3-Ethoxypropionate	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
1333-86-4	Carbon Black	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS**WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, EmS F-D, S-U

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION**SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	20	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

DE1615

Section 1. Identification

Product name : DUPLI-COLOR™ Engine Enamel with Ceramic Aluminum
Product code : DE1615
Other means of identification : Not available.
Product type : Aerosol.
Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Dupli-Color Products Company
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3270

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
TOXIC TO REPRODUCTION (Unborn child) - Category 1B
TOXIC TO REPRODUCTION (Fertility) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 11.6%

GHS label elements

Hazard pictograms :



Signal word : Danger

Date of issue/Date of revision

: 5/28/2016

Date of previous issue

: 3/27/2016

Version : 2.01

1/16

Section 2. Hazards identification

Hazard statements	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. Causes skin irritation. May damage the unborn child. Suspected of damaging fertility. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.
CAS number/other identifiers	

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Acetone	≥25 - ≤50	67-64-1
Methyl Ethyl Ketone	≥10 - ≤25	78-93-3
Propane	≥10 - ≤25	74-98-6
Butane	≤10	106-97-8
Ethanol	≤3	64-17-5
2-Propanol	≤3	67-63-0
Butyl Benzyl Phthalate	<1	85-68-7
Toluene	<1	108-88-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Section 7. Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Acetone	<p>ACGIH TLV (United States, 3/2015). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.</p>
Methyl Ethyl Ketone	<p>ACGIH TLV (United States, 3/2015). TWA: 200 ppm 8 hours. TWA: 590 mg/m³ 8 hours. STEL: 300 ppm 15 minutes. STEL: 885 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 200 ppm 10 hours. TWA: 590 mg/m³ 10 hours. STEL: 300 ppm 15 minutes. STEL: 885 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 200 ppm 8 hours. TWA: 590 mg/m³ 8 hours.</p>
Propane	<p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
Butane	<p>NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 3/2015). STEL: 1000 ppm 15 minutes.</p>
Ethanol	<p>ACGIH TLV (United States, 3/2015). STEL: 1000 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.</p>

Section 8. Exposure controls/personal protection

2-Propanol	<p>ACGIH TLV (United States, 3/2015). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.</p>
Butyl Benzyl Phthalate Toluene	<p>None.</p> <p>OSHA PEL Z2 (United States, 2/2013). TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes.</p> <p>ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours.</p>

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 1.05%
Upper: 19%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.5 [Air = 1]
- Relative density** : 0.76
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): <0.205 cm²/s (<20.5 cSt)
Kinematic (40°C (104°F)): <0.205 cm²/s (<20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 29.26 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : No specific data.

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
	LD50 Dermal	Rabbit	6480 mg/kg	-
Methyl Ethyl Ketone	LD50 Oral	Rat	2737 mg/kg	-
	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Butane	LC50 Inhalation Vapor	Rat	124700 mg/m ³	4 hours
	LD50 Oral	Rat	7 g/kg	-
Ethanol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
2-Propanol	LD50 Dermal	Rabbit	>10000 mg/kg	-
	LD50 Dermal	Rat	6700 mg/kg	-
	LD50 Oral	Rat	2330 mg/kg	-
Butyl Benzyl Phthalate	LD50 Oral	Rat	49 g/m ³	4 hours
	LC50 Inhalation Vapor	Rat	636 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation	
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-	
	Eyes - Mild irritant	Rabbit	-	10 microliters	-	
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-	
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-	
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-	
Methyl Ethyl Ketone	Skin - Mild irritant	Rabbit	-	395 milligrams	-	
	Skin - Moderate irritant	Rabbit	-	24 hours 14 milligrams	-	
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-	
Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-	
	Eyes - Moderate irritant	Rabbit	-	0.06666667 minutes 100 milligrams	-	
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-	
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-	
	Skin - Mild irritant	Rabbit	-	400 milligrams	-	
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-	
	2-Propanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
		Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
Eyes - Severe irritant		Rabbit	-	100 milligrams	-	
Toluene	Skin - Mild irritant	Rabbit	-	500 milligrams	-	
	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-	

Section 11. Toxicological information

	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	870 Micrograms	-
	Skin - Mild irritant	Pig	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 250 microliters	-
	Skin - Moderate irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethanol	-	1	-
2-Propanol	-	3	-
Butyl Benzyl Phthalate	-	3	-
Toluene	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl Ethyl Ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Propanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract irritation and

Section 11. Toxicological information

Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Methyl Ethyl Ketone	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Ethanol	Category 2	Not determined	Not determined
2-Propanol	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

Inhalation : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Skin contact : Adverse symptoms may include the following:
 irritation
 redness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Ingestion : Adverse symptoms may include the following:
 nausea or vomiting
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	10245.4 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 6900 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Methyl Ethyl Ketone	Acute EC50 >500000 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 5091000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
Ethanol	Acute LC50 3220000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours	
Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna -	21 days	

Section 12. Ecological information

2-Propanol	Chronic NOEC 0.375 µl/L Fresh water	Neonate Fish - Gambusia holbrooki - Larvae	12 weeks
Butyl Benzyl Phthalate	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
Toluene	Acute EC50 0.22 ppm Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 100 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 1000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 3.69 mg/l Fresh water	Crustaceans - Moina macrocopa - New born	48 hours
	Acute LC50 510 µg/l Marine water	Fish - Cymatogaster aggregata - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.26 mg/l Fresh water	Daphnia - Daphnia magna	21 days
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Methyl Ethyl Ketone	-	-	Readily
Ethanol	-	-	Readily
2-Propanol	-	-	Readily
Toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Butyl Benzyl Phthalate	-	1693.25	high
Toluene	-	90	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	<p>Special provisions LIMITED QUANTITY</p> <p>ERG No. 126</p>	<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).</p> <p>Special provisions LIMITED QUANTITY</p> <p>ERG No. 126</p>	<p>Special provisions Not Applicable</p> <p>ERG No. 126</p>	<p>Special provisions LIMITED QUANTITY</p>	<p>Emergency schedules (EmS) F-D, S-U</p> <p>Special provisions LIMITED QUANTITY</p>

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.
Ship type : Not available.
Pollution category : Not available.

Section 15. Regulatory information

[SARA 313](#)

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

[California Prop. 65](#)

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

[Hazardous Material Information System \(U.S.A.\)](#)

Health	2
Flammability	3
Physical hazards	1

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

[Procedure used to derive the classification](#)

Classification

FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 1B	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

Justification

[History](#)

Date of printing : 5/28/2016

Date of issue/Date of revision : 5/28/2016

Date of previous issue : 3/27/2016

Version : 2.01

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

[Notice to reader](#)

Section 16. Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

DAL1607

Section 1. Identification

Product name : DUPLI-COLOR® Acrylic Lacquer Aerosol Paint
Flat Black

Product code : DAL1607

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS CO.
DUPLI-COLOR Products Group
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3270

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 11.8%

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

Hazard statements	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. Causes skin irritation. May cause cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling.
Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

CAS number/other identifiers

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Acetone	38.1	67-64-1
Methyl Ethyl Ketone	16.6	78-93-3
Propane	11.8	74-98-6
Butane	11.3	106-97-8
Ethanol	3.8	64-17-5
Ethyl Acetate	3.1	141-78-6
2-Propanol	1.1	67-63-0
Carbon Black	0.2	1333-86-4
Methyl Isobutyl Ketone	0.1	108-10-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
Acetone	<p>ACGIH TLV (United States, 4/2014). TWA: 500 ppm 8 hours. TWA: 1188 mg/m³ 8 hours. STEL: 750 ppm 15 minutes. STEL: 1782 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.</p>
Methyl Ethyl Ketone	<p>ACGIH TLV (United States, 4/2014). TWA: 200 ppm 8 hours. TWA: 590 mg/m³ 8 hours. STEL: 300 ppm 15 minutes. STEL: 885 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 200 ppm 10 hours. TWA: 590 mg/m³ 10 hours. STEL: 300 ppm 15 minutes. STEL: 885 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 200 ppm 8 hours. TWA: 590 mg/m³ 8 hours.</p>
Propane	<p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
Butane	<p>NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 4/2014). STEL: 1000 ppm 15 minutes.</p>
Ethanol	<p>ACGIH TLV (United States, 4/2014). STEL: 1000 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.</p>
Ethyl Acetate	<p>ACGIH TLV (United States, 4/2014). TWA: 400 ppm 8 hours. TWA: 1440 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 400 ppm 10 hours. TWA: 1400 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 400 ppm 8 hours. TWA: 1400 mg/m³ 8 hours.</p>
2-Propanol	<p>ACGIH TLV (United States, 4/2014). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes.</p>

Section 8. Exposure controls/personal protection

Carbon Black	<p>NIOSH REL (United States, 10/2013). TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 3.5 mg/m³ 8 hours.</p> <p>ACGIH TLV (United States, 4/2014). TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction</p>
Methyl Isobutyl Ketone	<p>ACGIH TLV (United States, 4/2014). TWA: 20 ppm 8 hours. STEL: 75 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 50 ppm 10 hours. TWA: 205 mg/m³ 10 hours. STEL: 75 ppm 15 minutes. STEL: 300 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 100 ppm 8 hours. TWA: 410 mg/m³ 8 hours.</p>

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 1%
Upper: 19%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.5 [Air = 1]
- Relative density** : 0.73
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): <0.07 cm²/s (<7 cSt)
Kinematic (40°C (104°F)): <0.07 cm²/s (<7 cSt)

Aerosol product

- Type of aerosol** : Spray
- Heat of combustion** : 0.00003086 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).

Section 10. Stability and reactivity

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
	LD50 Dermal	Rabbit	6480 mg/kg	-
Methyl Ethyl Ketone	LD50 Oral	Rat	2737 mg/kg	-
	LD50 Oral	Rat	2737 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m ³	4 hours
	LD50 Oral	Rat	7 g/kg	-
Ethyl Acetate	LD50 Oral	Rat	5620 mg/kg	-
	LD50 Dermal	Rabbit	12800 mg/kg	-
2-Propanol	LD50 Oral	Rat	5000 mg/kg	-
	LD50 Oral	Rat	>15400 mg/kg	-
Carbon Black	LD50 Oral	Rat	>15400 mg/kg	-
Methyl Isobutyl Ketone	LD50 Oral	Rat	2080 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Methyl Ethyl Ketone	Skin - Mild irritant	Rabbit	-	395 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 14 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	10 milligrams	-
2-Propanol	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500	-

Section 11. Toxicological information

Methyl Isobutyl Ketone	Eyes - Moderate irritant	Rabbit	-	milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	40 milligrams	-
				24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethanol	-	1	-
2-Propanol	-	3	-
Carbon Black	-	2B	-
Methyl Isobutyl Ketone	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl Ethyl Ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Propanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl Isobutyl Ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Methyl Ethyl Ketone	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Ethanol	Category 2	Not determined	Not determined
2-Propanol	Category 2	Not determined	Not determined
Methyl Isobutyl Ketone	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	10254.2 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
Methyl Ethyl Ketone	Acute EC50 >500000 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 5091000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
Ethanol	Acute LC50 3220000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
Ethyl Acetate	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
	Acute EC50 2500000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 750000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 154000 µg/l Fresh water	Daphnia - Daphnia cucullata	48 hours
	Acute LC50 212500 µg/l Fresh water	Fish - Heteropneustes fossilis	96 hours
2-Propanol	Chronic NOEC 2400 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 75.6 mg/l Fresh water	Fish - Pimephales promelas - Embryo	32 days
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
Methyl Isobutyl Ketone	Acute LC50 505000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 78 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days

Section 12. Ecological information

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Methyl Ethyl Ketone	-	-	Readily
Ethanol	-	-	Readily
Ethyl Acetate	-	-	Readily
2-Propanol	-	-	Readily
Methyl Isobutyl Ketone	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Ethyl Acetate	-	30	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

Section 14. Transport information

Additional information	Special provisions LIMITED QUANTITY	Special provisions LIMITED QUANTITY	Special provisions (ERG#126)	Special provisions LIMITED QUANTITY	Emergency schedules (EmS) LIMITED QUANTITY, F-D, S-U
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Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		4
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Section 16. Other information

[Notice to reader](#)

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

DAP1692

Section 1. Identification

Product name : DUPLI-COLOR® Sandable Primer
Gray Hot Rod

Product code : DAP1692

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Dupli-Color Products Company
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3270

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 22.5%

GHS label elements

Hazard pictograms



Signal word : Danger

Section 2. Hazards identification

Hazard statements	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Suspected of damaging the unborn child. Suspected of causing cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Pressurized container: Do not pierce or burn, even after use.
Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.
CAS number/other identifiers	

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Acetone	35.04	67-64-1
Propane	14.95	74-98-6
Butane	14.36	106-97-8
Toluene	10.25	108-88-3
Lt. Aliphatic Hydrocarbon Solvent	6.49	64742-89-8
Titanium Dioxide	1.06	13463-67-7
Naphthalene	0.15	91-20-3
Methyl Ethyl Ketoxime	0.11	96-29-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Section 7. Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Acetone	<p>ACGIH TLV (United States, 3/2015). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.</p>
Propane	<p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
Butane	<p>NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 3/2015). STEL: 1000 ppm 15 minutes.</p>
Toluene	<p>OSHA PEL Z2 (United States, 2/2013). TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes.</p> <p>ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours.</p>
Lt. Aliphatic Hydrocarbon Solvent Titanium Dioxide	<p>None.</p> <p>ACGIH TLV (United States, 3/2015). TWA: 10 mg/m³ 8 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
Naphthalene	<p>ACGIH TLV (United States, 3/2015). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 52 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 10 ppm 10 hours.</p>

Section 8. Exposure controls/personal protection

Methyl Ethyl Ketoxime	<p>TWA: 50 mg/m³ 10 hours. STEL: 15 ppm 15 minutes. STEL: 75 mg/m³ 15 minutes. OSHA PEL (United States, 2/2013). TWA: 10 ppm 8 hours. TWA: 50 mg/m³ 8 hours.</p> <p>AIHA WEEL (United States, 10/2011). Skin sensitizer. TWA: 10 ppm 8 hours.</p>
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Occupational exposure limits (Canada)

Ingredient name	Exposure limits
Acetone	<p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 1200 mg/m³ 8 hours. 15 min OEL: 1800 mg/m³ 15 minutes. 8 hrs OEL: 500 ppm 8 hours. 15 min OEL: 750 ppm 15 minutes. CA British Columbia Provincial (Canada, 5/2015). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. CA Ontario Provincial (Canada, 7/2015). TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes. CA Quebec Provincial (Canada, 1/2014). TWAEV: 500 ppm 8 hours. TWAEV: 1190 mg/m³ 8 hours. STEV: 1000 ppm 15 minutes. STEV: 2380 mg/m³ 15 minutes. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 750 ppm 15 minutes. TWA: 500 ppm 8 hours.</p>
Propane	<p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 1000 ppm 8 hours. CA British Columbia Provincial (Canada, 5/2015). TWA: 1000 ppm 8 hours. CA Quebec Provincial (Canada, 1/2014). TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. CA Ontario Provincial (Canada, 7/2015). TWA: 1000 ppm 8 hours. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p>
Butane	<p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 1000 ppm 8 hours. CA British Columbia Provincial (Canada, 5/2015). TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes. CA Quebec Provincial (Canada, 1/2014). TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours.</p>

Section 8. Exposure controls/personal protection

Toluene	<p>CA Ontario Provincial (Canada, 7/2015). TWA: 800 ppm 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p> <p>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin. 8 hrs OEL: 50 ppm 8 hours. 8 hrs OEL: 188 mg/m³ 8 hours.</p> <p>CA British Columbia Provincial (Canada, 5/2015). TWA: 20 ppm 8 hours.</p> <p>CA Ontario Provincial (Canada, 7/2015). TWA: 20 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 1/2014). Absorbed through skin. TWAEV: 50 ppm 8 hours. TWAEV: 188 mg/m³ 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin. STEL: 60 ppm 15 minutes. TWA: 50 ppm 8 hours.</p>
Naphthalene	<p>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin. 15 min OEL: 15 ppm 15 minutes. 8 hrs OEL: 10 ppm 8 hours. 8 hrs OEL: 52 mg/m³ 8 hours. 15 min OEL: 79 mg/m³ 15 minutes.</p> <p>CA British Columbia Provincial (Canada, 5/2015). Absorbed through skin. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes.</p> <p>CA Ontario Provincial (Canada, 7/2015). Absorbed through skin. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes.</p> <p>CA Quebec Provincial (Canada, 1/2014). TWAEV: 10 ppm 8 hours. TWAEV: 52 mg/m³ 8 hours. STEV: 15 ppm 15 minutes. STEV: 79 mg/m³ 15 minutes.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin. STEL: 15 ppm 15 minutes. TWA: 10 ppm 8 hours.</p>
Methyl Ethyl Ketoxime	<p>AIHA WEEL (United States, 10/2011). Skin sensitizer. TWA: 10 ppm 8 hours.</p>

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

:

Section 8. Exposure controls/personal protection

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%
Upper: 12.8%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.55 [Air = 1]

Section 9. Physical and chemical properties

Relative density	: 0.75
Solubility	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (room temperature): <0.205 cm ² /s (<20.5 cSt) Kinematic (40°C (104°F)): <0.205 cm ² /s (<20.5 cSt)
Molecular weight	: Not applicable.
Aerosol product	
Type of aerosol	: Spray
Heat of combustion	: 29.89 kJ/g

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame).
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Toluene	LC50 Inhalation Vapor	Rat	49 g/m ³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Naphthalene	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	490 mg/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395	-

Section 11. Toxicological information

Toluene	Eyes - Mild irritant	Rabbit	-	milligrams 0.5 minutes 100	-
	Eyes - Mild irritant	Rabbit	-	milligrams 870	-
	Eyes - Severe irritant	Rabbit	-	Micrograms 24 hours 2	-
	Skin - Mild irritant	Pig	-	milligrams 24 hours 250	-
	Skin - Mild irritant	Rabbit	-	microliters 435	-
	Skin - Moderate irritant	Rabbit	-	milligrams 24 hours 20	-
	Skin - Moderate irritant	Rabbit	-	milligrams 500	-
Titanium Dioxide	Skin - Mild irritant	Human	-	milligrams 72 hours 300	-
Naphthalene	Skin - Mild irritant	Rabbit	-	Micrograms Intermittent 495	-
	Skin - Severe irritant	Rabbit	-	milligrams 24 hours 0.05	-
Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	Milliliters 100 microliters	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Titanium Dioxide	-	2B	-
Naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract

Section 11. Toxicological information

Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	irritation and Narcotic effects Respiratory tract irritation and Narcotic effects
Naphthalene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Naphthalene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Naphthalene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

- Skin contact** : Adverse symptoms may include the following:
 irritation
 redness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 nausea or vomiting
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4539.5 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 6900 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours

Section 12. Ecological information

Lt. Aliphatic Hydrocarbon Solvent Titanium Dioxide Naphthalene	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Methyl Ethyl Ketoxime	Acute EC50 1600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2350 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 213 µg/l Fresh water	Fish - Melanotaenia fluviatilis - Larvae	96 hours
	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Naphthalene	-	36.5 to 168	low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	- <u>ERG No.</u> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). <u>ERG No.</u> 126	- <u>ERG No.</u> 126	-	<u>Emergency schedules (EmS)</u> F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification

- FLAMMABLE AEROSOLS - Category 1
- GASES UNDER PRESSURE - Compressed gas
- SKIN CORROSION/IRRITATION - Category 2
- SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
- SKIN SENSITIZATION - Category 1
- CARCINOGENICITY - Category 2
- TOXIC TO REPRODUCTION (Unborn child) - Category 2
- SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
- SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
- SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
- ASPIRATION HAZARD - Category 1

Justification

- On basis of test data
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method

History

- Date of printing** : 6/4/2016
- Date of issue/Date of revision** : 6/4/2016
- Date of previous issue** : 6/3/2016
- Version** : 3
- Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

Notice to reader

Section 16. Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SECTION I-MATERIAL IDENTIFICATION AND USE

Material Name/Identifier:	Eco-Care Engine Degreaser	Stock No.	022 / 023
Manufacturer's Name:	Kleen-Flo Tumbler Industries Ltd	Street Address:	75 Advance Blvd.
City:	Brampton	Province:	Ontario
Postal Code:	L6T 4N1	Emergency Phone #:	CANUTEC:- 613-996-6666 (24HR)
Chemical Name:	N.Ap.(mixture)	Chemical Family:	N.Ap.(mixture)
Chemical Formula:	N.Ap. (Mixture)	Trade Names & Synonyms:	N/A
Material Use:	Cleaner, Degreaser	Molecular Weight:	N.Ap.

SECTION II-HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	C.A.S.	Approximate Concentration	LD50 Species & Route	LC50 Species & Route
D-limonene	5989-27-5	10 -30 %	> 2 g/kg rat-oral	N/E
Alcohol ethoxylate	68439-46-3	1-5 %	>2 g/kg rat-oral	N/E
Diethylene glycol monobutyl ether	112-34-5	1-5 %	6.56 g/kg rat-oral	N/E

SECTION III-PHYSICAL DATA FOR MATERIAL

Physical State:	Liquid	Odour/Appearance:	Light citrus.clear light yellow liquid
Specific Gravity:	1.01	Odour Threshold(p.p.m.):	N/E
Boiling Point:	100°C (Approx.)	Evaporation Rate:	1 (Water=1)
Freezing Point:	0 °C	Solubility in Water:	Emulsifies
% wt. Volatile:	N/E	Vapour Pressure(mm)Hg:	N/E
Vapour Density(Air=1):	N/E	Coefficient of Water/Oil Distribut:	N/E
pH	11-12.3		

SECTION IV-FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability Yes/No	Yes, Combustible liquid	If yes under which conditions:Open flame, heat, spark. May form explosive air-vapour mixture at elevated temperature.	
Auto Ignition Temperature:	N/E	Means of Extinction: carbon dioxide, dry powder, foam type	
Flashpoint and Method:	52°C TCC	Hazardous Combustion Products: Oxides of carbon and products of incomplete combustion.	
Upper Flammable limit (% vol)	N/Av.	Lower Flammable Limit(% by volume):	N/Av.
Explosion Data:	Sensitivity to Mechanical Impact: No	Sensitivity to Static Discharge:	N/E

SECTION V-REACTIVITY DATA

Chemical Stability Yes/No:	Yes	If NO under Which conditions?	N.Ap.
Incompatibility to Other Substances Yes/No:	Yes	If so which ones?	Strong Oxidizers
Reactivity and under what conditions?	none known		
Hazardous Decomposition Products:	Oxides of carbon		

Material Name/Identifier: Eco-Care Engine Degreaser		Stock No. 022 / 023		PAGE 2
SECTION VI-TOXICOLOGICAL PROPERTIES OF PRODUCT				
Route of Entry: ALL routes	--SKIN CONTACT --SKIN ABSORPTION --EYE CONTACT --INHALATION --INGESTION			
Effects of Acute Exposure:	Over exposure to vapour may irritate respiratory passages and/or cause dizziness, nausea or headaches. May cause eye and skin irritation. Ingestion may cause gastrointestinal irritation and diarrhea.			
Effects of Chronic Exposure:	None known			
LD 50 of Product:	N/E	LC 50 of Product:	N/E	
Irritancy of Product:	Moderate skin and eye irritant	Exposure Limits of Product:	N/E	
Sensitization of Product:	N/E	Toxicologically Synergistic Materials:	N/E	
--CARCINOGENICITY --REPRODUCTIVE EFFECTS --TERATOGENICITY --MUTAGENICITY				None known
SECTION VII-PREVENTIVE MEASURES				
Personal Protective Equipment to be used:				
Gloves(specify):	Solvent proof gloves	Eye(specify):	Splash proof eye goggles	
Respiratory(specify):	Maintain adequate ventilation	Clothing:	Not required	
Respiratory Protection:	If used indoors or on a continuous basis, use of cartridge respirator for organic vapour is recommended			
Engineering Controls:	Positive exhaust ventilation required for enclosed area			
Leak and Spill Procedure:	Use absorbent material and place in sealed container, rinse area with plenty of water.			
Waste Disposal:	According to your local and /or provincial regulation			
Storage Requirements:	Keep material at ambient temperature. Keep away form source of heat, spark and ignition.			
Handling Procedures and Equipment:	No special procedure or equipment required.			
DSL listing	All components are listed			
TDG Classification:	Not regulated.			
WHMIS Classification:	B3, D2B			
SECTION VIII-FIRST AID MEASURES				
Eye:	Wash with water for at least 15 minutes. Seek medical help if irritation persists.			
Skin:	Wash with soap and water. Seek medical help if irritation persists			
Inhalation:	Remove to fresh air. Seek medical help.			
Ingestion:	DO NOT INDUCE VOMITING. Give a glass of milk or water. Seek medical help immediately			
SECTION IX-PREPARATION DATE OF M.S.D.S.				
Additional Info/Comments:		Sources Used:		
Phone Number:	(905) 793-4311	Prepared By: Quality Control Laboratory		
Date Prepared:	January 2, 2015.	Kleen-Flo Tumbler Industries Limited		
THIS SHEET SUPERSEDES ANY OTHER M.S.D.S. PREVIOUSLY PREPARED				
N/Av.: not available		N/Ap. : not applicable		N/E: not established



Envy Foaming Disinfectant Cleaner (US)

Version Number: 1

Preparation date: 2014-08-08

1. IDENTIFICATION

Product name: Envy Foaming Disinfectant Cleaner (US)
Product Code: 04531
SDS #: MS0800465
Recommended use:

- Disinfectant
- This product is intended to be used neat.

Uses advised against: Uses other than those identified are not recommended

Manufacturer, importer, supplier:

US Headquarters Diversey, Inc. 8310 16th St. Sturtevant, Wisconsin 53177-1964 Phone: 1-888-352-2249 MSDS Internet Address: www.diversey.com	Canadian Headquarters Diversey, Inc. - Canada 2401 Bristol Circle Oakville, Ontario L6H 6P1 Phone: 1-800-668-3131
--	---

Emergency telephone number: 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product

Flammability Extremely flammable aerosol, Category 1



Signal Word: Danger

Precautionary Statements

EXTREMELY FLAMMABLE AEROSOL. HEATING MAY CAUSE AN EXPLOSION. CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not incinerate. Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50 °C (122 °F) which may cause bursting. Dispose of in accordance with all federal, state and local applicable regulations.

Health hazards not otherwise classified (HHNOC) - Not applicable

Physical hazards not otherwise classified (PHNOC) - Not applicable

Classification for the diluted product @ RTU

Precautionary Statements

3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

Ingredient(s)	CAS #	Weight %
Isobutane	75-28-5	3% - < 5%
Dipropylene glycol methyl ether	34590-94-8	1% - < 3%
Tetrapotassium pyrophosphate	7320-34-5	1% - < 3%
n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride	68391-01-5	> 0.1% - < 1%
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	68956-79-6	> 0.1% - < 1%

*Exact percentages are being withheld as trade secret information

4. FIRST AID MEASURES

Undiluted Product:

Eyes: Rinse with plenty of water. If irritation occurs and persists, get medical attention.

Skin: Rinse with plenty of water. If irritation occurs and persists, get medical attention.

Inhalation: No specific first aid measures are required.

Ingestion: Rinse mouth with water.

Most Important Symptoms/Effects: No information available.

Immediate medical attention and special treatment needed: Not applicable.

Diluted Product:

Eyes: Rinse with plenty of water. If irritation occurs and persists, get medical attention.

Skin: Rinse with plenty of water. If irritation occurs and persists, get medical attention.

Inhalation: No specific first aid measures are required.

Ingestion: Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

Specific methods: Aerosol Product - Containers may rocket or explode in heat of fire.

Suitable extinguishing media: Dry chemical, water spray, foam.

Specific hazards: NFPA 30B Level 1 Aerosol.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Ensure adequate ventilation. Remove all sources of ignition.

Environmental precautions and clean-up methods: Clean-up methods - large spillage. Remove all sources of ignition. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep away from open flames, hot surfaces and sources of ignition. CONTENTS UNDER PRESSURE. Do not puncture or incinerate. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

Storage:

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 degrees C or 120 degrees F. Exposure to heat may cause bursting. Do not pierce or burn, even after use. NFPA 30B Level 1 Aerosol. Protect from freezing. Store in a cool, dry, well ventilated area away from heat or open flame.

Aerosol Level (if applicable): Level 1

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

Ingredient(s)	CAS #	ACGIH	OSHA
Isobutane	75-28-5	1000 ppm (STEL)	-
Dipropylene glycol methyl ether	34590-94-8	150 ppm (STEL) 100 ppm (TWA)	Skin 100 ppm (TWA) 600 mg/m ³ (TWA)
Tetrapotassium pyrophosphate	7320-34-5	-	-
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	68956-79-6	-	-
n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride	68391-01-5	-	-

Undiluted Product:

Engineering measures to reduce exposure:

None known

Personal Protective Equipment

Eye protection:	No special requirements under normal use conditions.
Hand protection:	No special requirements under normal use conditions.
Skin and body protection:	No special requirements under normal use conditions.
Respiratory protection:	No special requirements under normal use conditions.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

Diluted Product:

Personal Protective Equipment

Eye protection:	No special requirements under normal use conditions.
Hand protection:	No special requirements under normal use conditions.
Skin and body protection:	No special requirements under normal use conditions.
Respiratory protection:	No special requirements under normal use conditions.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Pressurized Liquid	Color: Clear White
Evaporation Rate: No information available	Odor: Lavender Ammonia
Odor threshold: No information available.	Boiling point/range: Not determined
Melting point/range: Not determined	Decomposition temperature: Not determined
Autoignition temperature: No information available	Solubility: Completely Soluble
Solubility in other solvents: No information available	Relative Density (relative to water): 0.98
Density: 8.17 lbs/gal 0.98 Kg/L	Vapor density: No information available
Bulk density: No information available	Vapor pressure: No information available.
Flash point: 19 °F -7 °C	Partition coefficient (n-octanol/water): No information available
Dilution Flash Point: 19 °F -7 °C	Viscosity: No information available
Elemental Phosphorus: 0.30 % by wt.	VOC: 7.2 % *
pH: 12.1	VOC % by wt. at use dilution: 7.2 % *
Dilution pH: 12.1 @ RTU	Flammability (Solid or Gas): Not applicable
Metal Corrosion: Not determined	
Flame Extension (inches): 0	
Explosion limits: - upper: Not determined - lower: Not determined	

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Reactivity:	Not Applicable
Stability:	The product is stable
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	None known.
Conditions to avoid:	Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Skin contact, Eye contact, Inhalation, Ingestion

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure

Skin contact: Unlikely to be irritant in normal use.

Eye contact: May be mildly irritating to eyes.

Ingestion: No information available.

Inhalation: No information available.

Sensitization: No known effects.

Numerical measures of toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Dispose in compliance with all Federal, state, provincial, and local laws and regulations. If possible, recycle empty aerosol cans to the nearest steel recycling center.

Contaminated Packaging: Do not re-use empty containers.

RCRA Hazard Class (undiluted product): D001 Ignitable Waste

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: Please refer to the Diversey HazMat Library, only available through Internet Explorer, <http://naextranet.diversey.com/dot/>, for up to date shipping information.

DOT (Ground) Bill of Lading Description: LTD. QTY.

IMDG (Ocean) Bill of Lading Description: UN1950, AEROSOLS, 2.1, LTD. QTY.

15. REGULATORY INFORMATION

International Inventories at CAS# Level

All components of this product are listed on the following inventories: U.S.A. (TSCA).

U.S. Regulations

EPA Reg. No. : 70627-35

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

FIFRA Text

CAUTION: Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. PHYSICAL AND CHEMICAL HAZARDS: CONTENTS UNDER PRESSURE. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause bursting.

California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65.

RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
---------------	-------	--------	--------	--------	--------

Water	7732-18-5	-	-	-	-
Isobutane	75-28-5	X	X	X	-
Dipropylene glycol methyl ether	34590-94-8	X	X	X	-
Tetrapotassium pyrophosphate	7320-34-5	-	-	-	-

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Dipropylene glycol methyl ether	34590-94-8	1% - < 3%			X

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
Dipropylene glycol methyl ether	X		

SARA 311/312 Hazard Categories

Immediate: -
Delayed: -
Fire: X
Reactivity: -
Sudden Release of Pressure: X

Canada

WHMIS hazard class: Not for sale in Canada.

16. OTHER INFORMATION

NFPA

Health 1
Flammability 4
Instability 0

Version Number: 1
Preparation date: 2014-08-08

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice: • Contains an added fragrance, see "Odor" heading in section 9 for specific description

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.



Material Safety Data Sheet

Revision Date 13-Sep-2013

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code P91010
Product name ETP Gold Cutting Fluid
Recommended Use Lubricant
Supplier Lawson Products, Inc.
8770 W.Bryn Mawr Ave.- Suite 900
Chicago, IL 60631
1-866-529-7664
Emergency telephone number (888) 426-4851

2. HAZARDS IDENTIFICATION

Emergency Overview
Irritant. Contents under pressure.

Aggravated Medical Conditions
Pre-existing skin sensitivity. May cause allergic skin reaction.

Principal Routes of Exposure
Eyes. Inhalation. Skin contact.

Potential health effects

Eyes May cause the following effects: Irritation. Redness. Itching. Burning sensation.

Skin Repeated or prolonged exposure may cause: Skin Irritation. Redness. Itching. Burning sensation.

Inhalation Repeated or prolonged exposure may cause the following effects: Headaches. Dizziness. Nausea. Irritating to respiratory system.

Ingestion No hazard under normal industrial and institutional use.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Triethanolamine	102-71-6	7-13
Diethanolamine	111-42-2	0.5-1.5

4. FIRST AID MEASURES

Eye contact Flush with plenty of water for at least 15 minutes. Seek medical attention.

Skin contact Wash area thoroughly with soap and water. Remove and wash contaminated clothing before re-use. Seek medical attention if irritation persists.

Ingestion Do Not induce vomiting. Seek medical attention immediately.

Inhalation Remove from exposure. Restore breathing. Keep warm and quiet. Contact physician if breathing difficulty develops.

5. FIRE FIGHTING MEASURES

Flash point °C > 93
Flash point °F > 200
Method Tag Closed Cup

Autoignition temperature °C Not Applicable
Autoignition temperature °F Not Applicable

Flammability Limits (% in Air)
Upper No data available
Lower No data available

Suitable extinguishing media
Carbon dioxide (CO₂). Alcohol foam. Dry chemical.

Special protective equipment for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Fire and Explosion Hazards
Keep product and empty container away from heat and sources of ignition. Containers may vent or burst under extreme or prolonged fire conditions. Water should be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. Water spray may be ineffective. If water is used, fog nozzles are preferable. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

Sensitivity to shock
No information available.

Sensitivity to static discharge
No information available.

6. ACCIDENTAL RELEASE MEASURES

6. ACCIDENTAL RELEASE MEASURES**Methods for cleaning up**

Eliminate all sources of ignition. Ventilate area to maintain exposure below permissible exposure limits. Soak up with inert absorbent material.

7. HANDLING AND STORAGE**Handling**

Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep container closed when not in use. Do not take internally. Keep out of reach of children.

Storage

Keep in properly labelled containers. Keep out of the reach of children.

NFPA Storage Code

Store as Level 3 Aerosol (NFPA 30B)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Diethanolamine	-	-	1 mg/m ³	-
Triethanolamine	-	-	5 mg/m ³	-

Ventilation and Environmental Controls

Use enough ventilation, local exhaust at the work area, general, or both, to keep below the TLV's in the worker's breathing zone and the general area. General: as necessary.

Hygiene measures

Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing.

Other precautions

Avoid breathing vapors or mists.

Respiratory protection

Avoid breathing concentrated vapors or particles from all products not specifically designed to be inhaled. Wear a NIOSH approved organic vapor/particulate respirator.

Hand Protection

Consult glove manufacturer to determine the proper type for a specific operation. Use of a barrier cream on exposed skin is highly recommended.

Eye protection

Wear safety glasses with side shields.

Skin and body protection

None necessary under normal conditions

Other Protective Equipment

A safety shower and eye wash station should be available for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Aerosol
Color	No information available
Odor	No information available
Odor Threshold	No information available
pH	9.0
Specific Gravity	1.06
Vapor pressure	No data available
Density	8.84 lbs/gal, 1059 g/l
Vapor density	>1 (air=1)
Evaporation Rate	<1 (ether = 1)
Water solubility	No data available
VOC Content	0.11 lbs/gal; 13 g/l
Partition Coefficient (n-octanol/water)	No data available
Boiling point/range °C	100 - 269
Boiling point/range °F	212 - 517
Melting point/range °C	No data available
Melting point/range °F	No data available
Flash point °C	> 93
Flash point °F	> 200

10. STABILITY AND REACTIVITY**Stability**

Stable.

Conditions to avoid

None known.

Incompatibility

None.

Hazardous Decomposition Products

By fire: Carbon dioxide. Carbon monoxide.

Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION**Component Information**

Chemical Name	LD50 (oral, rat)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat)
Diethanolamine 111-42-2	-	-	-
Triethanolamine 102-71-6	4190 mg/kg	20 mL/kg	-

Synergistic Products

None known

Potential health effects**Sensitization**

None known

Chronic toxicity See Section 2 .
Mutagenic effects None known
Teratogenic effects None known
Reproductive toxicity None known
Target Organ Effects See Section 2
Carcinogenic effects See table below

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
Diethanolamine	Listed	Listed	Carcinogen
Triethanolamine	Not Listed	Listed	Not Listed

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
Diethanolamine	A3	Group 2B	Not Listed	Not Listed	Listed
Triethanolamine	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA
Diethanolamine	X	X	-	X
Triethanolamine	X	X	-	X

CPR

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by the Controlled Product Regulations

12. ECOLOGICAL INFORMATION

Diethanolamine

Microtox Data

Photobacterium phosphoreum EC50=73 mg/L (5 min)

Pseudomonas fluorescens EC50>16 mg/L (16 h)

Pseudomonas putida EC50>16 mg/L (16 h)

Water Flea Data

Daphnia magna EC50=55 mg/L (48 h)

Ecotoxicity effects No information available

13. DISPOSAL CONSIDERATIONS

Disposal Information

As supplied, this product is classified as non-hazardous waste according to RCRA regulations. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not incinerate. Dispose in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

DOT

Not Regulated

TDG

Not Regulated

15. REGULATORY INFORMATION

Chemical Name	US EPA SARA 313 Emission Reporting
Diethanolamine	Listed

State Regulations

16. OTHER INFORMATION

HMIS

Health - 2
Flammability - 1
Physical Hazard - 0

Prepared By

V. Shargorodsky, Regulatory Affairs Engineer

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

MATERIAL SAFETY DATA SHEET

Date Printed: 07/25/2008
 Product Code(s): 1273

Page: 1

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: European Auto Coat

Product Code(s): 1273

Manufacturer/Supplier: TRANSTAR AUTOBODY TECHNOLOGIES
 2040 Heiserman Dr.
 Brighton, MI, 48114, USA

24 Hour Emergency Phone(s): 800-424-9300 (CHEMTREC), 613-996-6666 (CANUTEC)

Business Phone: 810-220-3000

Product Use: Specialty Coating

MSDS Prepared By: Transtar Autobody Technologies

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% by Weight
Acetone	67-64-1	25- 40%
* Methylbenzene; Toluene	108-88-3	15- 25%
Propane	74-98-6	15.5
n-Butane	106-97-8	9.0
* Methyl Ethyl Ketone (MEK)	78-93-3	5 - 10%
* Propylene Glycol Monomethyl Ether Acetate	108-65-6	0 - 5%
* Ethylene Glycol Monobutyl Ether	111-76-2	0 - 5%
Carbon Black Pigment	1333-86-4	0 - 5%

See Section 15. Regulatory Information for code descriptions
 Weight percent (%) of 0.0 means chemical is in trace amounts.

3. HAZARDS IDENTIFICATION

DANGER: EXTREMELY FLAMMABLE. CONTENTS UNDER PRESSURE. Aerosol cans produce flammable vapors which can travel to a source of ignition and flash back. IRRITANT.

HMIS Hazard Ratings: Health =3 , Flammability =4, Chemical Reactivity =0

Note: HMIS ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Potential Health Effects

Eyes: Moderate irritation to the eyes.

Skin: Moderate irritation to the skin.

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Inhalation: Moderate irritation to the respiratory system. May be harmful if inhaled. High concentrations may be fatal.

Ingestion: Moderate irritation to the digestive tract.

4. FIRST AID MEASURES

Seek professional medical attention for all over-exposures and/or persistent problems.

Eyes Contact: Flush eyes with clean water for a minimum of 15 minutes. Seek medical attention.

Skin Contact: Wash exposed area thoroughly with soap and water.

Inhalation: Remove person from area to fresh air. If breathing difficulty persists, seek medical attention.

Ingestion: DO NOT INDUCE VOMITTING. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: -4 Deg F, -20 Deg C
Method: TCC
Upper Explosive Limit (UEL): 12.8
Lower Explosive Limit (LEL): 1.1
Autoignition Temperature: No data

Extinguishing Media: Foam, Alcohol Foam, CO₂, Dry Chemical, Water Fog, Other.

Special Firefighting Procedures: Full fire fighter equipment including SCBA should be worn to avoid skin contact and inhalation of concentrated vapors. Minimize skin exposure. Highly toxic fumes may be generated by thermal decomposition.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, oxides of nitrogen.

Unusual Fire and Explosion Hazards: Vapors can travel to a source of ignition and flash back. Aerosol cans contain flammable, pressurized propellant. Cans will explode when exposed to flame, high heat and temperatures. Combustion generates toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

For large spills or transportation accidents involving release of this product, contact the Emergency Response Center: 800-424-9300.

Eliminate all sources of ignition, provide adequate ventilation, dike spill area and add absorbent earth or sawdust to spilled liquid. Sweep up and dispose of in appropriate containers in accordance with Federal, State and/or Local regulations.

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7. HANDLING AND STORAGE

Aerosol cans contain pressurized, flammable propellant. Cans will burst if exposed to extreme heat or temperatures. Keep spray nozzle pointed away from face and do not direct nozzle spray towards people or animals. Avoid hot surfaces. Use in cool, well-ventilated areas. Keep aerosol can capped when not in use. Keep away from excessive heat and open flames. Follow all MSDS/label precautions even after container is emptied because they may retain product residues. Store in a cool area away from heat and flames. Do not reuse container when empty.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name/Exposure Limits	CAS Number
Acetone	67-64-1
OSHA PEL: 1000 ppm, ACGIH TLV: 500 ppm, OTHER: STEL 750 ppm	
* Methylbenzene; Toluene	108-88-3
OSHA PEL: 200 ppm, 300 ppm ceiling	
ACGIH TLV: 50 ppm (skin)	
IDLH: 500 ppm	
Propane	74-98-6
OTHER: TWA1000ppm	
n-Butane	106-97-8
OTHER: TWA 800ppm	
* Methyl Ethyl Ketone (MEK)	78-93-3
OSHA PEL: 200 ppm, ACGIH TLV: 200 ppm, OTHER: STEL 300 ppm	
* Propylene Glycol Monomethyl Ether Acetate	108-65-6
OSHA PEL: N/A, ACGIH TLV: N/A, OTHER: N/A	
* Ethylene Glycol Monobutyl Ether	111-76-2
OSHA PEL: 50ppm, ACGIH TLV: 20ppm	
Carbon Black Pigment	1333-86-4
OSHA PEL: 3.5 mg/m ³ , ACGIH TLV: 3.5mg/m ³	

Engineering Controls: General mechanical ventilation or local exhaust should be utilized to keep vapor concentrations below exposure limits (PEL & TLV). Ventilation equipment must be explosion proof.

Respiratory Protection: Utilize engineering controls to reduce emission levels below the time weighted exposure limits (ACGIH TLV & OSHA PEL). Wear an approved respirator if exposure limits are above the exposure limits listed above.

Eye Protection: Use safety glasses or splash goggles.

Skin Protection: Use chemical resistant gloves.

Safe Work Practices: Eye washes and safety showers in the workplace are recommended. Avoid contact with skin and eyes. Avoid breathing vapors. Wash hands thoroughly after using and before eating, drinking or smoking. Employee education and training in the safe use and

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handling of this product is required under the OSHA Hazard Communication Standard 29CFR1200. When spraying an aerosol can, use ventilation to minimize vapors. Smoking in area where this material is used should be strictly prohibited. Always use protective clothing and equipment. Remove all contaminated clothing and wash thoroughly when finished working. Keep food and drink away from material and from area where material is being used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Homogeneous mixture
Physical State: Liquid
Color: Black
Odor: Organic solvent
Odor Threshold: No Data
Specific Gravity (water=1) 0.75
Vapor Pressure: No data
Vapor Density: Heavier than air
Material VOC: 3.40 lb/gl 407 g/l
Coating VOC: 5.37 lb/gl 644 g/l
Evaporation Rate: Faster than ether.
Boiling Point: -44øF
Melting Point: No data
Freezing Point: No data
Viscosity at Ambient Temperature: No data
Solubility in Water: Insoluble
Octanol/Water Partition Coefficient: No data
pH: No data

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: Strong acids, strong bases and strong oxidizing agents.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

ACUTE:

INHALATION - Dizziness, breathing difficulty, headaches, & loss of coordination.

EYE CONTACT - Moderate irritation, tearing, redness, and blurred vision.

SKIN CONTACT - Moderate irritant. Can dry and defat skin causing cracks, irritation, and dermatitis.

INGESTION - Can cause gastrointestinal irritation, vomiting, nausea, & diarrhea.

CHRONIC:

May affect liver, kidney and central nervous system with repeated exposure.

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Aerosol spraying may create an oxygen deficient environment. Use proper ventilation to remove vapors, mists and fumes. Aerosol propellents can cause asphyxia characterized by blueness of the skin, difficulty breathing, headaches, loss of coordination and unconsciousness.

Acute Toxicity Data: No data.

Carcinogenicity: NTP -No, IARC -Yes, OSHA -No
This product has not been tested for carcinogenic effects. Some chemicals in this product may be identified by NTP, IARC and/or OSHA as carcinogenic, indicated above as "Yes". No further information available.

Teratology: No data.

Reproduction: No data.

Mutagenicity: No data.

12. ECOLOGICAL INFORMATION

No data.

13. DISPOSAL CONSIDERATIONS

Subject to hazardous waste generation, treatment, storage and disposal. Product should be disposed of in accordance with all governmental regulations. Subject to hazardous waste generation, treatment, storage and disposal under RCRA, 40CFR261. Product should be disposed of in accordance with all Federal, State and local regulations.

14. TRANSPORT INFORMATION

The following transportation information is provided based on Transtar Autobody Technologies interpretation of shipping regulations. Each shipper is responsible for identifying, naming, marking and labeling prior to offering for transport.

USA (DOT) Status: Consumer Commodity ORM-D

Water (IMDG) Status: UN1950, AEROSOL, 2.1, Limited Quantity

Air (ICAO, IATA) Status: UN1950, AEROSOL, 2.1, Limited Quantity

Canada (TDG) Status: Consumer Commodity ORM-D

15. REGULATORY INFORMATION

The information listed in this section is not all inclusive of all regulations for this product or the chemical components of this product.

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US Federal Regulations

TSCA Status: All known major components of this product are listed on the TSCA Inventory and/or are otherwise in compliance with TSCA.

SARA 302 (EHS) Status: No EHS chemicals present.

SARA 311/312 Status: Immediate Health Hazard, Delayed Health Hazard, Fire Hazard.

SARA 313 Status: * Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

OSHA Status: This material meets the requirement of hazardous material and is subject to 29CFR1910.1200.

USA State Information

California Proposition 65: This product contain chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

Pennsylvania RtK Status: This material contains chemical(s) subject to notification under Pennsylvania Right to Know.

New Jersey RtK Status: This material contains chemical(s) subject to notification under New Jersey Right to Know.

Massachusetts RtK Status: This material contains chemical(s) subject to notification under Massachusetts Right to Know.

Rhode Island RtK Status: This material contains chemical(s) subject to notification under Rhode Island Right to Know.

International Regulations

Canada

DSL Status: All known major components of this product are listed on the DSL Inventory and/or are otherwise in compliance with the DSL

NDSL Status: Contains no chemicals on the NDSL

WHMIS: AB5D2B

New Zealand

HSNO Number: HSR002515

EINECS Status: All components of this material are listed on the EINECS Inventory.

16. OTHER INFORMATION

To the best of our knowledge, the information contained herein is accurate, obtained from sources believed by Transtar Autobody Technologies to be accurate. As with all chemicals, KEEP AWAY FROM CHILDREN AND ANIMALS. FOR PROFESSIONAL USE ONLY. The hazard information contained herein is offered solely for the consideration of the user, subject to his own investigation and verification of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

6.

Safety Data Sheet

Prepared in accordance with Commission Regulation (EU) 2015/830

Revision Date 09-02-2016

Revision Number 7



SECTION 1 Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier** 100632
Everglass quart
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Automotive repair
- 1.3 Details of the supplier of the safety data sheet** ITW Evercoat
a division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, OH 45242
513-489-7600
- 1.4 Emergency telephone number** CHEM TEL: +1-813-248-0591

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

- Classified in accordance to (EC) No. 1272/2008** Skin Corrosion/Irritation Category 2
Serious Eye Damage/Eye Irritation Category 2
Flammable Liquid Category 3

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



Signal Word

Warning

Hazard Statements

H226 - Flammable liquid and vapour.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

Precautionary Statements

P233 - Keep container tightly closed.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

Safety Data Sheet

Prepared in accordance with Commission Regulation (EU) 2015/830

Revision Date 09-02-2016

Revision Number 7

rinsing.

P403+P235 - Store in a well-ventilated place. Keep cool.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P240 - Ground/bond container and receiving equipment.

Supplemental Hazard information (EU)

EUH208 - Contains Acid anhydride. May produce an allergic reaction.

2.3 Other hazards

No data available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical Name	%	CAS #	(EC) No 1272/2008	M Factor	SCL
Styrene	14.41	100-42-5	Acute Tox. 4; H332 Acute Tox. 4; H332 Acute Tox. 4; H332 Eye Irrit. 2; H319 Flam. Liq. 3; H226 Skin Irrit. 2; H315	No data available	No data available
Acid anhydride	0.75	85-43-8	Aquatic Chronic 3; H412 Eye Dam. 1; H318 Resp. Sens. 1; H334 Skin Sens. 1; H317 EUH208	No data available	No data available
Dimethylaniline (DMA)	0.11	121-69-7	Aquatic Chronic 2; H411 Acute Tox. 3; H311 Acute Tox. 3; H331 Acute Tox. 3; H331 Acute Tox. 3; H301 Acute Tox. 3; H331 Carc. 2; H351	No data available	No data available

For full text of H-statements; See Section 16

SECTION 4 First aid measures

4.1 Description of first aid measures

Inhalation

Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately. Get medical attention immediately. Keep the victim warm and quiet. If the victim has stopped breathing open airway, loosen collar and belt, and administer artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice.

Safety Data Sheet

Prepared in accordance with Commission Regulation (EU) 2015/830

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Eye Contact	Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention. No data available
Skin Contact	Wash with soap and water. Get medical attention if irritation develops or persists. Remove contaminated clothing and continue flushing with water. Seek medical advice if symptoms persist Wash clothing before reuse.
Ingestion	Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this MSDS. Do not induce vomiting unless directed to do so by medical personnel.
Self protection of the first aider	No data available

4.2 Most important symptoms and effects, both acute and delayed

Symptom See Section 4.1

4.3 Indication of any immediate medical attention and special treatment needed

Note to Doctor No additional first aid information available

SECTION 5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid. Carbon dioxide Dry chemical

Unsuitable extinguishing media No data available

5.2 Special hazards arising from the substance or mixture

Fire and/or Explosion Hazards Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back.

Hazardous Combustion Products Carbon dioxide, Carbon monoxide, Phthalic anhydride, Hydrocarbons

5.3 Advice for firefighters

Fire Fighting Methods and Protection Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface.

SECTION 6 Accidental release measures

Safety Data Sheet

Prepared in accordance with Commission Regulation (EU) 2015/830

Revision Date 09-02-2016

Revision Number 7

6.1 Personal precautions, protective equipment and emergency procedures

For Non-emergency Personnel

Non-emergency personnel should be kept clear of the area.

For emergency responders

No health effects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section VIII of this MSDS

6.2 Environmental precautions

No data available

6.3 Methods and material for containment and cleaning up

No special spill clean-up considerations. Collect and discard in regular trash. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container.

6.4 Reference to other sections

Refer to section 13 for disposal information.

SECTION 7 Handling and storage

7.1 Precautions for safe handling

Mildly irritating material. Avoid unnecessary exposure. Do not get in eyes, on skin and clothing Wash hands before eating Use with adequate ventilation Avoid contact with material, avoid breathing dusts or fumes, use only in a well ventilated area.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool dry place. Isolate from incompatible materials. Store in a cool dry place Keep away from heat, sparks, and flame Store in a tightly closed container

7.3 Specific end use(s)

Automotive repair

SECTION 8 Exposure controls/personal protection

Occupational Exposure limit values

Chemical Name	ACGIH TLV-TWA	ACGIH STEL	IDLH
Styrene	20 ppm	40 ppm STEL; 170 mg/m ³ STEL	No data available

8.2 Exposure controls

Appropriate engineering controls

No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Individual protection measures, such as personal protective equipment

Eye and face protection

Wear chemically resistant safety glasses with side shields when handling this product. Do not wear contact lenses. None

Skin Protection

Hand protection

No information available

Other skin protection

Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene and wear a barrier

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	cream and/or impervious surgical style gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Respiratory Protection	Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.
Thermal hazards	No data available
Environmental exposure controls	No data available

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Paste
Colour	Blue
Odour	Aromatic
Odour Threshold	No data available
pH	Neutral
Melting point / Freezing point (°C)	-30.6
Initial boiling point and boiling range (°C)	145
Flash Point (°C)	49
Evaporation Rate	No data available
Flammability (Solid, gas)	No data available
Upper/lower flammability or explosive limits	
Upper Flammable/Explosive Limit, % in air	6.1
Lower Flammable/Explosive Limit, % in air	1.1
Vapour Pressure	5.0 mmHg @ 68 °F / 20 °C (Styrene)
Vapour Density	Heavier than air. Vapors that evolve from this product will tend to settle and accumulate near the floor.
Relative Density	1.71
Solubility(ies)	No data available
Partition coefficient: n-octanol/water	1.36
Autoignition Temperature (°C)	490
Decomposition Temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

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9.2 Other information No data available

SECTION 10 Stability and reactivity

10.1 Reactivity No data available
10.2 Chemical stability Stable under normal conditions.
10.3 Possibility of hazardous reactions No data available
10.4 Conditions to avoid No data available
10.5 Incompatible materials Peroxides; Strong acids; Strong oxidizing agents
10.6 Hazardous decomposition products Carbon dioxide Carbon monoxide Hydrocarbons

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Acute Toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

pH	Neutral
----	---------

Classification is based on pH and the components listed in Section 3.

Serious eye damage/irritation

pH	Neutral
----	---------

Classification is based on pH and the components listed in Section 3.

Respiratory or skin sensitization

EUH208 - Contains Acid anhydride. May produce an allergic reaction.
Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

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Based on available data, the classification criteria are not met.

SECTION 12 Ecological information

12.1 Toxicity No data available

Ecotoxicity Data

Chemical Name	CAS Number	Aquatic EC50 Crustacea	Aquatic ERC50 Algae	Aquatic LC50 Fish
No data available				

12.2 Persistence and degradability No data available

12.3 Bioaccumulative potential No data

12.4 Mobility in soil No data available

12.5 Results of PBT and vPvB assessment No data available

12.6 Other adverse effects No data available

12.7 Additional information No data available

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Waste Description for Spent Product Spent or discarded material is a hazardous waste.

Disposal Methods Dispose of by incineration following Federal, State, Local, or Provincial regulations.

Waste Disposal Code(s) (European Waste Catalogue) W080111

SECTION 14 Transport information

Ground:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT
14.3 Transport hazard class(es): 3
14.4 Packing group: III
Exemptions: Limited Quantity

Air:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT

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14.3 Transport hazard class(es): 3

14.4 Packing group: III

Water:

14.1 UN number: UN3269

14.2 UN proper shipping name: POLYESTER RESIN KIT

14.3 Transport hazard class(es): 3

14.4 Packing group: III

Exemptions: Limited Quantity

14.5 Environmental hazards: No

14.6 Special precautions for user: No data available

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: No data available

SECTION 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

<u>Chemical Name</u>	<u>EINECS</u>	<u>SVHC</u>
Styrene	Y	N
Acid anhydride	Y	N
Dimethylaniline (DMA)	Y	N
Aniline	Y	N
Styrene Oxide	Y	N

15.2 Chemical safety assessment No data available

SECTION 16 Other information

SDS Abbreviations: No data available

References: No data available

Hazard phrase(s) referenced in section 3

- H226 - Flammable liquid and vapour.
- H301 - Toxic if swallowed.
- H302 - Harmful if swallowed.
- H311 - Toxic in contact with skin.
- H312 - Harmful in contact with skin.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.

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- H331 - Toxic if inhaled.
- H332 - Harmful if inhaled.
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H336 - May cause drowsiness or dizziness.
- H341 - Suspected of causing genetic defects.
- H350 - May cause cancer.
- H351 - Suspected of causing cancer.
- H372 - Causes damage to organs through prolonged or repeated exposure.
- H400 - Very toxic to aquatic life.
- H411 - Toxic to aquatic life with long lasting effects.
- H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/lighting equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 - Wash thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P284 - Wear respiratory protection.

Response

- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P307+P311 - IF exposed: Call a POISON CENTER or doctor/physician.

P308+P313 - IF exposed or concerned: Get medical advice/attention.

P314 - Get medical advice/attention if you feel unwell.

P321 - Specific treatment (see on this label).

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P363 - Wash contaminated clothing before reuse.

P370+P378 - In case of fire: Use for extinction.

Storage

P233 - Keep container tightly closed.

P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up.

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances

Safety Data Sheet



Revision Number: 005.1

Issue date: 06/08/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Extend(R) Rust Treatment
Product type: Rust converter
Restriction of Use: None identified
Company address:
 Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 497093
Item number: 37557
Region: United States
Contact information:
 Telephone: (860) 571-5100
 MEDICAL EMERGENCY Phone: Poison Control Center
 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC
 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkeln.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CONTENTS UNDER PRESSURE.
 EXTREMELY FLAMMABLE AEROSOL.
 HARMFUL IF SWALLOWED.
 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
 MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE AEROSOL	1
ACUTE TOXICITY ORAL	4
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention: Keep away from heat, sparks, open flames, hot surfaces - no smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe the mist or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.

Response: If SWALLOWED: Immediately call poison control or physician if you feel unwell. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison control center or physician. Wash contaminated clothing before reuse.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
2-Butoxyethanol	111-76-2	30 - 60
Acetone	67-64-1	30 - 60
Butyral resin	Proprietary	5 - 10
Formic acid	64-18-6	5 - 10
3,4,5-Trihydroxybenzoic acid	149-91-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical advice.
Skin contact:	Remove contaminated clothing and footwear. Wash with soap and water. If symptoms develop and persist, get medical attention. Wash clothing before reuse.
Eye contact:	Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.
Ingestion:	Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Carbon dioxide. Dry chemical. foam
Special firefighting procedures:	Use water spray to keep fire exposed containers cool and disperse vapors. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. Vapours may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back.
Hazardous combustion products:	Oxides of carbon. Hydrocarbons

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow material to contaminate ground water system. Do not let product enter drains. Absorb spill with inert material. Shovel material into appropriate container for disposal.
Clean-up methods:	Absorb the spilled material with an inert absorbent (nonflammable) material.

7. HANDLING AND STORAGE

Handling: Avoid breathing mists or aerosols of this product. Keep away from sources of ignition - no smoking. Avoid contact with eyes, skin and clothing.

Storage: Store in a cool, dry area. Keep containers closed when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
2-Butoxyethanol	20 ppm TWA	50 ppm (240 mg/m ³) PEL (SKIN)	None	None
Acetone	750 ppm STEL 500 ppm TWA	1,000 ppm (2,400 mg/m ³) PEL	None	None
Butyral resin	None	None	None	None
Formic acid	5 ppm TWA 10 ppm STEL	5 ppm (9 mg/m ³) PEL	None	None
3,4,5-Trihydroxybenzoic acid	None	None	None	None

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Aerosol, Liquid
Color:	Translucent
Odor:	Acetone
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Specific gravity:	1.0000
Vapor density:	Not available.
Flash point:	< -17.7 °C (< 0.14 °F) ; This product exhibits no flashback when tested for flame extension.
Flammable/Explosive limits - lower:	1.1 %
Flammable/Explosive limits - upper:	57 %
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Not available.
Partition coefficient (n-octanol/water):	Not available.
VOC content:	50.4 %
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Irritating organic vapours. Oxides of carbon.
Incompatible materials:	Acids and bases. Oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, spark and flame.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation:	Vapours may cause drowsiness and dizziness.
Skin contact:	Causes skin burns.
Eye contact:	Causes serious eye damage.
Ingestion:	Harmful if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
2-Butoxyethanol	Oral LD50 (RAT) = 560 mg/kg Oral LD50 (RABBIT) = 0.32 g/kg Oral LD50 (RAT) = 1.48 g/kg Dermal LD50 (RABBIT) = 400 mg/kg Inhalation LC50 (RAT, 4 h) = 486 ppm Inhalation LC50 (RAT, 4 h) = 450 ppm	Blood, Central nervous system, Irritant, Kidney, Liver
Acetone	Oral LD50 (RABBIT) = 5,340 mg/kg Oral LD50 (RAT) = 5,800 mg/kg Oral LD50 (RAT) = 9,800 mg/kg Dermal LD50 (RABBIT) = 20,000 mg/kg Inhalation LC50 (RAT, 8 h) = 50.1 mg/l Inhalation LC50 (RAT, 4 h) = 76 mg/l	Blood, Central nervous system, Irritant, Reproductive
Butyral resin	None	No Records
Formic acid	Oral LD50 (RAT) = 730 mg/kg Inhalation LC50 (RAT, 15 min) = 15 mg/l Inhalation LC50 (RAT, 4 h) = 7.4 mg/l	Central nervous system, Corrosive, Irritant, Kidney, Metabolic
3,4,5-Trihydroxybenzoic acid	Oral LD50 (RABBIT) = 5.0 g/kg	Irritant, Central nervous system

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
2-Butoxyethanol	No	No	No
Acetone	No	No	No
Butyral resin	No	No	No
Formic acid	No	No	No
3,4,5-Trihydroxybenzoic acid	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Not available.
Hazardous waste number: D001: Ignitable.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
DOT Hazardous Substance(s): Acetone

International Air Transportation (ICAO/IATA)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: AEROSOLS
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Additional information: IMDG-Code: Segregation group 1- Acids

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire, Sudden Release
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). 2-Butoxyethanol (CAS# 111-76-2).
CERCLA Reportable quantity: Acetone (CAS# 67-64-1) 5,000 lbs. (2,270 kg)
Formic acid (CAS# 64-18-6) 5,000 lbs. (2,270 kg)
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Catherine Bimler, Regulatory Affairs Specialist

Issue date: 06/08/2015

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101G

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- GEAR OILS
- MOTOR OILS
- HYDRAULIC OILS
- PIPE COATINGS
- THREAD SEALANTS
- BEARING GREASES
- SPECIALTY GREASES
- THREAD COMPOUNDS
- SUCKER ROD COATINGS
- OUTSIDE PRESERVATIVES
- WIRELINE GREASE SEALS
- CLEANERS & DEGREASERS
- PIPE STORAGE COMPOUNDS
- RUST & CORROSION INHIBITORS
- THREAD LOCKING COMPOUNDS
- VALVE LUBRICANTS & SEALANTS
- TOOL JOINT & DRILL COLLAR COMPOUNDS

PRODUCT DESCRIPTION

101G Film Forming Lubricant is a premium quality highly concentrated lubricant that resists the corrosive effects of downhole chemicals. 101G is made with LIQUILON®, which enhances the lubricity and extreme pressure properties. LIQUILON® is unaffected by acids, caustics, downhole chemicals, and hydrocarbons including gasoline and solvents.

101G is inert and thermally stable. The film forming properties of 101G eliminates wear, guards against rust and corrosion, and prevents metal-to-metal contact thereby significantly reducing operating temperature. In many cases, the power (electricity) to operate is reduced. 101G provides instant lubrication to equipment critical areas during start up.

BENEFITS

- Made with LIQUILON®
- Highly concentrated
- Eliminates wear
- Guards against rust and corrosion
- Prevents metal-to-metal contact
- Provides residual lubrication
- Seals wireline tools from the effects of downhole chemicals
- Ensures against galling and seizing during makeup of wireline tools
- Provides instant lubrication during start up

APPLICATION

101G is recommended for use on O-rings, seal nipples, gaskets, packer plugs, and other downhole tool accessories to ensure against drying, cracking, and downhole contamination.

101G is also recommended for application to wireline equipment and various downhole tools, where lubrication and corrosion resistance are vital. This lubricant will allow easy break-out and disassembly of downhole tools that have been subjected to adverse downhole chemicals.

TYPICAL OBSERVATIONS

Type	Concentrated Film Forming Lubricant
Color	Green
Texture	Smooth Paste
Consistency	Buttery
Active Component	LIQUILON®
Density, lb/gal @ 77°F (25°C)	8.5
Specific Gravity, @ 77°F (25°C)	1.02
Dropping Point,	
ASTM D-2265	>450°F (232°C)
Flash Point, ASTM D-92	>500°F (260°C)
Penetration, ASTM D-217	
Worked @ 77°F (25°C)	265–295
Base Oil Viscosity	
cSt, 40°C	174.0
cSt, 100°C	17.0
Corrosion Preventive Properties,	
ASTM D-1743 @ 125°F (51°C)	Pass
Water Washout Characteristics,	
ASTM D-1264 @ 100°F (37°C)	1.0%
Evaporation Loss,	
ASTM D-972 @ 210°F (98°C)	2.8%
Oil Separation,	
ASTM D-1742 @ 77°F (25°C)	Nil
Oxidation Stability,	
ASTM D-942 @ 210°F (98°C) 72 Hrs. PSI Loss	6
Shelf Life (unopened container)	Two years

CONTAINER SIZE

- Small Case (12 jars)
- Standard Case (6 jars)
- Cart Case (6 cartridges)
- Pint Case (12 cans)
- 1 gal (4 L) pail
- 5 gal (19 L) pail
- 55 gal (208 L) drum



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WARRANTY Because the conditions of use and the supervision of application are beyond our control, we assume no liability for any product failure or other damage beyond the purchase price of the material furnished by us. No agent, representative, or employee of this Company is authorized to change this provision, which relates to all goods delivered, whether sold, delivered as samples, or otherwise. Each user should independently determine the suitability of this product based on their specific application.

Manufactured by

BALMAR, L.L.C.

616 WEST PONT DES MOUTON ROAD | LAFAYETTE, LA 70507

Sales Locations:

LAFAYETTE, LA | HOUSTON, TX | LONGVIEW, TX | MIDLAND, TX | OKLAHOMA CITY, OK

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The product information and specifications listed in this publication are constantly being updated to keep up with government regulations and technology changes. Please visit our web site, www.oilcenter.com, or contact your Account Representative for the most current information relating to this product.

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101EU

FILM FORMING LUBRICANT

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- GEAR OILS
- MOTOR OILS
- HYDRAULIC OILS
- PIPE COATINGS
- THREAD SEALANTS
- BEARING GREASES
- SPECIALTY GREASES
- THREAD COMPOUNDS
- SUCKER ROD COATINGS
- OUTSIDE PRESERVATIVES
- WIRELINE GREASE SEALS
- CLEANERS & DEGREASERS
- PIPE STORAGE COMPOUNDS
- RUST & CORROSION INHIBITORS
- THREAD LOCKING COMPOUNDS
- VALVE LUBRICANTS & SEALANTS
- TOOL JOINT & DRILL COLLAR COMPOUNDS

PRODUCT DESCRIPTION

101EU Film Forming Lubricant is a premium quality highly concentrated lubricant that resists the corrosive effects of downhole chemicals. 101EU is made with LIQUILON®, which enhances the lubricity and extreme pressure properties. LIQUILON® is unaffected by acids, caustics, downhole chemicals, and hydrocarbons including gasoline and solvents.

101EU is inert and thermally stable. The film forming properties of 101EU eliminates wear, guards against rust and corrosion, and prevents metal-to-metal contact thereby significantly reducing operating temperature. In many cases, the power (electricity) to operate is reduced. 101EU provides instant lubrication to equipment critical areas during start up.

BENEFITS

- REACH Compliant
- Made with LIQUILON®
- Highly concentrated
- Eliminates wear
- Guards against rust and corrosion
- Prevents metal-to-metal contact
- Provides residual lubrication
- Seals wireline tools from the effects of downhole chemicals
- Ensures against galling and seizing during makeup of wireline tools
- Provides instant lubrication during start up
- Service temperatures 10°F to >400°F

APPLICATION

101EU is recommended for use on O-rings, seal nipples, gaskets, packer plugs, and other downhole tool accessories to ensure against drying, cracking, and downhole contamination.

101EU is also recommended for application to wireline equipment and various downhole tools, where lubrication and corrosion resistance are vital. This lubricant will allow easy break-out and disassembly of downhole tools that have been subjected to adverse downhole chemicals.

TYPICAL OBSERVATIONS

Type	Concentrated
	Film Forming Lubricant
Color	Green
Texture	Smooth Paste
Consistency	Buttery
Active Component	LIQUILON®
Density, lb/gal @ 77°F (25°C)	7.70
Specific Gravity, @ 77°F (25°C)	0.922
Dropping Point,	
ASTM D-2265	>450°F (232°C)
Flash Point, ASTM D-92	>450°F (232°C)
Penetration, ASTM D-217	
Worked @ 77°F (25°C)	265–295
Base Oil Viscosity	
cSt, 40°C	174.0
cSt, 100°C	17.0
Corrosion Preventive Properties,	
ASTM D-1743 @ 125°F (51°C)	Pass
Water Washout Characteristics,	
ASTM D-1264 @ 100°F (37°C)	1.0%
Evaporation Loss,	
ASTM D-972 @ 210°F (98°C)	2.8%
Oil Separation,	
ASTM D-1742 @ 77°F (25°C)	Nil
Oxidation Stability, ASTM D-942	
@ 210°F (98°C) 72 Hrs. PSI Loss	6
Shelf Life (unopened container)	Two years

CONTAINER SIZE

- Small Case (12–5oz jars)
- Standard Case (6–1lb jars)
- 1 gal (4 L) pail
- 5 gal (19 L) pail
- 55 gal (208 L) drum



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WARRANTY Because the conditions of use and the supervision of application are beyond our control, we assume no liability for any product failure or other damage beyond the purchase price of the material furnished by us. No agent, representative, or employee of this Company is authorized to change this provision, which relates to all goods delivered, whether sold delivered as samples, or otherwise. Each user should independently determine the suitability of this product based on their specific application.

Manufactured by
BALMAR, L.L.C.

616 WEST PONT DES MOUTON ROAD | LAFAYETTE, LA 70507

Sales Locations:
LAFAYETTE, LA | HOUSTON, TX | LONGVIEW, TX | MIDLAND, TX | OKLAHOMA CITY, OK

*Registered trade name of Oil Center Research, Inc. 08/15/14

The product information and specifications listed in this publication are constantly being updated to keep up with government regulations and technology changes. Please visit our web site, www.oilcenter.com, or contact your Account Representative for the most current information relating to this product.

SAFETY DATA SHEET

Film Forming Lubricant

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Revision: 01/12/2016

1. Product and Company Identification

Product Code: 101G
Product Name: Film Forming Lubricant
Company Name: Balmar, LLC
616 W. Pont Des Mouton Rd.
Lafayette, LA 70507-4002
Phone Number: (337)232-2496
Email address: Info@oilcenter.com
Emergency Contact: 01-703-527-3887

2. Hazards Identification

Skin Corrosion/Irritation, Category 3

GHS Signal Word: Warning
GHS Hazard Phrases: H316 - Causes mild skin irritation.
GHS Precaution Phrases: No phrases apply.
GHS Response Phrases: P332+313 - If skin irritation occurs, get medical advice/attention.
GHS Storage and Disposal Phrases: No phrases apply.
Potential Health Effects (Acute and Chronic): Chronic: Effects may be delayed.
Inhalation: The toxicological properties of this substance have not been fully investigated. Effects may be delayed.
Skin Contact: May cause skin irritation.
Eye Contact: May cause eye irritation.
Ingestion: The toxicological properties of this substance have not been fully investigated. Moderately toxic to humans by ingestion. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

3. Composition/Information on Ingredients

CAS #	Components (Chemical Name)	Concentration	
NA	Mineral Oil	64.0 - 81.0 %	
NA	Thickener	4.00 - 9.00 %	
NA	Coloring agent	3.00 - 5.00 %	
1314-13-2	Zinc oxide	1.00 - 5.00 %	

SAFETY DATA SHEET

Film Forming Lubricant

4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid.

In Case of Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical aid.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

In Case of Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Consult a physician.

Note to Physician: Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt: > 232 F Method Used: Estimate

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: NA

Suitable Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Material will not burn.

Flammable Properties and Hazards: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Vacuum or sweep up material and place into a suitable disposal container.

7. Handling and Storage

Precautions To Be Taken in Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.

Precautions To Be Taken in Storing: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
NA	Mineral Oil	No data.	No data.	No data.
NA	Thickener	No data.	No data.	No data.
NA	Coloring agent	PEL: 15 (dust) mg/m3	TLV: 10 mg/m3	No data.
1314-13-2	Zinc oxide	PEL: 5 (fume); 15 (dust) mg/m3	TLV: 2 mg/m3 (R) STEL: 10 mg/m3 (R)	No data.

SAFETY DATA SHEET
Film Forming Lubricant

Respiratory Equipment (Specify Type):	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Eye Protection:	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Protective Gloves:	Wear appropriate protective gloves to prevent skin exposure.
Other Protective Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Engineering Controls (Ventilation etc.):	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

9. Physical and Chemical Properties

Physical States:	[] Gas [] Liquid [X] Solid
Appearance and Odor:	Paste. Petroleum-like. Appearance: green.
Melting Point:	> 232 F
Boiling Point:	NP
Autoignition Pt:	NA
Flash Pt:	> 232 F Method Used: Estimate
Explosive Limits:	LEL: No data. UEL: No data.
Specific Gravity (Water = 1):	1.02 at 77.0 F
Density:	8.51 at 77.0 F
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Evaporation Rate:	No data.
Solubility in Water:	< 1
Percent Volatile:	No data.

10. Stability and Reactivity

Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	Incompatible materials.
Incompatibility - Materials To Avoid:	Oxidizing agents, magnesium, chlorinated rubber.
Hazardous Decomposition Or Byproducts:	Carbon monoxide.
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

SAFETY DATA SHEET
Film Forming Lubricant

11. Toxicological Information

Toxicological Information: Epidemiology: No information found.
 Teratogenicity: No information available.
 Reproductive Effects: No information found.
 Mutagenicity: Neurotoxicity:

Carcinogenicity/Other Information: CAS# 6966-09-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
 CAS# 1314-13-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

CAS #	Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
NA	Mineral Oil	n.a.	n.a.	n.a.	n.a.
NA	Thickener	n.a.	n.a.	n.a.	n.a.
NA	Coloring agent	n.a.	2B	A4	n.a.
1314-13-2	Zinc oxide	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information: Environmental: No information available.

13. Disposal Considerations

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
 RCRA P-Series: None listed.
 RCRA U-Series: None listed.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not regulated as a hazardous material()
DOT Hazard Class:
UN/NA Number:

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: No information available.

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: No information available.
UN Number:
Hazard Class:

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Not regulated as a hazardous material

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not regulated as a hazardous material

SAFETY DATA SHEET

Film Forming Lubricant

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
NA	Mineral Oil	No	No	No
NA	Thickener	No	No	No
NA	Coloring agent	No	No	No
1314-13-2	Zinc oxide	No	No	Yes-Cat. N982

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Yes No Acute (immediate) Health Hazard
 Yes No Chronic (delayed) Health Hazard
 Yes No Fire Hazard
 Yes No Sudden Release of Pressure Hazard
 Yes No Reactive Hazard

CAS #	Components (Chemical Name)	Other US EPA or State Lists
NA	Mineral Oil	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; MA Oil/HazMat: No; NJ EHS: No; NY Part 597: No; PA HSL: No
NA	Thickener	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; MA Oil/HazMat: No; NJ EHS: No; NY Part 597: No; PA HSL: No
NA	Coloring agent	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: Yes; MA Oil/HazMat: No; NJ EHS: Yes; NY Part 597: No; PA HSL: Yes - 1
1314-13-2	Zinc oxide	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; MA Oil/HazMat: Yes - Cat.; NJ EHS: Yes - 2037; NY Part 597: No; PA HSL: Yes - E

CAS #	Components (Chemical Name)	International Regulatory Lists
NA	Mineral Oil	Canadian DSL: Yes; REACH: Yes - (R), (P), C2
NA	Thickener	Canadian DSL: Yes; REACH: Yes - (P)
NA	Coloring agent	Canadian DSL: Yes; REACH: Yes - (R), (P)
1314-13-2	Zinc oxide	Canadian DSL: Yes; REACH: Yes - (R), (P)

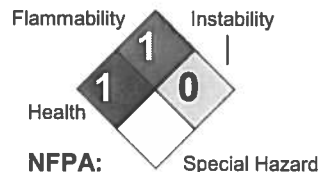
16. Other Information

Revision Date: 01/12/2016

Hazard Rating System:

HEALTH		1
FLAMMABILITY		1
PHYSICAL		0
PPE		B

HMIS:



Additional Information About This Product: No data available.

Company Policy or Disclaimer:

The information contained here is based upon data available to us and reflects our best professional judgment. Since it is impossible to anticipate the conditions under which our products may be used, we cannot guarantee that the recommendations will be adequate for all individuals and situations. Each user of this product should determine the suitability of the product with zero or minimum hazards. Our products are improved daily as up-to-date information and research data is received from our suppliers in our quest to

SAFETY DATA SHEET
Film Forming Lubricant

Revision: 01/12/2016

use products with less or no hazards. Please feel free to contact us for current information.



GLANCE FOAMING GLASS CLEANER

HMIS		NFPA	Personal protective equipment
Health	1	1	None / Aucune / Ninguno
Flammability	2	4	
Physical Hazard / Instability	0	0	

Version Number: 5

Preparation date: 2014-09-18

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: GLANCE FOAMING GLASS CLEANER

MSDS #: MS0301498
Product Code: 04553
Recommended use: • Glass Cleaner

Manufacturer, importer, supplier:
 US Headquarters: Diversey, Inc. 8310 16th St. Sturtevant, Wisconsin 53177-1964
 Phone: 1-888-352-2249
 MSDS Internet Address: www.diversey.com
 Canadian Headquarters: Diversey, Inc. - Canada 3755 Laird Road Mississauga, Ontario L5L 0B3
 Phone: 1-800-668-3131
Emergency telephone number: 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION. MAY BE MILDLY IRRITATING TO EYES. COMBUSTIBLE LIQUID AND VAPOR.

Principal routes of exposure: Eye contact. Skin contact. Inhalation.
Eye contact: May be mildly irritating to eyes.
Skin contact: None known.
Inhalation: None known.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral - Rat (mg/kg)	LD50 Dermal - Rabbit	LC50 Inhalation - Rat
Butane	106-97-8	1 - 5%	2000	Not available	=658 g/m ³ (4 h)
2-butoxyethanol	111-76-2	1 - 5%	1400	=99 mg/kg	=450 ppm (4 h)
Isopropyl alcohol	67-63-0	1 - 5%	4396	=4059 mg/kg	=72600 mg/m ³ (4 h)
Propane	74-98-6	1 - 5%	2400	Not available	=658 mg/L (4 h)
Sodium nitrite	7632-00-0	0.1 - 1.5%	85	Not available	=5.5 mg/L (4 h)

4. FIRST AID MEASURES

Eye contact: Flush immediately with plenty of water. If irritation develops, get medical attention.
Skin contact: Rinse with plenty of water.
Inhalation: No specific first aid measures are required.
Ingestion: No specific first aid measures are required.

Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Extinguish fire using agent suitable for surrounding fire.
Extinguishing media which must not be used for safety reasons: No information available.
Specific hazards: NFPA 30B Level 1 Aerosol. Aerosol product - Containers may rocket or explode in heat of fire.
Unusual hazards: None known.
Specific methods: Use water spray to keep fire-exposed containers cool.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area).
Environmental precautions and clean-up methods: No information available.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. COMBUSTIBLE LIQUID AND VAPOR. Keep away from open flames, hot surfaces and sources of ignition. Use only in well-ventilated areas. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

Storage: Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements General room ventilation is adequate

Personal Protective Equipment

Eye protection: No special requirements under normal use conditions.
Hand protection: No special requirements under normal use conditions
Skin and body protection: No special requirements under normal use conditions.
Respiratory protection: No special requirements under normal use conditions.
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Butane	106-97-8	1000 ppm (STEL)		800 ppm (TWA) 1900 mg/m ³ (TWA)
2-butoxyethanol	111-76-2	20 ppm (TWA)	Skin 50 ppm (TWA) 240 mg/m ³ (TWA)	75 ppm (STEL) 360 mg/m ³ (STEL) 26 ppm (TWA) 120 mg/m ³ (TWA)
Isopropyl alcohol	67-63-0	400 ppm (STEL) 200 ppm (TWA)	400 ppm (TWA) 980 mg/m ³ (TWA)	500 ppm (STEL) 1225 mg/m ³ (STEL) 400 ppm (TWA) 980 mg/m ³ (TWA)
Propane	74-98-6	1000 ppm (TWA)	1000 ppm (TWA) 1800 mg/m ³ (TWA)	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Aerosol
Appearance: No information available
Specific gravity: 0.9948
Vapor density: No information available
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Partially Soluble
Solubility in other solvents: No information available
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.
pH: 10.93
Explosion limits: - upper: Not determined - lower: Not determined

Bulk density: No information available
Evaporation Rate: No information available
Color: Clear Colorless
Odor: Solvent
Melting point/range: Not determined
Autoignition temperature: No information available
Density: 8.3 lbs/gal 0.9948 Kg/L
Flash point: -156 °F -104.4 °C
Viscosity: No information available
VOC: 8.82 % *
Dilution pH: 11.43 @ RTU

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Stability:	The product is stable
Polymerization:	Hazardous polymerization does not occur.
Hazardous decomposition products:	None reasonably foreseeable.
Conditions to avoid:	Extremes of temperature and direct sunlight. Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Oral LD50 estimated to be greater than 5000 mg/kg Dermal LD50 estimated to be > 2000 mg/kg
Component Information: See Section 3.

Chronic toxicity: None known

Specific effects

Carcinogenic effects:	• None known
Mutagenic effects:	None known
Reproductive toxicity:	None known
Target organ effects:	None known

Ingredient(s)	CAS #	NTP	IARC	OSHA
Isopropyl alcohol	67-63-0		3	X
Sodium nitrite	7632-00-0		2A	

12. ECOLOGICAL INFORMATION

Environmental Information: No data available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:

Use up contents if possible before disposal. If possible, recycle empty aerosol cans to the nearest steel recycling center. This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Dispose in compliance with all Federal, state, provincial, and local laws and regulations.

RCRA Hazard Class (undiluted product): D001 Ignitable Waste

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: Please refer to the Diversey HazMat Library, only available through Internet Explorer, <http://naextranet.diversey.com/dot/>, for up to date shipping information.

DOT (Ground) Bill of Lading Description: LTD. QTY.

IMDG (Ocean) Bill of Lading Description: UN1950, AEROSOLS, 2.1, LTD. QTY.

15. REGULATORY INFORMATION

International Inventories at CAS# Level

All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (ECL), Japan (ENCS), Philippines (PICCS), China (IECSC).

U.S. Regulations

California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65.

RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Butane	106-97-8	X	X	X	-
2-butoxyethanol	111-76-2	X	X	X	-
Isopropyl alcohol	67-63-0	X	X	X	-
Propane	74-98-6	X	X	X	-
Sodium nitrite	7632-00-0	X	X	X	X

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
2-butoxyethanol	111-76-2	1 - 5%			X
Isopropyl alcohol	67-63-0	1 - 5%			X
Sodium nitrite	7632-00-0	0.1 - 1.5%	100		X

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
2-butoxyethanol	X		

SARA 311/312 Hazard Categories

Immediate: -
Delayed: -
Fire: X
Reactivity: -
Sudden Release of Pressure: X

Canada

WHMIS hazard class: A Compressed gases, B5 Flammable aerosol.



Ingredient(s)	CAS #	NPRI
2-butoxyethanol	111-76-2	X
Isopropyl alcohol	67-63-0	X
Propane	74-98-6	X
Sodium nitrite	7632-00-0	X

16. OTHER INFORMATION

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice:

- Does not contain an added fragrance
- This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations

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SAFETY DATA SHEET

1. Identification

Product number 1000000075
Product identifier **GLASS CLEANER**
Revision date 05-30-2015
Company information Sprayway, Inc.
1005 S. Westgate Drive
Addison, IL 60101 United States
Company phone General Assistance 1-630-628-3000
Emergency telephone US 1-866-836-8855
Emergency telephone outside US 1-952-852-4646
Version # 02
Supersedes date 05-26-2015
Recommended use cleaner
Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards Gases under pressure Liquefied gas
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements



Signal word Warning
Hazard statement Contains gas under pressure; may explode if heated.
Precautionary statement
Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Protect from sunlight. Store in a well-ventilated place.
Disposal Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC) None known.
Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-Butoxyethanol		111-76-2	2.5 - 10
Ethyl Alcohol		64-17-5	2.5 - 10
Butane		106-97-8	1 - 2.5
Propane		74-98-6	1 - 2.5
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Get medical attention if symptoms persist.
Skin contact	Get medical attention if irritation develops and persists.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. See Section 8 of the SDS for Personal Protective Equipment. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
--------------------------------------	---

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3
		50 ppm
Ethyl Alcohol (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3
		1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm
Ethyl Alcohol (CAS 64-17-5)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3
		5 ppm
Butane (CAS 106-97-8)	TWA	1900 mg/m3
		800 ppm
Ethyl Alcohol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3
		1000 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Hand protection	For prolonged or repeated skin contact use suitable protective gloves.
Skin protection	
Other	Wear suitable protective clothing.
Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Clear.
Physical state	Gas.
Form	Aerosol. Liquefied gas.
Color	Light yellow.
Odor	Characteristic.
Odor threshold	Not available.
pH	9.1 - 10.1 estimated
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C) estimated
Flash point	-156.0 °F (-104.4 °C) Propellant estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	80 - 100 psig @70F estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Aerosol spray enclosed space	
Deflagration density	> 2.52 g/cm ³ Tested
Aerosol spray ignition distance	< 15 cm Tested estimated
Specific gravity	0.977 - 0.997

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Eye contact Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity May be harmful if swallowed. May be harmful in contact with skin. May be harmful if inhaled. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	230 ml/kg, 24 Hours 7.3 ml/kg, 4 Days
	Rabbit	450 ml/kg, 24 Hours 435 mg/kg, 24 Hours 0.63 ml/kg
	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
<i>Oral</i>		
LD100	Rabbit	695 mg/kg
LD50	Dog	> 695 mg/kg
	Guinea pig	1200 mg/kg
	Rat	530 - 2800 mg/kg
Butane (CAS 106-97-8)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes
	Rat	1355 mg/l

Components	Species	Test Results
Ethyl Alcohol (CAS 64-17-5)		
Acute		
<i>Inhalation</i>		
LC50	Cat	85.41 mg/l, 4.5 Hours
		43.68 mg/l, 6 Hours
	Mouse	> 60000 ppm
		79.43 mg/l, 134 Minutes
	Rat	> 115.9 mg/l, 4 Hours
		51.3 mg/l, 6 Hours
<i>Oral</i>		
LD50	Monkey	6000 mg/kg
	Mouse	10500 ml/kg
	Rat	1187 - 2769 mg/kg
		7800 ml/kg
Propane (CAS 74-98-6)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
		658 mg/l/4h

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation May be irritating to the skin. Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation. May be irritating to eyes.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2)

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard. Not likely, due to the form of the product.

Chronic effects Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Product	Species		Test Results
GLASS CLEANER (CAS Mixture)			
Aquatic			
Crustacea	EC50	Daphnia	13838.1602 mg/l, 48 hours estimated
Components	Species		Test Results
2-Butoxyethanol (CAS 111-76-2)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
Ethyl Alcohol (CAS 64-17-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	7700 - 11200 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100.1 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

2-Butoxyethanol	0.83
Butane	2.89
Ethyl Alcohol	-0.31
Propane	2.36

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable

Transport hazard class(es)**Class** 2.2**Subsidiary risk** -**Label(s)** 2.2**Packing group** Not applicable.**Environmental hazards** No.**ERG Code** 2L**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Other information****Passenger and cargo aircraft** Allowed.**Cargo aircraft only** Allowed.**Packaging Exceptions** LTD QTY**IMDG****UN number** UN1950**UN proper shipping name** AEROSOLS**Transport hazard class(es)****Class** 2.2**Subsidiary risk** -**Label(s)** 2.2**Packing group** Not applicable.**Environmental hazards****Marine pollutant** No.**EmS** Not available.**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Packaging Exceptions** LTD QTY**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.**DOT****IATA; IMDG****15. Regulatory information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - Yes
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. Massachusetts RTK - Substance List**

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

Ethyl Alcohol (CAS 64-17-5)

Propane (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

Ethyl Alcohol (CAS 64-17-5)

Propane (CAS 74-98-6)

US. Pennsylvania Worker and Community Right-to-Know Law

2-Butoxyethanol (CAS 111-76-2)

Butane (CAS 106-97-8)

Ethyl Alcohol (CAS 64-17-5)

Propane (CAS 74-98-6)

US. Rhode Island RTK

Butane (CAS 106-97-8)

Propane (CAS 74-98-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-26-2015

Revision date 05-30-2015

Version # 02

References EPA: AQUIRE database
 NLM: Hazardous Substances Data Base
 US. IARC Monographs on Occupational Exposures to Chemical Agents

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information Product and Company Identification: Alternate Trade Names

SECTION 1: Product and company identification

Product name : Graffiti Wipes
Use of the substance/mixture : Premoistened wipe
Product code : 1447
Company : Total Solutions
P.O. Box 240014
Milwaukee, WI 53224 - USA
T (414) 354-6417
Emergency number : Chemtec: (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Eye Irrit. 2A H319
Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : Causes serious eye irritation
Precautionary statements (GHS-US) : Wash thoroughly after handling
Wear eye protection, protective clothing, protective gloves
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable
Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Dimethyl Adipate	(CAS No) 627-93-0	10 - 30	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332
UNDECETH-5	(CAS No) 34398-01-1	1 - 5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : If you feel unwell, seek medical advice.
First-aid measures after skin contact : Gently wash with plenty of soap and water.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Rinse mouth with water. Do not induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/injuries after inhalation	: None under normal use.
Symptoms/injuries after skin contact	: Contact during a long period may cause light irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries after ingestion	: Gastrointestinal complaints.
Chronic symptoms	: No data available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Carbon dioxide. Dry chemical powder.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible liquid.
Reactivity	: Upon combustion: CO and CO ₂ are formed.

5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Isolate from fire, if possible, without unnecessary risk.
------------------	---

6.1.1. For non-emergency personnel

Protective equipment	: Protective goggles. Gloves. Protective clothing.
Emergency procedures	: Evacuate unnecessary personnel. NO open flames, NO sparks, and NO smoking. Avoid contact with skin, eyes and clothing. Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Stop leak if safe to do so. Stop release. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Contain released substance, pump into suitable containers.
Methods for cleaning up	: This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing. Handle and open the container with care. Keep away from sources of ignition - No smoking.
Hygiene measures	: Wash thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Incompatible products	: Oxidizing agent. strong acids. Strong bases.
Incompatible materials	: Sources of ignition. Heat sources.
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage	: KEEP SUBSTANCE AWAY FROM: (strong) acids. (strong) bases. oxidizing agents.
Storage area	: Meet the legal requirements. Store in a cool area. Store in a well-ventilated place.
Special rules on packaging	: meet the legal requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Use appropriate personal protective equipment when risk assessment indicates this is necessary. Safety glasses. Gloves. Protective clothing.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Premoistened wipe.
Odor	: Mild odor
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 163 °F Closed cup - Tested using the liquid component of the towelette
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Specific gravity / density	: 1.03 g/ml - Tested using the liquid component of the towelette
Solubility	: Liquid component is soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
VOC content	: < 20 % - Tested using the liquid component of the towelette

SECTION 10: Stability and reactivity

10.1. Reactivity

Upon combustion: CO and CO₂ are formed.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

strong acids. Strong bases. Oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

UNDECETH-5 (34398-01-1)	
LD50 oral rat	> 1400 mg/kg

Skin corrosion/irritation : Not classified
 Serious eye damage/irritation : Causes serious eye irritation.
 Respiratory or skin sensitization : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified
 Reproductive toxicity : Not classified
 Specific target organ toxicity (single exposure) : Not classified
 Specific target organ toxicity (repeated exposure) : Not classified
 Aspiration hazard : Not classified
 Symptoms/injuries after inhalation : None under normal use.
 Symptoms/injuries after skin contact : Contact during a long period may cause light irritation. Repeated exposure may cause skin dryness or cracking.
 Symptoms/injuries after eye contact : Causes serious eye irritation.
 Symptoms/injuries after ingestion : Gastrointestinal complaints.
 Chronic symptoms : No data available.
 Likely routes of exposure : Dermal

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified due to lack of data.

UNDECETH-5 (34398-01-1)	
LC50 fish 1	< 10 mg/l
EC50 Daphnia 1	< 10 mg/l
ErC50 (algae)	< 10 mg/l

12.2. Persistence and degradability

Graffiti Wipes	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Do not flush wipes.
 Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT : Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

UNDECETH-5 (34398-01-1)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

California Proposition 65 - This product does not contain substances known to the state of California to cause cancer and/or reproductive toxicity.

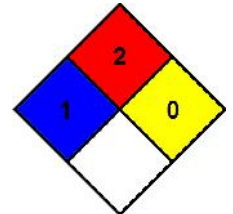
SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H-phrases:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
H302	Harmful if swallowed
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
 NFPA fire hazard : 2 - Must be moderately heated or exposed to relatively high temperature before ignition can occur.
 NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



Prepared by: Technical Department

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.

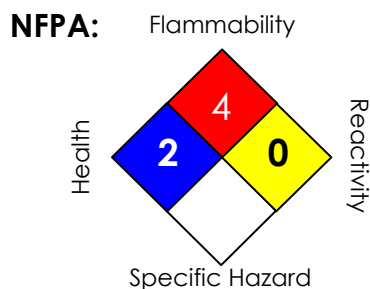
Material Safety Data Sheet

HHS 5000 500ml

Version 4.1

Revision Date 08/20/2014

Print Date 08/23/2014


HMIS III:

HEALTH	2*
FLAMMABILITY	4
PHYSICAL	0

0 = Insignificant, 1 = Slight,
2 = Moderate, 3 = High, 4 = Extreme

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Commercial Product Name : HHS 5000 500ml

Product code : 893.1063

SDS-Identcode : 10033262

Product Use Description : Anti-friction agent and lubricant

Company : Würth Canada Limited
345 Hanlon Creek Blvd
GUELPH, ON N1C 0A1
Canada

Telephone : +1 (905) 564 6225

Telefax : +1 (905) 564 3671

Responsible/issuing person : prodsafe@wuerth.com

Emergency telephone number : In case of emergency please contact: CANUTEC (5:00 pm - 8:00 am):
+1 (613) 996 6666
WÜRTH CANADA LIMITED (8:00 am - 5:00 pm):
+1 (905) 564 6225

SECTION 2. HAZARDS IDENTIFICATION
Emergency Overview

Regulatory status : This product, material or substance is a WHMIS controlled product per Sections 33 - 66, Part IV of the CPR.

Signal Word : DANGER

Form : aerosol

Colour : yellow

Material Safety Data Sheet

HHS 5000 500ml

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Odour : characteristic
Odour - Control : No data available
parameters
Hazard Summary : Extremely flammable aerosol.
Compressed gas
May cause fire.
Pressurized container. Protect from sunlight and do not
expose to temperatures exceeding 50°C / 122 °F.
Irritant
Possible reproductive hazard

Potential Health Effects

Skin : May cause skin irritation.

Inhalation : Harmful if inhaled.
May be fatal if inhaled.
May cause drowsiness or dizziness.
May cause respiratory tract irritation.

Chronic Exposure : This product contains a material that may cause adverse
reproductive effects.*

Target Organs : Skin
Central nervous system
Respiratory system
Reproductive system

ACGIH : No component of this product present at levels greater
than or equal to 0.1% is identified as a carcinogen or
potential carcinogen by ACGIH.

NTP : No component of this product present at levels greater
than or equal to 0.1% is identified as a known or
anticipated carcinogen by NTP.

IARC : Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5%
n-hexane (CAS-No.: 64742-49-0)
low boiling point hydrogen treated naphtha (CAS-No.:
64742-49-0)

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OSHA : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight percent- Weight percent
isobutane	75-28-5	>= 45 - < 50
propane	74-98-6	>= 5 - < 7
butane	106-97-8	>= 2 - < 3
n-hexane	110-54-3	>= 0.2 - < 0.5

SECTION 4. FIRST AID MEASURES

General advice : If you feel unwell, seek medical advice (show the label where possible). First aider needs to protect himself. Move out of dangerous area. Never give anything by mouth to an unconscious person. Take off contaminated clothing and shoes immediately.

Inhalation : If breathed in, move person into fresh air. In the case of inhalation of aerosol/mist consult a physician if necessary. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Skin contact : In case of contact, immediately flush skin with soap and plenty of water. Do NOT use solvents or thinners. If skin irritation persists, call a physician. Wash off with polyethylene glycol and afterwards with plenty of water.

Eye contact : Protect unharmed eye. If easy to do, remove contact lens, if worn. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. If swallowed, DO NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position.

SECTION 5. FIREFIGHTING MEASURES

Form : aerosol

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Flash point	: -24 °C (-11 °F) Note: Active ingredient
Flammability	: Extremely flammable aerosol.
Ignition temperature	: 200 °C (392 °F)
Lower explosion limit	: 1 %(V)
Upper explosion limit	: 11 %(V)
Suitable extinguishing media	: Carbon dioxide (CO2) Foam Dry powder
Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Do not use a solid water stream as it may scatter and spread fire. Exposure to decomposition products may be a hazard to health.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
Further information	: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In the event of fire and/or explosion do not breathe fumes. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Refer to protective measures listed in sections 7 and 8.
Use personal protective equipment.
Remove all sources of ignition.
Avoid contact with skin and eyes.
Ensure adequate ventilation, especially in confined areas.
Contaminated surfaces will be extremely slippery.
Immediately evacuate personnel to safe areas.
Avoid inhalation of vapour or mist.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
Avoid release to the environment. Refer to special instructions/ Safety data sheets.
- Methods for cleaning up : Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.
Clean contaminated surface thoroughly.

SECTION 7. HANDLING AND STORAGE**Handling**

- Handling : For personal protection see section 8.
Limit the stocks at work place.
Use only in well-ventilated areas.
Do not breathe vapours or spray mist.
Avoid contact with skin and eyes.
Do not spray on a naked flame or any incandescent material.
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
Take precautionary measures against static discharges.
Do not carry cloths that have come into contact with the

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product in your clothing.

Advice on protection against fire and explosion : Normal measures for preventive fire protection. Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Keep away from heat and sources of ignition. Do not smoke. No sparking tools should be used. Electrical equipment should be protected to the appropriate standard.

Dust explosion class : Not applicable

Storage

Requirements for storage areas and containers : Store in original container. BEWARE: Aerosol is pressurized. Keep away from heat. Keep away from direct sunlight. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Keep containers tightly closed in a cool, well-ventilated place. Please observe the storage instructions for aerosols!

Advice on common storage : Incompatible with oxidizing agents. Keep away from food, drink and animal feedingstuffs. Do not store together with oxidizing and self-igniting products.

Storage temperature : $\geq 10\text{ }^{\circ}\text{C}$ ($\geq 50\text{ }^{\circ}\text{F}$)

Other data : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Exposure Guidelines

Components	CAS-No.	List	Type:	Value	Update
isobutane	75-28-5	CA BC OEL	TWA	1,000 ppm	2006-11-29
		CA AB OEL	TWA	1,000 ppm	2009-04-30

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		CA ON OEL	TWA	800 ppm	2012-06-12
distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	CA BC OEL	TWA	1 mg/m3	2012-04-20
		CA AB OEL	TWA	5 mg/m3	2009-04-30
		CA AB OEL	STEL	10 mg/m3	2009-04-30
		CA QC OEL	TWAEV	5 mg/m3	2012-11-28
		CA QC OEL	STEV	10 mg/m3	2012-11-28
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	64742-49-0	CA AB OEL	TWA	5 mg/m3	2009-04-30
		CA AB OEL	STEL	10 mg/m3	2009-04-30
		CA QC OEL	TWAEV	5 mg/m3	2012-11-28
		CA QC OEL	STEV	10 mg/m3	2012-11-28
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics		CA AB OEL	TWA	5 mg/m3	2009-04-30
		CA AB OEL	STEL	10 mg/m3	2009-04-30
		CA QC OEL	TWAEV	5 mg/m3	2012-11-28
		CA QC OEL	STEV	10 mg/m3	2012-11-28
propane	74-98-6	CA AB OEL	TWA	1,000 ppm	2009-04-30
		CA BC OEL	TWA	1,000 ppm	2006-11-29
		CA QC OEL	TWAEV	1,000 ppm 1,800 mg/m3	2006-12-29
		CA ON OEL	TWA	1,000 ppm	2010-11-05
distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	CA BC OEL	TWA	1 mg/m3	2012-04-20
		CA AB OEL	TWA	5 mg/m3	2009-04-30
		CA AB OEL	STEL	10 mg/m3	2009-04-30
		CA QC OEL	TWAEV	5 mg/m3	2012-11-28
		CA QC OEL	STEV	10 mg/m3	2012-11-28
butane	106-97-8	CA AB OEL	TWA	1,000 ppm	2009-04-30
		CA BC OEL	TWA	600 ppm	2006-11-29
		CA BC OEL	STEL	750 ppm	2006-11-29
		CA QC OEL	TWAEV	800 ppm 1,900 mg/m3	2006-12-29
		CA ON OEL	TWA	800 ppm	2012-06-12

Engineering measures : Provide sufficient air exchange and/or exhaust in work rooms.

Eye protection : Tightly fitting safety goggles

Hand protection
Glove material : Nitrile rubber

Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.

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- Skin and body protection : Flame retardant antistatic protective clothing.
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
Respirator with filter type AX
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
General industrial hygiene practice.
Do not inhale aerosol.
Avoid contact with skin, eyes and clothing.
When using do not eat, drink or smoke.
Wash hands before breaks and at the end of workday.
Follow the skin protection plan.
Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form : aerosol
Colour : yellow
Odour : characteristic
Flash point : -24 °C (-11 °F)
Note: Active ingredient
- Ignition temperature : 200 °C (392 °F)
- Lower explosion limit : 1 %(V)
- Upper explosion limit : 11 %(V)
- Flammability : Extremely flammable aerosol.
- pH : Not applicable
- Boiling point/boiling range : -40 °C(-40 °F)
- Density : 0.808 g/cm³
at 20 °C (68 °F)Active ingredient
- Water solubility : insoluble

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SECTION 10. STABILITY AND REACTIVITY

- Conditions to avoid : Heat, flames and sparks.
- Materials to avoid : Oxidizing agents
Avoid contact with other chemicals.
- Hazardous decomposition products : Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.
- Hazardous reactions : Vapours may form explosive mixtures with air.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

Note: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

- Carcinogenicity : No data is available on the product itself.
Reproductive toxicity : No data is available on the product itself.
Teratogenicity : No data is available on the product itself.

Component:

isobutane	75-28-5	<u>Acute inhalation toxicity:</u> LC50 Mouse Dose: 1,237 mg/l
propane	74-98-6	<u>Acute inhalation toxicity:</u> LC50 Mouse Dose: 1,237 mg/l
n-hexane	110-54-3	<u>Acute oral toxicity:</u> LD50 Rat Dose: ca. 16 g/kg Method: OECD Test Guideline 401 <u>Acute dermal toxicity:</u> LD50 Rabbit Dose: > 3,350 mg/kg Method: OECD Test Guideline 402 <u>Acute inhalation toxicity:</u> LC50 Dose: 259.354 mg/l 73860 ppm Exposure time: 4 h Method: OECD Test Guideline 403 <u>Skin irritation:</u> Rabbit Result: irritating Method: OECD Test Guideline 404

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Eye irritation: Rabbit
Result: No eye irritation
Method: OECD Test Guideline 405

Reproductive toxicity: Suspected human reproductive toxicant
Suspected of damaging fertility.

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

Component:

isobutane

75-28-5

Toxicity to fish:
LC50
Species: Fish
Dose: 147.54 mg/l
Exposure time: 96 h

Acute and prolonged toxicity for aquatic invertebrates:
LC50
Species: Daphnia (water flea)
Dose: 46.6 mg/l
Exposure time: 48 h

propane

74-98-6

Toxicity to fish:
LC50
Species: Fish
Dose: 147.54 mg/l
Exposure time: 96 h

Acute and prolonged toxicity for aquatic invertebrates:
LC50
Species: Daphnia magna (Water flea)
Dose: 69.43 mg/l
Exposure time: 48 h

butane

106-97-8

Toxicity to fish:
LC50
Species: Fish
Dose: 24.11 mg/l
Exposure time: 96 h

Acute and prolonged toxicity for aquatic invertebrates:
LC50
Species: Daphnia magna (Water flea)
Dose: 14.22 mg/l
Exposure time: 48 h

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		<u>Toxicity to algae:</u> EC50 Species: Selenastrum capricornutum (green algae) Dose: 7.71 mg/l Exposure time: 96 h
n-hexane	110-54-3	<u>Toxicity to fish:</u> LC50 Species: Oryzias latipes (Orange-red killifish) Dose: > 1,000 µg/l Exposure time: 48 h <u>Acute and prolonged toxicity for aquatic invertebrates:</u> EC50 Species: Daphnia magna (Water flea) Dose: 30 mg/l Exposure time: 48 h <u>Toxicity to algae:</u> ErC50 Species: Pseudokirchneriella subcapitata (algae) Dose: 9.285 mg/l Exposure time: 72 h Calculation <u>Toxicity to algae:</u> Growth inhibition NOEC Species: Pseudokirchneriella subcapitata (algae) Dose: 2.077 mg/l Exposure time: 72 h Method: Calculation <u>Toxicity to bacteria:</u> EC50 Species: Bacteria Dose: 48.396 mg/l Exposure time: 48 h Calculation <u>Toxicity to bacteria:</u> NOEC Species: Bacteria Dose: 10.82 mg/l Exposure time: 48 h Calculation

SECTION 13. DISPOSAL CONSIDERATIONS

Adequate disposal : In accordance with local and national regulations.
This material and its container must be disposed of as hazardous waste.

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SECTION 14. TRANSPORT INFORMATION**DOT 49 CFR**

ID No : UN 1950
Proper shipping name : Aerosols
Class : 2.1
Labels : 2.1
Emergency Response : 126
Guidebook Number

TDGR

ID No : UN 1950
Proper shipping name : AEROSOLS
Class : 2.1
Labels : 2.1

ICAO/IATA-DGR

ID No : UN 1950
Proper shipping name : Aerosols, flammable
Class : 2.1
ICAO-Labels : 2.1
Packing instruction (cargo aircraft) : 203
Packing instruction (passenger aircraft) : 203
Packing instruction (passenger aircraft) : Y203
Environmentally hazardous : no

IMDG-Code

ID No : UN 1950
Description of the goods : AEROSOLS

Class : 2.1
IMDG-Labels : 2.1
EmS Number 1 : F-D
EmS Number 2 : S-U

Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : A Compressed Gas

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Compressed Gas

B5 Flammable aerosol
Flammable aerosolD2B Toxic Material Causing Other Toxic Effects
Moderate skin irritant
Mild respiratory irritantD2A Very Toxic Material Causing Other Toxic Effects
Reproductive hazard

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION**Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Prepared by : SAP Business Compliance Services GmbH
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Revision Date : 08/20/2014

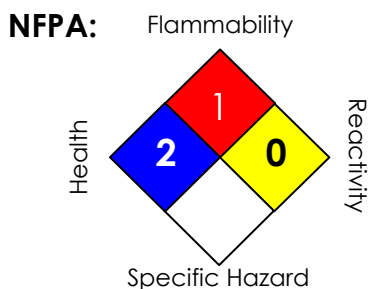
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High Build Undercoat 550G. Paintable

Version 1.0

Revision Date 12/03/2014

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HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL	0

0 = Insignificant, 1 = Slight,
2 = Moderate, 3 = High, 4 = Extreme

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Commercial Product Name : High Build Undercoat 550G. Paintable
 Product code : 890.9072
 SDS-Identcode : 10047413
 Product Use Description : Colouring agents, dyes
 Company : Würth Canada Limited
 345 Hanlon Creek Blvd
 GUELPH, ON N1C 0A1
 Canada
 Telephone : +1 (905) 564 6225
 Telefax : +1 (905) 564 3671
 Responsible/issuing person : prodsafe@wuerth.com
 Emergency telephone number : In case of emergency please contact: CANUTEC (5:00 pm - 8:00 am):
 +1 (613) 996 6666
 WÜRTH CANADA LIMITED (8:00 am - 5:00 pm):
 +1 (905) 564 6225

SECTION 2. HAZARDS IDENTIFICATION
Emergency Overview

Form : Aerosol containing a liquefied gas
 Colour : black
 Odour : solvent-like
 Odour - Control parameters : No data available
 Hazard Summary : Extremely flammable aerosol.

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May cause fire.
Compressed gas
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C / 122 °F.
Irritant
Reproductive hazard
Possible cancer hazard - may cause cancer

Potential Health Effects

Target Organs	: Liver Kidney Eyes Skin Central nervous system
Eyes	: May cause eye irritation.
Skin	: May cause skin irritation. Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	: Harmful if inhaled. May be fatal if inhaled. May cause drowsiness or dizziness.
Chronic Exposure	: This product contains a material that may cause adverse reproductive effects.*
ACGIH	: Carbon black (CAS-No.: 1333-86-4) distillates (petroleum), hydrotreated light (CAS-No.: 64742-47-8)
NTP	: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC	: Titanium dioxide (CAS-No.: 13463-67-7) Carbon black (CAS-No.: 1333-86-4)

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OSHA : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight percent- Weight percent
tert-butyl acetate	540-88-5	>= 55 - < 60
toluene	108-88-3	>= 25 - < 35
propane	74-98-6	>= 7 - < 10
isobutane	75-28-5	>= 3 - < 5
Carbon black	1333-86-4	>= 0.75 - < 1

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). First aider needs to protect himself. Move out of dangerous area. Never give anything by mouth to an unconscious person. Take off contaminated clothing and shoes immediately.

Inhalation : If breathed in, move person into fresh air. Call a physician immediately. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Skin contact : In case of contact, immediately flush skin with soap and plenty of water. Do NOT use solvents or thinners. If skin irritation persists, call a physician.

Eye contact : Protect unharmed eye. If easy to do, remove contact lens, if worn. Rinse with water. Get medical attention.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. If swallowed, DO NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position. Get medical attention.

SECTION 5. FIREFIGHTING MEASURES

Form : Aerosol containing a liquefied gas
Ignition temperature : 450 °C (842 °F)

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- Lower explosion limit : 2.1 %(V)
- Upper explosion limit : 9.5 %(V)
- Suitable extinguishing media : Foam
Alcohol-resistant foam
Dry chemical
Water mist
- Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Hazardous decomposition products may be formed under fire conditions (see section 10).
Exposure to decomposition products may be a hazard to health.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
- Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
In the event of fire and/or explosion do not breathe fumes.
Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately.
This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Refer to protective measures listed in sections 7 and 8.
Use personal protective equipment.
Remove all sources of ignition.
Avoid contact with skin and eyes.

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- Ensure adequate ventilation, especially in confined areas.
Immediately evacuate personnel to safe areas.
Avoid inhalation of vapour or mist.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for cleaning up : Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.
Clean contaminated surface thoroughly.

SECTION 7. HANDLING AND STORAGE**Handling**

- Handling : For personal protection see section 8.
Limit the stocks at work place.
Use only in well-ventilated areas.
Do not breathe vapours or spray mist.
Avoid contact with skin and eyes.
Do not spray on a naked flame or any incandescent material.
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
Take precautionary measures against static discharges.
Handle with care.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
Vapours are heavier than air and may spread along floors.
Vapours may form explosive mixtures with air.
Keep away from heat and sources of ignition.
Do not smoke.
No sparking tools should be used.
Electrical equipment should be protected to the appropriate standard.

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Dust explosion class : Not applicable

Storage

Requirements for storage areas and containers : Store in a place accessible by authorized persons only. Store in original container. BEWARE: Aerosol is pressurized. Keep away from heat. Keep away from direct sunlight. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Keep containers tightly closed in a cool, well-ventilated place. Please observe the storage instructions for aerosols!

Advice on common storage : Incompatible with oxidizing agents. Keep away from reducing agents.

Keep away from food, drink and animal feedingstuffs. Do not store together with oxidizing and self-igniting products.

Other data : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Exposure Guidelines

Components	CAS-No.	List	Type:	Value	Update
tert-butyl acetate	540-88-5	CA AB OEL	TWA	200 ppm 950 mg/m3	2007-01-01
		CA BC OEL	TWA	200 ppm	2006-11-29
		CA QC OEL	TWAEV	200 ppm 950 mg/m3	2006-12-29
toluene	108-88-3	CA AB OEL	TWA	50 ppm 188 mg/m3	2007-01-01
		CA BC OEL	TWA	20 ppm	2009-02-09
		CA QC OEL	TWAEV	50 ppm 188 mg/m3	2006-12-29
propane	74-98-6	CA AB OEL	TWA	1,000 ppm	2009-04-30
		CA BC OEL	TWA	1,000 ppm	2006-11-29
		CA QC OEL	TWAEV	1,000 ppm 1,800 mg/m3	2006-12-29
Calcium carbonate	1317-65-3	CA ON OEL	TWA	1,000 ppm	2010-11-05
		CA AB OEL	TWA	10 mg/m3	2009-04-30
		CA BC OEL	TWA	10 mg/m3	2006-11-29

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		CA BC OEL	STEL	20 mg/m ³	2006-11-29
		CA QC OEL	TWAEV	10 mg/m ³	2012-11-28
isobutane	75-28-5	CA BC OEL	TWA	1,000 ppm	2006-11-29
		CA AB OEL	TWA	1,000 ppm	2009-04-30
		CA ON OEL	TWA	800 ppm	2012-06-12
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	64742-47-8	CA BC OEL	TWA	200 mg/m ³	2006-11-29
		CA QC OEL	TWAEV	5 mg/m ³	2006-12-29
		CA QC OEL	STEV	10 mg/m ³	2006-12-29
		CA ON OEL	TWA	525 mg/m ³	2010-11-05
		CA AB OEL	TWA	200 mg/m ³	2009-04-30
		CA AB OEL	TWA	5 mg/m ³	2009-04-30
		CA AB OEL	STEL	10 mg/m ³	2009-04-30
		CA QC OEL	TWAEV	5 mg/m ³	2012-11-28
		CA QC OEL	STEV	10 mg/m ³	2012-11-28
Carbon black	1333-86-4	CA AB OEL	TWA	3.5 mg/m ³	2007-01-01
		CA QC OEL	TWAEV	3.5 mg/m ³	2006-12-29
		CA BC OEL	TWA	3 mg/m ³	2011-09-15

- Engineering measures : Provide sufficient air exchange and/or exhaust in work rooms.
- Eye protection : Tightly fitting safety goggles
- Hand protection : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.
- Skin and body protection : Flame retardant antistatic protective clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Product contains low-boiling liquids. Respiratory protective equipment must be air supplied respirators.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. General industrial hygiene practice. Do not inhale aerosol. Avoid contact with skin, eyes and clothing. When using do not eat, drink or smoke.

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Wash hands before breaks and at the end of workday.
Follow the skin protection plan.
Take off all contaminated clothing immediately.
Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Aerosol containing a liquefied gas
Colour	: black
Odour	: solvent-like
Ignition temperature	: 450 °C (842 °F)
Lower explosion limit	: 2.1 %(V)
Upper explosion limit	: 9.5 %(V)
pH	: Not applicable
Boiling point/boiling range	: >98 °C(208 °F)
Vapour pressure	: 3.79 - 4.14 bar at 20 °C (68 °F)
Relative vapour density	: >1 (Air = 1.0)
Density	: 0.90 g/cm ³ at 25 °C (77 °F)
Water solubility	: insoluble
Volatile organic compounds (VOC) content	: 29.5 % 265.35 g/l

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: Strong oxidizing agents Reducing agents hydrides
Hazardous decomposition	: Carbon oxides

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products	Smoke Hydrocarbons
	Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.
Hazardous reactions	: Note: No decomposition if stored and applied as directed. Vapours may form explosive mixtures with air. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

SECTION 11. TOXICOLOGICAL INFORMATION

Carcinogenicity	: No data is available on the product itself.
Reproductive toxicity	: No data is available on the product itself.
Teratogenicity	: No data is available on the product itself.
Further information	: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Vapours may cause drowsiness and dizziness.

Component:

toluene	108-88-3	<u>Acute oral toxicity</u> : LD50 Rat Dose: 5,580 mg/kg <u>Acute dermal toxicity</u> : LD50 Rabbit Dose: ca. 12,267 mg/kg <u>Acute inhalation toxicity</u> : LC50 Rat Dose: >= 28.1 mg/l/Exposure time: 4 h Method: OECD Test Guideline 403 <u>Skin irritation</u> : Rabbit Result: irritating <u>Eye irritation</u> : Rabbit Result: No eye irritation Method: OECD Test Guideline 405 <u>Reproductive toxicity</u> : Suspected human reproductive toxicant, Suspected of damaging the unborn child.
isobutane	75-28-5	<u>Acute inhalation toxicity</u> : LC50 Mouse Dose: 1,237 mg/l/Exposure time: 120 min <u>Mutagenicity</u> : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

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Reproductive toxicity: No toxicity to reproduction

Carbon black

1333-86-4

Eye irritation: Result: irritating**SECTION 12. ECOLOGICAL INFORMATION**

Volatile organic compounds (VOC) content : 29.5 %

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

Component:

toluene

108-88-3

Toxicity to fish:
LC50
Species: Oncorhynchus kisutch (coho salmon)
Dose: 5.5 mg/l
Exposure time: 96 hAcute and prolonged toxicity for aquatic invertebrates:
EC50
Species: Ceriodaphnia dubia (water flea)
Dose: 3.78 mg/l
Exposure time: 48 hToxicity to algae:
EC50
Species: Chlorella vulgaris (Fresh water algae)
Dose: 134 mg/l
Exposure time: 3 hToxicity to bacteria:
EC50
Species: Bacteria
Dose: 84 mg/l
Exposure time: 24 h**SECTION 13. DISPOSAL CONSIDERATIONS**

Adequate disposal : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

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DOT 49 CFR

ID No : UN 1950
Proper shipping name : Aerosols
Class : 2.1
Labels : 2.1
Emergency Response : 126
Guidebook Number

TDGR

ID No : UN 1950
Proper shipping name : AEROSOLS
Class : 2.1
Labels : 2.1

ICAO/IATA-DGR

ID No : UN 1950
Proper shipping name : Aerosols, flammable
Class : 2.1
ICAO-Labels : 2.1
Packing instruction (cargo aircraft) : 203
Packing instruction (passenger aircraft) : 203
Packing instruction (passenger aircraft) : Y203
Environmentally hazardous : no

IMDG-Code

ID No : UN 1950
Description of the goods : AEROSOLS

Class : 2.1
IMDG-Labels : 2.1
EmS Number 1 : F-D
EmS Number 2 : S-U

Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : A Compressed Gas
B1 Flammable gas
D2A Very Toxic Material Causing Other Toxic Effects
D2B Toxic Material Causing Other Toxic Effects

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Compressed Gas
Flammable gas
Carcinogen
Reproductive hazard
Moderate skin irritant

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION**Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Revision Date : 12/03/2014



JOHNSEN'S BRAKE CLEANER 16 OZ.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 08/19/2014

Version:

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : JOHNSEN'S BRAKE CLEANER 16 OZ.
Product code : 2420

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Brake Parts Cleaner

1.3. Details of the supplier of the safety data sheet

Technical Chemical Company
P.O. BOX 139
Cleburne, Texas 76033
T 817-645-6088

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Compressed gas H280
Acute Tox. 4 (Inhalation) H332
Acute Tox. 4 (Inhalation:gas) H332
Eye Irrit. 2B H320
Carc. 1B H350

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS04

GHS07

GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated
H320 - Causes eye irritation
H332 - Harmful if inhaled
H350 - May cause cancer

Precautionary statements (GHS-US) : P201 - Obtain special instructions
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust, fume, gas, mist, vapor spray
P264 - Wash affected areas thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention
P312 - Call a POISON CONTROL CENTER, doctor, if you feel unwell.
P337+P313 - If eye irritation persists: Get medical advice/attention
P405 - Store locked up
P410+P403 - Protect from sunlight. Store in a well-ventilated place
P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

2.3. Other hazards

Other hazards not contributing to the classification : Contains gas under pressure; may explode if heated.

2.4. Unknown acute toxicity (GHS-US)

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Tetrachloroethylene	(CAS No) 127-18-4	>= 95	Carc. 1B, H350 Aquatic Chronic 2, H411
Carbon Dioxide, Liquefied, Under Pressure	(CAS No) 124-38-9	1 - 5	Compressed gas, H280

The exact percentage is a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow victim to breathe fresh air. Allow the victim to rest. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: May cause cancer.
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/injuries after skin contact	: May cause slight irritation . Itching. Skin rash/inflammation. Red skin.
Symptoms/injuries after eye contact	: Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue. Causes eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable.
-------------	------------------

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: NFPA Aerosol Level 1.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources.
------------------	----------------------------

6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Safety glasses.
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

- For containment : Dam up the liquid spill. Contain released substance, pump into suitable containers. Plug the leak, cut off the supply.
- Methods for cleaning up : Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Use only outdoors or in a well-ventilated area. Avoid breathing dust, fume, gas, mist, vapor spray. Obtain special instructions. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Storage area : Store in a well-ventilated place.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Tetrachloroethylene (127-18-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	170 mg/m ³
USA ACGIH	ACGIH TWA (ppm)	25 ppm
USA ACGIH	ACGIH STEL (mg/m ³)	685 mg/m ³
USA ACGIH	ACGIH STEL (ppm)	100 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	200 ppm

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)		
USA ACGIH	ACGIH TWA (mg/m ³)	9000 mg/m ³
USA ACGIH	ACGIH TWA (ppm)	5000 ppm
USA ACGIH	ACGIH STEL (mg/m ³)	54000
USA ACGIH	ACGIH STEL (ppm)	30000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	9000 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	5000 ppm

8.2. Exposure controls

- Appropriate engineering controls : Local exhaust ventilation, vent hoods. Ensure good ventilation of the work station.
- Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.



- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear appropriate mask.
- Other information : Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Liquid.
Molecular mass	: 165.83 g/mol
Color	: Colourless.
Odor	: Sweet odour. Ether-like odour.
Odor threshold	: 2.0 - 71 ppm
pH	: 6.8 - 8.4
Relative evaporation rate (butyl acetate=1)	: 2
Relative evaporation rate (ether=1)	: 8
Melting point	: -22 °C
Freezing point	: No data available
Boiling point	: 121 °C
Flash point	: None
Critical temperature	: 347 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: > 150 °C
Flammability (solid, gas)	: No data available
Vapor pressure	: 19 hPa
Vapor pressure at 50 °C	: 82 hPa
Relative vapor density at 20 °C	: 5.8
Relative density	: 1.62
Relative density of saturated gas/air mixture	: 1.1
Specific gravity / density	: 1623 kg/m ³
Solubility	: Insoluble in water. Substance sinks in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in tetrachloromethane. Soluble in hexane. Soluble in oils/fats. Water: 0.015 g/100ml Ethanol: soluble Ether: soluble Acetone: > 10 g/100ml
Log Pow	: 3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Log Kow	: No data available
Viscosity, kinematic	: 0.555 mm ² /s (20 °C)
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

Saturation concentration	: 127 g/m ³
VOC content	: 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled. Harmful if inhaled.

JOHNSEN'S BRAKE CLEANER 16 OZ.	
LD50 oral rat	3835 mg/kg body weight
LD50 dermal rabbit	> 3000 mg/kg (Rabbit; Literature study; >10000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.58 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	5200 ppm/4h (Rat; Experimental value)

Tetrachloroethylene (127-18-4)	
LD50 oral rat	> 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 3835 mg/kg bodyweight; Rat; Equivalent or similar to OECD 401; Experimental value; 3005 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 3000 mg/kg (Rabbit; Literature study; >10000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.58 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	3786 ppm/4h (Rat; Experimental value)

Skin corrosion/irritation : Not classified
pH: 6.8 - 8.4

Serious eye damage/irritation : Causes eye irritation.
pH: 6.8 - 8.4

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

JOHNSEN'S BRAKE CLEANER 16 OZ.	
IARC group	2A

Tetrachloroethylene (127-18-4)	
IARC group	2A

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if inhaled.

Symptoms/injuries after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.

Symptoms/injuries after skin contact : May cause slight irritation . Itching. Skin rash/inflammation. Red skin.

Symptoms/injuries after eye contact : Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue. Causes eye irritation.

Symptoms/injuries after ingestion : May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Dangerous for the environment.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/I.

JOHNSEN'S BRAKE CLEANER 16 OZ.	
LC50 fish 1	4.99 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Locomotor effect)
EC50 Daphnia 1	8.5 mg/l (48 h; Daphnia magna; Locomotor effect)
LC50 fish 2	13 mg/l (96 h; Lepomis macrochirus)

Tetrachloroethylene (127-18-4)	
LC50 fish 1	4.99 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Locomotor effect)
EC50 Daphnia 1	8.5 mg/l (48 h; Daphnia magna; Locomotor effect)
LC50 fish 2	13 mg/l (96 h; Lepomis macrochirus)
Threshold limit algae 1	816 mg/l (96 h; Selenastrum capricornutum; Cell numbers)
Threshold limit algae 2	3.64 mg/l (72 h; Chlamydomonas angulosa; Growth rate)

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Carbon Dioxide, Liquefied, Under Pressure (124-38-9)	
LC50 fish 1	35 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)
LC50 fish 2	60 - 240 mg/l (12 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)

12.2. Persistence and degradability

JOHNSEN'S BRAKE CLEANER 16 OZ.	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.06 g O ₂ /g substance
ThOD	0.39 g O ₂ /g substance
BOD (% of ThOD)	0.15 % ThOD

Tetrachloroethylene (127-18-4)	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.06 g O ₂ /g substance
ThOD	0.39 g O ₂ /g substance
BOD (% of ThOD)	0.15 % ThOD

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)	
Persistence and degradability	Biodegradability: not applicable. Not applicable (gas).
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

JOHNSEN'S BRAKE CLEANER 16 OZ.	
BCF fish 1	40 - 115 Salmo gairdneri (Oncorhynchus mykiss)
BCF fish 2	25.8 - 77.1 (8 weeks; Cyprinus carpio)
BCF other aquatic organisms 1	63 (Modiolus modiolus; Mantle, dry weight)
BCF other aquatic organisms 2	39 (Buccinum undatum; Muscles, dry weight)
Log Pow	3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Tetrachloroethylene (127-18-4)	
BCF fish 1	40 - 115 Salmo gairdneri (Oncorhynchus mykiss)
BCF fish 2	25.8 - 77.1 (8 weeks; Cyprinus carpio)
BCF other aquatic organisms 1	63 (Modiolus modiolus; Mantle, dry weight)
BCF other aquatic organisms 2	39 (Buccinum undatum; Muscles, dry weight)
Log Pow	3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)	
Log Pow	0.83 (Experimental value)
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

JOHNSEN'S BRAKE CLEANER 16 OZ.	
Surface tension	0.0313 N/m (20 °C)

Tetrachloroethylene (127-18-4)	
Surface tension	0.0313 N/m (20 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Ecology - waste materials : Avoid release to the environment.

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SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): UN1950, Aerosols, 2.2, Limited Quantity
ICAO/IATA (air): UN1950, Aerosols, 2.2, Limited Quantity
IMO/IMDG (water): UN1950, Aerosols, 2.2, Limited Quantity

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Aerosols
poison, (each not exceeding 1 L capacity)
Department of Transportation (DOT) Hazard Classes : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
Hazard labels (DOT) : 2.2 - Non-flammable gas
6.1 - Poison inhalation hazard



DOT Packaging Exceptions (49 CFR 173.xxx) : 306
DOT Packaging Non Bulk (49 CFR 173.xxx) : None
DOT Packaging Bulk (49 CFR 173.xxx) : None
Marine pollutant : Yes

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other : 48 - Stow "away from" sources of heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : Forbidden

SECTION 15: Regulatory information

15.1. US Federal regulations

JOHNSEN'S BRAKE CLEANER 16 OZ.	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Sudden release of pressure hazard
Tetrachloroethylene (127-18-4)	
Listed on the United States SARA Section 302 Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb Tetrachloroethylene
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

JOHNSEN'S BRAKE CLEANER 16 OZ.	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
Tetrachloroethylene (127-18-4)	
Listed on the Canadian DSL (Domestic Substances List)	

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Tetrachloroethylene (127-18-4)

WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.3; R40

Full text of R-phrases: see section 16

15.2.2. National regulations

Tetrachloroethylene (127-18-4)

Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

JOHNSEN'S BRAKE CLEANER 16 OZ.

State or local regulations	Not for sale in California or New Jersey U.S. - Pennsylvania - RTK (Right to Know) List U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)
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Tetrachloroethylene (127-18-4)

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)
Not for sale in California or New Jersey
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Massachusetts - Right To Know List
U.S. - Rhode Island - Hazardous Substance List

SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information : None.

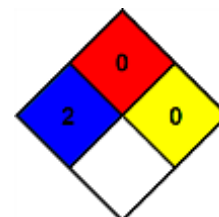
Full text of H-phrases: see section 16:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Carc. 1B	Carcinogenicity Category 1B
Compressed gas	Gases under pressure Compressed gas
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
H280	Contains gas under pressure; may explode if heated
H320	Causes eye irritation
H332	Harmful if inhaled
H350	May cause cancer
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard

Physical : 1 Slight Hazard

JOHNSEN'S BRAKE CLEANER 16 OZ.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Personal Protection

: B

SDS US (GHS HazCom 2012) - TCC

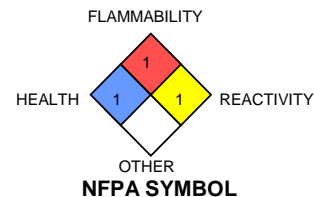
The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

Health	1
Flammability	1
Reactivity	1
PPI	B

MATERIAL SAFETY DATA SHEET

KOPR-KOTE THERMAL GRADE



HMIS SYMBOL

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: **KOPR-KOTE THERMAL GRADE**
 Chemical Family: Mixture
 Use: Lubricating grease anti-seize
 Manufacturer/Supplier: **Jet-Lube of Canada Ltd.**
 3820 – 97 Street
 Edmonton, Alberta
 Canada T6E 5S8
 Phone: (780) 463-7441 Fax: (780) 463-7454
 CCOHS: 1-800-668-4284

Emergency:
 CANUTEC PH: (613) 996-6666 Cell: *666 TTY/TDD: 1-888-675-6863

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	Talc	Graphite	Copper	Molybdenum Disulphide
CAS NO.	14807-96-6	7782-42-5	7440-50-8	1317-33-5
WT %	3-7	7-13	5-10	1-5
OSHA PEL	2 mg/m ³ (dust)	2.5 mg/m ³	1 mg/m ³ (dust)	15 mg/m ³
ACGIH TLV	2 mg/m ³ (dust)	2 mg/m ³	1 mg/m ³ (dust)	10 mg/m ³
LD50	Not Available	10000 mg/kg	Not Available	>2000 mg/kg (oral, rat)
LC50	Not Available	64400 mg/m ³	Not Available	>2820 mg/m ³ (rat)
OTHER:	Not Applicable	Not Applicable	Not Applicable	Not Applicable

SECTION 3 - HAZARDS IDENTIFICATION

Route of Entry: Eyes, Inhalation, Ingestion, Skin
 Eyes: May cause irritation to eyes as a foreign object.
 Inhalation: Viscous nature may block breathing passages if inhaled.
 Ingestion: May cause diarrhea if ingested.
 Skin: May cause irritation after prolonged skin exposure, especially for persons with hyper sensitivity.

SECTION 4 - FIRST AID MEASURES

Eyes: Flush with water until all residual material is gone. If irritation persists, seek medical help.
 Ingestion: Do not induce vomiting. Wash out mouth. Contact a physician immediately.
 Skin: Remove by wiping or with a waterless hand cleaner, followed by washing with soap and water.
 Inhalation: Clear air passage. If breathing difficulty continues seek medical help.

SECTION 5 - FIRE FIGHTING MEASURES

Flammability: Nil at ambient temp
 Extinguishing Media: Use dry chemicals, foam, halon, CO₂
 Flash Point (OC): >293°C (560°F)
 Flammable Limits: Upper (Not Available) Lower (Not Available)
 Explosive Properties: Sensitivity to Static Discharge (Not Available)
 Sensitivity to Impact (Not Available)
 LEL – 0.9% UEL - 7%
 Auto-ignition Temp: >360°C (680°F)
 Hazardous Combustion Products: Oxides of carbon, smoke and irritating vapors as products of incomplete combustion.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spillage: Scoop up excess, then wipes down the affected area and pick up residue with diatomaceous earth to avoid a walking hazard.
 Environmental Precautions: Do not allow product to enter into drains.

SECTION 7 - HANDLING AND STORAGE

Handling Procedures: No special handling precautions are necessary. Do not pressurize, cut, heat or weld empty containers.
 Storage Requirements: Store in a cool, well ventilated place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: **Talc** **Graphite** **Copper** **Molybdenum Disulphide**
OSHA PEL 2mg/m³ 2.5mg/m³ 1mg/m³ 15mg/m³
ACGIH TLV 2mg/m³ 2.0mg/m³ 1mg/m³ 10mg/m³
 Engineering Controls: If user's operation generates vapors or mists, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make up air should always be supplied to balance air removed by exhaust ventilation. Ensure eyewash station and safety shower are close to work station.
 Personal Protective Equipment (PPE's):
 Respiratory Protection: None required.
 Hand Protection: Protective gloves for hypersensitive persons.
 Eye Protection: Protective glasses if applied to moving parts.
 Body Protection: Protective Overall.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Paste Odor & Appearance: Light Petroleum & Dark Brown
Odor Threshold: Not Available Specific Gravity: 1.10 Typical
Vapor Pressure: <0.01 kPa Vapor Density: Not Available
Boiling Point: >370°C (698°F) Freezing Point: Not Available
pH: Neutral
Density: 1.10 g/cm³
Coefficient of Water/Oil Distribution: Not Available
Evaporation Rate (Butyl Acetate = 1.0): <0.01

SECTION 10 - STABILITY AND REACTIVITY

Stability: Chemically stable under normal conditions. No photoreactive agents.
Conditions to Avoid: Powerful sources of ignition and extreme temperatures.
Materials to Avoid: Strong acids and oxidizing agents.
Hazardous Decomposition Products: May release CO_x, smoke and irritating vapors when heated to decomposition.

SECTION 11 - TOXICOLOGICAL INFORMATION

Effects of Short-Term (Acute) Exposure: No adverse affects know.
Effects of Long-Term (Chronic) Exposure: Long term dermal application may produce possible skin irritation. Elevated temperatures or mechanical action may form vapors or fumes. Inhalation of oil mists or vapors may cause irritation of the upper respiratory tract.
Irritancy of Product: Products is not known to be an irritant.
Skin Sensitization: Product is not known to produce skin sensitization.
Respiratory Sensitization: Product is not known to produce respiratory sensitization.
Teratogenicity, Embryotoxicity & Reproductive Toxicity: Not Available
Mutagenicity: Product is not a known mutagen.
Carcinogen: Not classifiable as a human carcinogen IARC: Group 3 ACGIH: A4
Name of Synergistic Products/Effects: Not Available.

SECTION 12 - ECOLOGICAL INFORMATION

Possible Effects: May generate oil fractions that could act as a marine pollutant, but is highly unlikely.
Behavior: Product is non-reactive under ambient conditions. Bioaccumulation potential almost nil.
Environmental Fate: Highly unlikely to cause widespread contamination. May be toxic to marine and land organisms. Non-toxic to land and marine organisms.

SECTION 13 - DISPOSAL CONSIDERATIONS

Consult federal, provincial and local regulations for disposal of petroleum products.
Do not incinerate.

SECTION 14 - TRANSPORT INFORMATION

TDG (Canada): The mixture is not specifically listed in the Canadian Transportation of Dangerous Goods Regulations. The mixture is not regulated.
Land & Rail: Not Regulated
Marine: Regulated
Shipping Name: Environmentally Hazardous Substance, N.O.S (copper)
UN No.: UN3077
Packing Group: III
Classification: Class 9
Labeling Requirements: Class 9 and Marine Pollutant Labels
Placard Requirements: None
Labeling Requirements: Limited Quantities Label for containment less than LQI of 5L net Contents per containment.
Class 9 & Marine Pollutant label if >5L net contents per containment or large containment.
Placard Requirements: Limited Quantities – Non-Required
Large Containment – Class 9 & Marine Pollutant
Air Transport Requirements: Hazard Label – Miscellaneous
PG – III
Passenger and Cargo Aircraft Packing Instructions – 956
Max Net Qty/Package – 400 kg
Limited Quantity
Packing Instructions – Y956
Max Net Qty/Package – 30 kg G
Cargo Aircraft Only Packaging Instructions – 956
Max Net Qty/Package – 400kg

SECTION 15 - REGULATORY INFORMATION

WHMIS: Not Classified
DSL: All components listed
CPR Compliance: This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by those regulations.

SECTION 16 - OTHER INFORMATION

CPR - Controlled Product Regulations
DSL - Domestic Substance List

As of issue date, the information contained herein is accurate and reliable to the best of Jet-Lube of Canada Ltd.'s knowledge. Jet-Lube of Canada Ltd. does not warrant or guarantee its accuracy or reliability and shall not be liable for any loss or damage arising out of the use thereof. It is the users' responsibility to satisfy themselves that the information offered for their consideration is suitable for their particular use.

Prepared by: Jet-Lube of Canada Ltd. - Laboratory
Last Date of Revision: October 22, 2014

SAFETY DATA SHEET

03621

Section 1. Identification

Product name : KRYLON® Industrial QUIK-MARK™ Solvent-Based Inverted Marking Paint (APWA) Blue
Product code : 03621
Other means of identification : Not available.
Product type : Aerosol.
Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
KRYLON PRODUCTS GROUP
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3266

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 20%

GHS label elements

Hazard pictograms



Signal word : Danger

Section 2. Hazards identification

Hazard statements	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. Causes skin irritation. May cause cancer. Suspected of damaging the unborn child. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure. Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Acetone	≥10 - <25	67-64-1
Propane	≥10 - <25	74-98-6
Butane	≥10 - <25	106-97-8
Toluene	≥10 - <25	108-88-3
Lt. Aliphatic Hydrocarbon Solvent	≥5 - <10	64742-89-8
Titanium Dioxide	≥1 - <3	13463-67-7
Quartz	≥0.1 - <0.3	14808-60-7
Ethylbenzene	≥0.1 - <0.3	100-41-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.

Section 4. First aid measures

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Section 5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical

Section 7. Handling and storage

(ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Acetone	ACGIH TLV (United States, 3/2015). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. NIOSH REL (United States, 10/2013). TWA: 250 ppm 10 hours. TWA: 590 mg/m ³ 10 hours. OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m ³ 8 hours.
Propane	NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m ³ 10 hours. OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m ³ 8 hours.
Butane	NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m ³ 10 hours. ACGIH TLV (United States, 3/2015). STEL: 1000 ppm 15 minutes.
Toluene	OSHA PEL Z2 (United States, 2/2013). TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. NIOSH REL (United States, 10/2013). TWA: 100 ppm 10 hours. TWA: 375 mg/m ³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m ³ 15 minutes. ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours.
Lt. Aliphatic Hydrocarbon Solvent Titanium Dioxide	None. ACGIH TLV (United States, 3/2015). TWA: 10 mg/m ³ 8 hours. OSHA PEL (United States, 2/2013). TWA: 15 mg/m ³ 8 hours. Form: Total dust
Quartz	OSHA PEL Z3 (United States, 2/2013). TWA: 250 MPPCF / (%SiO ₂ +5) 8 hours. Form: Respirable TWA: 10 MG/M3 / (%SiO ₂ +2) 8 hours. Form:

Section 8. Exposure controls/personal protection

Ethylbenzene

Respirable
ACGIH TLV (United States, 3/2015).
 TWA: 0.025 mg/m³ 8 hours. Form:
 Respirable fraction
NIOSH REL (United States, 10/2013).
 TWA: 0.05 mg/m³ 10 hours. Form: respirable
 dust
ACGIH TLV (United States, 3/2015).
 TWA: 20 ppm 8 hours.
NIOSH REL (United States, 10/2013).
 TWA: 100 ppm 10 hours.
 TWA: 435 mg/m³ 10 hours.
 STEL: 125 ppm 15 minutes.
 STEL: 545 mg/m³ 15 minutes.
OSHA PEL (United States, 2/2013).
 TWA: 100 ppm 8 hours.
 TWA: 435 mg/m³ 8 hours.

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%
Upper: 12.8%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.55 [Air = 1]
- Relative density** : 0.86
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): <0.205 cm²/s (<20.5 cSt)
Kinematic (40°C (104°F)): <0.205 cm²/s (<20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 23.72 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Toluene	LC50 Inhalation Vapor	Rat	49 g/m ³	4 hours
Ethylbenzene	LD50 Oral	Rat	636 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Toluene	Skin - Mild irritant	Rabbit	-	395 milligrams	-
	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Section 11. Toxicological information

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Titanium Dioxide	-	2B	-
Quartz	-	1	Known to be a human carcinogen.
Ethylbenzene	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Quartz	Category 1	Inhalation	Not determined
Ethylbenzene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
 - pain or irritation
 - watering
 - redness
- Inhalation** : Adverse symptoms may include the following:
 - respiratory tract irritation
 - coughing
 - nausea or vomiting
 - headache
 - drowsiness/fatigue
 - dizziness/vertigo
 - unconsciousness
 - reduced fetal weight
 - increase in fetal deaths
 - skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
 - irritation
 - redness
 - reduced fetal weight
 - increase in fetal deaths
 - skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 - nausea or vomiting
 - reduced fetal weight
 - increase in fetal deaths
 - skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4440.1 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Toluene	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Lt. Aliphatic Hydrocarbon Solvent Titanium Dioxide Ethylbenzene	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Toluene	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Titanium Dioxide	-	352	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	Special provisions LIMITED QUANTITY	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). Special provisions LIMITED QUANTITY	Special provisions (ERG#126)	Special provisions LIMITED QUANTITY	Emergency schedules (EmS) LIMITED QUANTITY, F-D, S-U

Section 14. Transport information

<u>ERG No.</u>	<u>ERG No.</u>	<u>ERG No.</u>		
126	126	126		

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.
Ship type : Not available.
Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification

Flam. Aerosol 1, H222
Press. Gas Comp. Gas, H280
Skin Irrit. 2, H315
Eye Irrit. 2A, H319
Carc. 1A, H350
Repr. 2, H361 (Unborn child)
STOT SE 3, H335
STOT SE 3, H336
STOT RE 2, H373
Asp. Tox. 1, H304

Justification

On basis of test data
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

Section 16. Other information

History

Date of printing : 1/4/2016

Date of issue/Date of revision : 1/4/2016

Date of previous issue : 11/5/2015

Version : 1.03

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.



Revision Number: 006.0

Issue date: 02/07/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE® 242® THREADLOCKER	IDH number: 135355
Product use: Sealant	Item number: 24231
	Region: Canada
Company address: Henkel Corporation 2515 Meadowpine Boulevard Mississauga, Ontario L5N 6C3	Contact information: Telephone: 905.814.6511 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state: Liquid	WHMIS hazard class: D.2.A, D.2.B
Color: Blue	
Odor: Mild	

WARNING: CAUSES EYE IRRITATION.
MAY CAUSE SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:	May cause respiratory tract irritation.
Skin contact:	May cause allergic skin reaction. May cause skin irritation.
Eye contact:	Contact with eyes will cause irritation.
Ingestion:	Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Polyglycol dimethacrylate	25852-47-5	60 - 100
Oleic acid 5.5EO	9004-96-0	10 - 30
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5
Cumene hydroperoxide	80-15-9	1 - 5
Propane-1,2-diol	57-55-6	1 - 5
Titanium dioxide	13463-67-7	0.1 - 1
Cumene	98-82-8	0.1 - 1

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Keep warm and quiet. Get medical attention.

Skin contact:	Wash with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. If symptoms develop and persist, get medical attention.
Eye contact:	Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.
Ingestion:	Do not induce vomiting. Keep individual calm. Get medical attention.

5. FIRE FIGHTING MEASURES

Flash point:	> 93.3 °C (> 199.94 °F) Tagliabue closed cup
Flame projection:	Not applicable
Autoignition temperature:	Not determined
Flammable/Explosive limits - lower:	2.6 % (propylene glycol)
Flammable/Explosive limits - upper:	12.5 % (propylene glycol)
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	None
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours.
Sensitivity to Mechanical Impact:	Not sensitive to mechanical impact.
Sensitivity to static discharge:	Electrostatic charge may build-up during handling. Grounding of equipment is recommended.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Store in a partly filled, closed container until disposal.

7. HANDLING AND STORAGE

Handling:	Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.
Storage:	For safe storage, store between 0 °C (32°F) and 32 °C (89.6 °F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Canada Customer Service at 800-263-5043.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Polyglycol dimethacrylate	None	None	None	None
Oleic acid 5.5EO	None	None	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m3 TWA	None	None
Cumene hydroperoxide	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None
Propane-1,2-diol	None	None	10 mg/m3 TWA Aerosol.	None
Titanium dioxide	10 mg/m3 TWA	15 mg/m3 PEL Total dust.	None	None
Cumene	50 ppm TWA	50 ppm (245 mg/m3) PEL (SKIN)	None	None

Engineering controls:

No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection:

Safety goggles or safety glasses with side shields.

Skin protection:

Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves. Butyl rubber gloves. Natural rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Blue
Odor:	Mild
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	< 5 mm hg (27 °C (80.6 °F))
Boiling point/range:	> 149 °C (> 300.2 °F)
Melting point/ range:	Not available.
Specific gravity:	1.1 at 23.9 °C (75.02 °F)
Vapor density:	Not available.
Flash point:	> 93.3 °C (> 199.94 °F) Tagliabue closed cup
Flame projection:	Not applicable
Flammable/Explosive limits - lower:	2.6 % (propylene glycol)
Flammable/Explosive limits - upper:	12.5 % (propylene glycol)
Autoignition temperature:	Not determined
Evaporation rate:	Not available.
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available.
VOC content:	0.56 %; 6.17 g/l

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapours.
Incompatible materials:	Strong oxidizing agents. Free radical initiators. Strong reducing agents. Alkalis. Oxygen scavengers. Other polymerization initiators. Copper. Iron. Zinc. Aluminum. Rust.
Conditions to avoid:	See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity:	LD50 (rat) > 10,000 mg/kg
Acute dermal product toxicity:	LD50 (rabbit) > 5,000 mg/kg
Toxicologically synergistic products:	Not available.

Refer to the following for Irritancy of Product, Sensitization to Product, Carcinogenicity, Reproductive Toxicity, Teratogenicity, and Mutagenicity.

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Polyglycol dimethacrylate	No	No	No
Oleic acid 5.5EO	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
Cumene hydroperoxide	No	No	No
Propane-1,2-diol	No	No	No
Titanium dioxide	No	Group 2B	No
Cumene	No	Group 2B	No

Hazardous components	LD50s and LC50s	Health Effects/Target Organs
Polyglycol dimethacrylate	None	Allergen, Irritant
Oleic acid 5.5EO	None	Irritant
Silica, amorphous, fumed, crystal-free	None	Nuisance dust
Cumene hydroperoxide	None	Allergen, Central nervous system, Corrosive, Irritant, Mutagen
Propane-1,2-diol	Oral LD50 (RABBIT) = 18 g/kg Oral LD50 (RAT) = 30 g/kg	Irritant
Titanium dioxide	None	Irritant, Respiratory, Some evidence of carcinogenicity
Cumene	Oral LD50 (RAT) = 2.91 g/kg Oral LD50 (RAT) = 1,400 mg/kg Inhalation LC50 (RAT, 4 h) = 8,000 mg/l	Central nervous system, Irritant, Lung

12. ECOLOGICAL INFORMATION

Ecological information:	Not available.
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13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

Canada Transportation of Dangerous Goods - Ground

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 7, 9 and 16

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the MSDS contains all the information required by the CPR.

Prepared by: Diane Annis, Sr. Regulatory Affairs Specialist

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MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	LPS® 1 (Aerosol)	
Version #	02	
Issue date	10-01-2014	
Revision date	10-26-2014	
Supersedes date	10-01-2014	
CAS #	Mixture	
Part Number	C30116	
Product use	An industrial lubricant designed to displace moisture from mechanical and electrical equipment, provide light-duty lubrication and short-term rust prevention.	
Manufacturer information	LPS Laboratories, a division of Illinois Tool Works, Inc. 4647 Hugh Howell Rd Tucker, Georgia 30084 United States www.lpslabs.com 1-800-241-8334/ 770-243-8800 Chemtrec 1-800-424-9300	
Supplier	Not available.	

2. Hazards Identification

Emergency overview	DANGER Flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame. Irritating to eyes and skin. May cause an allergic skin reaction. May cause drowsiness and dizziness.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Contact with eyes may cause irritation. Avoid contact with eyes.
Skin	May cause sensitization by skin contact. May cause skin irritation. Avoid contact with the skin.
Inhalation	Intentional misuse by concentrating and inhaling the product can be harmful or fatal. May cause irritation of respiratory tract. Prolonged inhalation may be harmful.
Ingestion	Exposure by ingestion of an aerosol is unlikely. Irritating. May cause nausea, stomach pain and vomiting.
Signs and symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Potential environmental effects	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
CARBON DIOXIDE	124-38-9	1 - 5
Non-hazardous components	CAS #	Percent
Distillates Petroleum, Hydrotreated Light	64742-47-8	70 - 80
Distillates Petroleum Hydrotreated Med	64742-46-7	10 - 20
Sorbitan trioleate	26266-58-0	1 - 3
Calcium Sulfonate	61789-86-4	0.1 - 1

4. First Aid Measures

First aid procedures	
Inhalation	Move to fresh air. Get medical attention, if needed.

Skin contact	Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention if irritation develops and persists. Wash clothing separately before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
General advice	Take off contaminated clothing and shoes immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties	Flammable by WHMIS criteria. Heat may cause the containers to explode. Ruptured cylinders may rocket. Vapors may travel considerable distance to a source of ignition and flash back.
Extinguishing media	
Suitable extinguishing media	Powder. Alcohol resistant foam. Water spray. Dry chemicals. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Protection of firefighters	
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection.
Fire fighting equipment/instructions	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
Explosion data	
Sensitivity to static discharge	None known.
Sensitivity to mechanical impact	None known.
Hazardous combustion products	May include oxides of carbon.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Pay attention to flashback. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the MSDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Use water spray to reduce vapors or divert vapor cloud drift. Keep out of low areas. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Ventilate the area. Should not be released into the environment. Stop the flow of material, if this is without risk. Isolate area until gas has dispersed. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not re-use empty containers. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid breathing mist or vapor. Avoid prolonged exposure. Do not get this material on clothing. When using do not eat or drink. Do not use in areas without adequate ventilation. Wash thoroughly after handling. Avoid release to the environment.

Storage

Contents under pressure. The pressure in sealed containers can increase under the influence of heat. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Keep out of the reach of children. Use care in handling/storage. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components

Distillates Petroleum,
Hydrotreated Light (CAS
64742-47-8)

Type

TWA

Value

5 mg/m3

Form

Oil mist

US. ACGIH Threshold Limit Values

Components

CARBON DIOXIDE (CAS
124-38-9)

Type

STEL

Value

30000 ppm

TWA

5000 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components

CARBON DIOXIDE (CAS
124-38-9)

Type

STEL

Value

54000 mg/m3

TWA

30000 ppm
9000 mg/m3
5000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components

CARBON DIOXIDE (CAS
124-38-9)

Type

STEL

Value

15000 ppm

Distillates Petroleum,
Hydrotreated Light (CAS
64742-47-8)

TWA

TWA

5000 ppm
200 mg/m3

Non-aerosol.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components

CARBON DIOXIDE (CAS
124-38-9)

Type

STEL

Value

30000 ppm

TWA

5000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components

CARBON DIOXIDE (CAS
124-38-9)

Type

STEL

Value

30000 ppm

TWA

5000 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components

CARBON DIOXIDE (CAS
124-38-9)

Type

STEL

Value

54000 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
	TWA	30000 ppm 9000 mg/m3 5000 ppm

U.S. - OSHA

Components	Type	Value	Form
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)	PEL	5 mg/m3	Oil mist

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	PEL	9000 mg/m3 5000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Canada - British Columbia OELs: Skin designation

Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8) Can be absorbed through the skin.

Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection Avoid contact with the skin. Wear appropriate chemical resistant clothing.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection Chemical resistant gloves are recommended.

9. Physical & Chemical Properties

Appearance	Liquid.
Physical state	Gas.
Form	Aerosol.
Color	Amber.
Odor	Characteristic.
Odor threshold	Not available.
pH	Not applicable
Vapor pressure	< 0.05 mm Hg @ 20°C
Vapor density	> 1 (air = 1)
Boiling point	415.4 °F (213 °C)
Melting point/Freezing point	< -58 °F (< -50 °C)
Solubility (water)	Not soluble
Specific gravity	0.79 - 0.81 @ 20°C
Relative density	0.79 - 0.81 @ 20°C
Flash point	174.2 °F (79.0 °C) Tag Closed Cup (dispensed liquid)
Flammability limits in air, upper, % by volume	7 %
Flammability limits in air, lower, % by volume	0.6 %
Auto-ignition temperature	> 442.4 °F (> 228 °C)
VOC	0.4 % per US State & Federal Consumer Product Regulations

Evaporation rate	< 0.1 (BuAc = 1)
Viscosity	< 3.8 cSt @ 25°C
Percent volatile	95 - 96 %
Partition coefficient (n-octanol/water)	< 1
Other data	
Decomposition temperature	Not established
Flammability (solid, gas)	Flammable gas.
Heat of combustion	Not established

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Oxidizing agents.
Hazardous decomposition products	Carbon oxides.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Calcium Sulfonate (CAS 61789-86-4)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 1.9 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	10000 - 20000 mg/kg
Distillates Petroleum Hydrotreated Med (CAS 64742-46-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	7640 mg/m ³ , 4 Hours 1.72 mg/l, 4 Hours
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg > 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Cat	> 6.4 mg/l, 6 Hours
	Rat	> 7.5 mg/l, 6 Hours > 4.3 mg/l, 4 Hours > 0.1 mg/l, 8 Hours
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg

Components	Species	Test Results
METHYL SALICYLATE (CAS 119-36-8)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	0.7 ml/kg
<i>Oral</i>		
LD50	Dog	2.1 g/kg
	Guinea pig	1060 mg/kg
		1.06 g/kg
	Rabbit	2.8 g/kg
	Rat	887 mg/kg
		0.887 g/kg
Acute effects	Narcotic effects. May cause an allergic skin reaction.	
Sensitization	Not classified.	
Local effects	Irritating to eyes. Irritating to skin. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.	
Chronic effects	Prolonged inhalation may be harmful.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/irritation	Direct contact with eyes may cause temporary irritation.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Reproductive effects	This product is not expected to cause reproductive or developmental effects.	
Teratogenicity	Not available.	
Symptoms and target organs	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Exposure may cause temporary irritation, redness, or discomfort. Defatting of the skin. Rash. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Decrease in motor functions. Behavioral changes.	
Synergistic materials	Not available.	

12. Ecological Information

Ecotoxicological data

Components	Species	Test Results
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)		
Aquatic		
Fish	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.9 mg/l, 96 hours
Ecotoxicity	Harmful to aquatic life with long lasting effects.	
Environmental effects	Harmful to aquatic life with long lasting effects.	
Aquatic toxicity	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.	
Persistence and degradability	Not inherently biodegradable.	
Partition coefficient		
LPS® 1 (Aerosol)	< 1	
METHYL SALICYLATE	2.55	
Other adverse effects	None known.	

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
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Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport Information

TDG

UN number	UN1950
UN proper shipping name	AEROSOLS, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, Flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA; IMDG; TDG



15. Regulatory Information

Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled

WHMIS classification

A - Compressed Gas
 B5 - Flammable Aerosols
 D2B - Other Toxic Effects-TOXIC

WHMIS labeling**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information**Disclaimer**

LPS Laboratories cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Prepared by

Not available.

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Alternate Trade Names



MARVEL OIL CO., INC.
625 WILLOWBROOK CTR PKWY
WILLOWBROOK, IL 60527

SAFETY DATA SHEET

1. Product and Company Identification

1.1 Product Identifier

Product Name: Marvel Air Tool Oil
Product Code (SKU): MM85R1 (50100), MM080R (50093) - See Section 15 for discontinued SKU's

1.2 Relevant Identified Uses Of The Substance

Product Use: Engine Oil Additive – Fuel additive (EPA Registered)

1.3 Details of the Supplier of the SDS

Company Name: Marvel Oil Company, Inc.
Street Address: 625 Willowbrook Centre Parkway
City, State, Zip Code: Willowbrook, Illinois 60527

1.4 Emergency Telephone Numbers

Phone Number: 1(630)455-3700
Fax Number: 1(630)455-3868
Transportation: 1(800)424-9300 (CHEMTREC)
Medical Assistance: Call your local Poison Control Center

2. Hazard Identification:

2.1 Classification of the Substance or Mixture

Hazard Classification: Flammable liquid 3
Skin irritation 2
Reproductive Toxicity 2
Aspiration toxicity 1

2.2 Label Elements



Pictogram:

Signal Word: Danger

Hazard Statement: Flammable liquid and vapor. Causes skin irritation. Suspected of damaging fertility of the un-born child. May be fatal if swallowed and enters airways.

Precautionary Statement: Keep away from heat, sparks, open flames or hot surfaces. Do not smoke. Keep containers tightly closed. Ground all containers and receiving equipment. Use explosion proof electrical, ventilation, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static

discharge. Wear protective gloves, clothing, eye glasses and face shield. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. If exposed, get medical attention. If on skin or hair, remove immediately all contaminated clothing and launder before re-use. Wash skin with soap and water. If skin irritation occurs, get medical attention. If swallowed, immediately call a poison control center or doctor. Do NOT induce vomiting. Store in a well ventilated place. Dispose of contents and container in accordance with all local, state, national and international regulations.

2.3 Other Hazards

Description of additional HNOC: None

3. Information on Ingredients:

3.1 Substance not applicable

3.2 Mixture

<u>Component</u>	<u>CAS Number</u>	<u>Concentration (wt%)</u>
Petroleum Distillates (Hydrotreated Heavy Naphthenic)	64742-52-5	60-100%
Petroleum Distillates (Stoddard Solvent)	8052-41-3	10-30%
Tricresyl Phosphate	1330-78-5	0.1-1.0%
Ortho Dichlorobenzene	95-50-1	0.1-1.0%
Para Dichlorobenzene	106-46-7	<0.1%

4. First Aid Measures:

4.1 Description of First Aid Measures

Inhalation: Remove to fresh air and promote deep breathing. Get medical attention if effects persist or you feel un-well.

Skin: In case of skin contact, wash thoroughly with soap and water. Remove contaminated clothing and footwear. Launder clothing before re-use. Call a physician if irritation develops or persists.

Eyes: In case of eye contact, immediately flush eyes with plenty of water. Remove contact lenses if worn. If irritation persists, get medical attention

Ingestion: If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a poison control center or physician.

4.2 Most important symptoms and effects – acute and chronic

Inhalation: May cause respiratory tract irritation. Vapors may cause drowsiness or dizziness.

Skin: Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.

Eyes: May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.

Ingestion: May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment

Symptoms may not appear immediately. Seek medical attention if effects develop or persist and you feel un-well.

5. Fire Fighting Measures:

5.1 Extinguishing media

Carbon dioxide, dry chemical, and alcohol foam

5.2 Special hazards arising from the substance or mixture

CO₂, CO, and hydrocarbons

5.3 Advice for Fire Fighters

Keep up wind of fire. Wear full firefighting turn out gear (full bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water. See Section 8 for personal protection.

6. Accidental Release Measures:

6.1 Personal precautions, protective equipment, and emergency procedures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate all source of ignition.

6.2 Methods and materials for containment and clean up

For containment: Contain and absorb spill with inert material. Place in suitable container for disposal. Do not flush to sewer or allow to enter waterways. See section 8 for PPE.

For clean up: Take up material and place in a suitable container. Vapors may be heavier than air and may travel along the ground to a distant source of ignition. Provide adequate ventilation.

7. Handling and Storage

7.1 Precautions for safe handling

Keep away from source of ignition. Do not smoke. Take precaution to eliminate static discharge. Avoid contact with skin and eyes. Avoid breathing vapor or mist. Do not swallow. Do not eat or drink while handling. Wash hands with soap and water after handling. Use only non-sparking tools.

7.2 Conditions for safe storage including incompatibilities

Keep out of reach of children. Store in a well ventilated place. Do not store above 49°C (120°F).

7.3 Specific end uses

Shelf Life: Shelf life is considered to be 7 – 10 years when properly stored.

8. Exposure Control/Personal Protection:

8.1 Control parameters

<u>Exposure Limits</u> <u>8 hr TWA:</u>	<u>(OSHA PEL)</u>	<u>(ACGIH TWA)</u>
Petroleum Distillates (Hydrotreated Heavy Naphthenic)	not applicable	not applicable
Petroleum Distillates (Stoddard Solvent)	500 ppm	100 ppm
Tricresyl Phosphate	not applicable	not applicable
Ortho Dichlorobenzene	50 ppm	25 ppm
Para Dichlorobenzene	75 ppm	10 ppm

8.2 Exposure controls

Use adequate ventilation to keep exposure below recommended limits. Ensure that eye wash station and safety shower are close to work station.

Hand Protection Equipment: Wear chemical resistant gloves to prevent skin contact.

Eye Protection Equipment: Wear safety glasses or splash goggles to prevent eye contact.

Skin and Body Protection: Wear suitable protective clothing.

Respiration/Ventilation Protection Requirements: Provide good ventilation.

Ingestion Protection Requirements: Do not eat, drink or smoke while handling. Wash hands with soap and water after handling. Launder all clothing and foot wear before re-use.

9. Physical And Chemical Properties:

9.1 Information of basic chemical and physical properties

Physical Form:	thin liquid
Color:	clear red
Odor:	typical oily
Odor Threshold:	not available
pH:	not applicable – oil based product
Melting Point/Freeze Point:	-51°C (-60°F)
Initial Boiling Point:	not available
Flash Point (Seta Closed Cup):	53°C (128°F)
Flammability Limits:	Explosive Limits: Upper: not available Lower: not available
Evaporation Rate:	not available
Flammability Solid/Gas:	not applicable
Vapor Pressure:	not available
Vapor Density:	not available
Specific Gravity:	0.876
Solubility in Water:	insoluble
Auto Ignition Temperature:	not available
Partition coefficient (n/octonol/water):	not available
Viscosity (Kinimatic @ 100°C):	2.0 – 3.0 cSt

9.2 Other information

% NVM by Weight:	75.0%
% VOC Content (California):	24.92%

10. Stability and Reactivity:

10.1 Reactivity

Does not react under normal conditions

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Does not react under normal conditions

10.4 Conditions to avoid

Heat and incompatible materials

10.5 Incompatible materials

Strong oxidizers such as bleach and peroxides

10.6 Hazardous decomposition products

CO₂, CO and hydrocarbons

11. Toxicological Information:

11.1 Information on Toxicological effects

Marvel Mystery Oil

LD50 – Oral Rat >2000 mg/Kg
LD50 – Dermal Rabbit >2000 mg/Kg
LC50 – Inhalation Rat >20 mg/L (4 hr)

Petroleum Distillates Hydrotreated Heavy Naphthenic (64742-52-5)

LD50 – Oral Rat >5000 mg/Kg
LD50 – Dermal Rabbit >5000 mg/Kg
LC50 – Inhalation Rat >5 mg/L (4 hr)

Tricresyl Phosphate (1330-78-5)

LD50 – Oral Rat 3000 mg/Kg

o-Dichlorobenzene (95-50-1)

LD50 – Oral Rat 500 mg/Kg
LD50 – Dermal Rabbit >10000 mg/Kg
LC50 – Inhalation Rat 8.15 mg/L (4 hr)

p-Dichlorobenzene (106-46-7)

LD50 – Oral Rat >2000 mg/Kg
LD50 – Dermal Rabbit >2000 mg/Kg

Skin corrosion/irritation	Causes skin irritation
Serious eye damage/irritation	Based on available data, classification data are not met
Respiratory or skin sensitization	Based on available data, classification data are not met
Germ cell mutagenicity	Based on available data, classification data are not met
Carcinogenicity	Based on available data, classification data are not met
o-Dichlorobenzene (95-50-1)	IARC Group 3 – Not Classified
p-dichlorobenzene (106-46-7)	IARC Group 2B – Possible carcinogen to humans. NTP 1-Evidence of Carcinogenicity 3, Reasonably anticipated to be a human Carcinogen
Reproductive toxicity	Suspected of damaging fertility of un-born child
Specific target organs – single exposure	Based on available data, classification data are not met
Specific target organs – repeated exposure	Based on available data, classification data are not met

Aspiration hazard	May be fatal if swallowed and enters air ways.
Symptoms/injuries after inhalation	May cause respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Symptoms/injuries after skin contact	Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.
Symptoms/injuries after eye contact	May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.
Symptoms/injuries after ingestion	May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

12. Ecological Information:

12.1 Toxicity

Not recommended for release into aquatic systems without treatment

12.2 Persistence and degradability

Not established

12.3 Bioaccumulative potential

Not established

12.4 Mobility in soil

Not established

12.5 Other adverse effects

None known

13. Disposal Considerations:

13.1 Waste treatment methods

RCRA Hazardous Waste:

Regulated as a hazardous waste (D-001 Ignitable).

Waste Disposal Method:

Dispose of in accordance with local, state and federal regulations

Waste Disposal Vessel:

Metal drums are recommended.

14. Transportation Information:

14.1 UN number

1268

14.2 UN Proper shipping name

Petroleum Distillate n.o.s.

14.3 Transport Hazard class

3

14.4 Packaging group

III

14.5 Marine Pollutant

No

14.6 Transportation in Bulk

Not applicable

14.7 Special precautions

Use limited quantities

15. Regulatory Information:

15.1 US Federal Regulations

TSCA Status: All ingredients are commercially available and listed by the manufacturer under TSCA.

15.2 Foreign Regulations

Canadian Status: All materials contained in this product are listed on the Canadian Domestic Substance List (DSL). Consult Turtle Wax, Inc. regarding status of ingredients.

European Union: All materials contained in this product are listed on EINECS.

AICS: All materials are registered for AICS (Australia)

15.3 State Regulations

State Regulatory Information:

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, contact the appropriate agency in your state.

California Prop 65:

<u>CAS Number</u>	<u>Concentration</u>	<u>State Code</u>
p-Dichlorobenzene (106-46-7)	<0.1%	Cancer

15.4 HIMS & NFPA Classifications

HIMS Classification:	Health	2
	Flammability	2
	Reactivity	0
NFPA Classification:	Health	2
	Flammability	2
	Reactivity	0

15.5 Discontinued SKU's All discontinued SKU's used this same formula.

MM080, MM085, MM85R, MM086, MM088R, MM089

16. Other Information:

Reason For Issue	Conversion to OSHA GHS SDS Format
Prepared By	James Heidel
Preparer's Title	Technical Director, R&D
SDS Administrator	Jean Mayszak - Technical Compliance Manager, R&D

Approval Date	March 10, 2015
Supersedes Date	December 27, 2012
Revision Number	#11

This information is, to the best of Turtle Wax, Inc.'s knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy oneself as to the suitability and completeness of such information for their own particular use.

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EVERCOAT®

SECTION 1 Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier** 100416
Metal Glaze
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Automotive repair
- 1.3 Details of the supplier of the safety data sheet** ITW Evercoat
a division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, OH 45242
513-489-7600
- 1.4 Emergency telephone number** CHEM TEL: +1-813-248-0591

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

- Classified in accordance to (EC) No. 1272/2008**
- Respiratory Sensitisation Category 1
 - Skin Sensitisation Category 1
 - Skin Corrosion/Irritation Category 2
 - Serious Eye Damage/Eye Irritation Category 2
 - Flammable Liquid Category 3
 - Hazardous to the aquatic environment - Chronic Category 3

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



Signal Word

Danger

Hazard Statements

- H226 - Flammable liquid and vapour.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.

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Precautionary Statements

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H412 - Harmful to aquatic life with long lasting effects.

P233 - Keep container tightly closed.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P235 - Store in a well-ventilated place. Keep cool.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 - Avoid release to the environment.

Supplemental Hazard information (EU)

EUH208 - Contains Acid anhydride. May produce an allergic reaction.

2.3 Other hazards

No data available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical Name	%	CAS #	(EC) No 1272/2008	M Factor	SCL
Styrene	23.42	100-42-5	Acute Tox. 4; H332 Acute Tox. 4; H332 Acute Tox. 4; H332 Eye Irrit. 2; H319 Flam. Liq. 3; H226 Skin Irrit. 2; H315	No data available	No data available
Zinc Phosphate	1.19	7779-90-0	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	No data available	No data available
Acid anhydride	1.18	85-43-8	Aquatic Chronic 3; H412 Eye Dam. 1; H318 Resp. Sens. 1; H334 Skin Sens. 1; H317 EUH208	No data available	No data available

For full text of H-statements; See Section 16

SECTION 4 First aid measures

4.1 Description of first aid measures

Inhalation

Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual

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administer oxygen. Get medical attention immediately. Get medical attention immediately. Keep the victim warm and quiet. If the victim has stopped breathing open airway, loosen collar and belt, and administer artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice.

Eye Contact Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

Skin Contact Wash with soap and water. Get medical attention if irritation develops or persists. Remove contaminated clothing and continue flushing with water. Seek medical advice if symptoms persist. Wash clothing before reuse.

Ingestion Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this MSDS. Do not induce vomiting unless directed to do so by medical personnel.

Self protection of the first aider No data available

4.2 Most important symptoms and effects, both acute and delayed

Symptom See Section 4.1

4.3 Indication of any immediate medical attention and special treatment needed

Note to Doctor No additional first aid information available

SECTION 5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water may be ineffective but water spray can be used to extinguish a fire if swept across the base of the flames. Water can absorb heat and keep exposed material from being damaged by fire. Carbon dioxide Dry chemical

Unsuitable extinguishing media No data available

5.2 Special hazards arising from the substance or mixture

Fire and/or Explosion Hazards Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back.

Hazardous Combustion Products Carbon dioxide, Carbon monoxide, Phthalic anhydride, Hydrocarbons

5.3 Advice for firefighters

Fire Fighting Methods and Protection Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a

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protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For Non-emergency Personnel

Non-emergency personnel should be kept clear of the area.

For emergency responders

No health effects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section VIII of this MSDS

6.2 Environmental precautions

No data available

6.3 Methods and material for containment and cleaning up

No special spill clean-up considerations. Collect and discard in regular trash. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container.

6.4 Reference to other sections

Refer to section 13 for disposal information.

SECTION 7 Handling and storage

7.1 Precautions for safe handling

Mildly irritating material. Avoid unnecessary exposure. Do not get in eyes, on skin and clothing Wash hands before eating Use with adequate ventilation Avoid contact with material, avoid breathing dusts or fumes, use only in a well ventilated area.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Store in a cool dry place Keep away from heat, sparks, and flame Store in a tightly closed container

7.3 Specific end use(s)

Automotive repair

SECTION 8 Exposure controls/personal protection

Occupational Exposure limit values

Chemical Name	ACGIH TLV-TWA	ACGIH STEL	IDLH
Styrene	20 ppm	40 ppm STEL; 170 mg/m ³ STEL	No data available

8.2 Exposure controls

Appropriate engineering controls

No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Individual protection measures, such as personal protective equipment

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Eye and face protection	Wear chemically resistant safety glasses with side shields when handling this product. Do not wear contact lenses. Wear goggles if dusts can reach the exposure limit.
Skin Protection	
Hand protection	No information available
Other skin protection	Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene and wear a barrier cream and/or impervious surgical style gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Respiratory Protection	Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Follow a respiratory protection program that meets 29 CFR 1910.134 and ANSI Z88.2 requirements whenever work place conditions warrant the use of a respirator. Respiratory protection may be required in addition to ventilation depending upon conditions of use.
Thermal hazards	No data available
Environmental exposure controls	No data available

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Liquid
Colour	Green
Odour	Aromatic
Odour Threshold	No data available
pH	Neutral
Melting point / Freezing point (°C)	-30.6
Initial boiling point and boiling range (°C)	145
Flash Point (°C)	31
Evaporation Rate	No data available
Flammability (Solid, gas)	No data available
Upper/lower flammability or explosive limits	
Upper Flammable/Explosive Limit, % in air	6.1
Lower Flammable/Explosive Limit, % in air	1.1
Vapour Pressure	5.0 mmHg @ 68 °F / 20 °C (Styrene)
Vapour Density	Heavier than air. Vapors that evolve from this product will tend to

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	settle and accumulate near the floor.
Relative Density	0.96
Solubility(ies)	Minimal; 1-9%
Partition coefficient: n-octanol/water	1.36
Autoignition Temperature (°C)	490
Decomposition Temperature	No data available
Viscosity	20,800 - 25,600
Explosive properties	No data available
Oxidizing properties	No data available
9.2 Other information	No data available

SECTION 10 Stability and reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	No data available
10.4 Conditions to avoid	Contamination
10.5 Incompatible materials	Peroxides; Strong acids; Strong oxidizing agents
10.6 Hazardous decomposition products	Carbon dioxide Carbon monoxide Hydrocarbons

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Acute Toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

pH	Neutral
----	---------

Classification is based on pH and the components listed in Section 3.

Serious eye damage/irritation

pH	Neutral
----	---------

Classification is based on pH and the components listed in Section 3.

Respiratory or skin sensitization

EUH208 - Contains Acid anhydride. May produce an allergic reaction.

Classification has been based on toxicological information of the components in Section 3.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

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Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12 Ecological information

12.1 Toxicity No data available

Ecotoxicity Data

Chemical Name	CAS Number	Aquatic EC50 Crustacea	Aquatic ERC50 Algae	Aquatic LC50 Fish
No data available				

12.2 Persistence and degradability No data available

12.3 Bioaccumulative potential No data

12.4 Mobility in soil No data available

12.5 Results of PBT and vPvB assessment No data available

12.6 Other adverse effects No data available

12.7 Additional information No data available

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Waste Description for Spent Product Spent or discarded material is a hazardous waste.

Disposal Methods Dispose of by incineration following Federal, State, Local, or Provincial regulations.

Waste Disposal Code(s) (European Waste Catalogue) W080111

SECTION 14 Transport information

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Ground:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT
14.3 Transport hazard class(es): 3
14.4 Packing group: III
Exemptions: Limited Quantity

Air:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT
14.3 Transport hazard class(es): 3
14.4 Packing group: III

Water:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT
14.3 Transport hazard class(es): 3
14.4 Packing group: III
Exemptions: Limited Quantity

14.5 Environmental hazards: Yes
14.6 Special precautions for user: No data available
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: No data available

SECTION 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Name	EINECS	SVHC
Styrene	Y	N
Zinc Phosphate	Y	N
Acid anhydride	Y	N
Acetone	Y	N
Diacetone alcohol	Y	N
1, 4 Benzenediol, 2,3,5-Trimethyl-	Y	N
1,4-Naphthoquinone	Y	N
p-Toluidene	Y	N
Styrene Oxide	Y	N

15.2 Chemical safety assessment No data available

SECTION 16 Other information

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SDS Abbreviations:	No data available
References:	No data available
Hazard phrase(s) referenced in section 3	H225 - Highly flammable liquid and vapour. H226 - Flammable liquid and vapour. H301 - Toxic if swallowed. H302 - Harmful if swallowed. H311 - Toxic in contact with skin. H312 - Harmful in contact with skin. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H319 - Causes serious eye irritation. H331 - Toxic if inhaled. H332 - Harmful if inhaled. H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. H336 - May cause drowsiness or dizziness. H350 - May cause cancer. H351 - Suspected of causing cancer. H400 - Very toxic to aquatic life. H410 - Very toxic to aquatic life with long lasting effects. H412 - Harmful to aquatic life with long lasting effects.
Precautionary Statements	
Prevention	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P233 - Keep container tightly closed. P240 - Ground/bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.

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Response

P272 - Contaminated work clothing should not be allowed out of the workplace.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P284 - Wear respiratory protection.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P307+P311 - IF exposed: Call a POISON CENTER or doctor/physician.

P308+P313 - IF exposed or concerned: Get medical advice/attention.

P314 - Get medical advice/attention if you feel unwell.

P321 - Specific treatment (see on this label).

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P363 - Wash contaminated clothing before reuse.

P370+P378 - In case of fire: Use for extinction.

Storage

P233 - Keep container tightly closed.

P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up.

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances

MATERIAL SAFETY DATA SHEET

Lloyds Laboratories Inc.

Moovit (Aerosol) Part # 11008, 11010, 11014

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOOVIT **PRODUCT USE:** Penetrating Lubricant.
MANUFACTURER: Lloyds Laboratories Inc. **SUPPLIER:** Lloyds Laboratories Inc.

ADDRESS: 613 Neal Drive, Peterborough, Ontario, K9J 6X7 **ADDRESS:** 613 Neal Drive, Peterborough, Ontario, K9J 6X7

EMERGENCY #: 1 800 361-6766 **EMERGENCY #:** 1 800 361-6766

SECTION II: INFORMATION ON INGREDIENTS

Ingredients	CAS#	Wt%	OSHA-TWA	ACGIH-TWA	LD ₅₀
Propane	74-98-6	7-13	1800 mg/m ³	4508 mg/m ³	Not available
Isobutane	75-28-5	7-13	Not available	Not available	Vapour LC 50 Acute: 0.0057 ppm 0.25 hours Rat.

SECTION III: HAZARDOUS IDENTIFICATION

Route of Entry: Eye, skin contact, ingestion.
Potential Health Effects:
Eye Contact: May cause irritation to eyes.
Skin Contact: May cause irritation upon repeated/prolonged contact.
Inhalation: May cause slight nose, throat and respiratory tract irritation.
Ingestion: May cause irritation to mouth, esophagus and stomach. May cause gastric tract upset and/or damage.

Chronic Effects:
Carcinogenicity: No ingredients listed IARC or NTP or ACGIC. Non hazardous by WHMIS/OSHA criteria.

Teratogenicity, Mutagenicity, Reproductive Effects: The ingredients in this product were found not to be mutagenic when tested by the Ames Assay, (OECD Guidelines for chemical testing, sec.471).
Skin: Repeated or prolonged exposures to dilutions can cause drying, defatting and dermatitis.

MATERIAL SAFETY DATA SHEET

Lloyds Laboratories Inc.

Moovit (Aerosol) Part # 11008, 11010, 11014

SECTION IV: FIRST AID MEASURES

Eye Contact: Immediately flush with water for 15 minutes. Holding eyelids open during flushing. If irritation persists, repeat flushing and obtain medical attention immediately.

Skin Contact: Flush with water. Remove contaminated clothing and launder before reuse.

Inhalation: Move victim to fresh air. If conscious, have victim take deep, slow breaths. Seek medical attention if symptoms persist.

Ingestion: DO NOT INDUCE VOMITING. Rinse mouth with water, and then drink one glass of water. Seek medical attention. Do not give anything to victim if unconscious or convulsing.

SECTION V: FIRE FIGHTING MEASURES

Flammability: NFPA 30B Level 1 Aerosol.

Flash Point deg (C,TCC):

Means of Extinction: Use water spray to keep fire exposed containers cool. Dry chemicals, carbon dioxide. Fight fire from protected location or maximum possible distance.

Special Fire Hazards: Fire fighters should wear self contained breathing apparatus as for surrounding fire. Aerosol product - containers may rocket or explode.

Autoignition temperature: Not applicable.

Flame projection: 28.0 cm.

Sensitivity to static discharge: Not applicable.

Unusual Fire and Explosion Hazards: Aerosol product - containers may rocket or explode.

Hazardous decomposition products: Oxides of carbon, oxides of nitrogen.

SECTION VI: ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures: Before attempting clean up, refer to the hazard data provided above. Small spills may be absorbed with non reactive absorbent and placed in suitable, covered, labeled container. For large quantities, dispose of in accordance with local, provincial/ state or federal regulations. For large spills prevent from entering sewers and waterways. For large spills provide diking to prevent spreading.

SECTION VII: HANDLING AND STORAGE

Storage Requirements: KEEP OUT OF REACH OF CHILDREN.
Store in a dry, cool and well ventilated area. Protect from freezing. Do not puncture or incinerate. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 120°F or 50°C. Do not pierce or burn, even after use.

MATERIAL SAFETY DATA SHEET

Lloyds Laboratories Inc.

Moovit (Aerosol) Part # 11008, 11010, 11014

SECTION VIII: EXPOSURE CONTROL/PERSONAL PROTECTION

Gloves: Not normally required. Use Viton or Nitrile gloves to avoid prolonged or skin contact repeated.

Eye Protection: Not normally required, if eye contact is possible chemical splash goggles are recommended.

Respiratory Protection: Not normally required if good ventilation is maintained.

Other Protective Equipment: As required by employer code. Eye bath, safety shower, protective clothing.

Engineering Controls: General ventilation normally required.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Aerosol	Odour and Appearance: Odourless, Opaque Purple		Odour Threshold	Not applicable
Vapour Pressure (mm Hg):	4394.5	Vapour Density (Air=1)	Not applicable	Boiling Point (°C)	Not applicable
% Volatile (Wt %):	7-13 %	Solubility in water(20°C)	None	Freezing Point (°C)	-50°C
pH	Not applicable	Specific Gravity	.85	Evaporation Rate (nBuAc=1)	Not applicable
Coeff. Water/Oil Dist.	Not applicable				

SECTION X: STABILITY AND REACTIVITY

Conditions for Chemical Instability: Stable under normal conditions. Excessive heat or contamination could cause decomposition.

Incompatible Materials: Reducing agents, strong acids, strong caustics, iron and other metals.

Hazardous Decomposition Products: Oxides of carbon, Oxides of Nitrogen when heated.

SECTION XI: TOXICOLOGICAL INFORMATION

LD 50 values for individual components see section II.
Skin Sensitization (OECD Sec. 406) Non sensitizing.

SECTION XII: ECOLOGICAL INFORMATION

No data available on the adverse effects of this product on the environment.

SECTION XIII: DISPOSAL CONSIDERATIONS

Dispose of in accordance to all local, provincial/state and federal regulations.

MATERIAL SAFETY DATA SHEET

Lloyds Laboratories Inc.

Moovit (Aerosol) Part # 11008, 11010, 11014

SECTION XIV: TRANSPORTATION

T.D.G. Classification: Please refer to Bill of lading for up to date shipping information.
D.O.T. Classification: Please refer to Bill of lading for up to date shipping information.

SECTION XV: REGULATORY INFORMATION

Occupational Health and Safety

Regulations:

WHMIS Class:

Class A Compressed Gas/Class B-5 Flammable aerosol.

OSHA & WHMIS:

MSDS prepared pursuant to the Hazard Communication Standard (CFR29.1920.1200) and Canadian WHMIS regulations.

Environmental Regulatory Lists:

SARA – Section 313 (Toxic Chemical Release Reporting) 40 CFR 372:

None of these ingredients are listed.

CERCLA – Section 102 (Reportable Quantity) 40 CFR 302:

Butane, Propane.

RCRA 40 CFR 261 (Subpart D):

None of the ingredients are listed.

CLEAN WATER ACT – Section 311 (Reportable Qty) 40 CFR 116:

None of these ingredients are listed.

CLEAN AIR ACT – Section 312 (List of Hazardous Pollutants) 40 CFR 63 (Subpart C):

Flammable substances Propane, Isobutane.

National Pollutant Release Inventory: Toxic Substances Control Act (TSCA):

None of these ingredients are listed.

All ingredients are registered on the Chemical Substances Inventory.

Canadian Domestic Substance List (DSL):

All ingredients are registered on the DSL.

SECTION XVI: OTHER INFORMATION

Date: June 7, 2013	Prepared By: Technical Services Group	Telephone: 1 800 361-6766
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Disclaimer:

Information for this material safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond the control of supplier, it is assumed that users of this material; have been fully trained according to the mandatory requirements of WHMIS. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries for consequential damages, which may result from the use or reliance on any information contained in this form. If user requires independent information on ingredients in this or other material, we recommend contact with the Canadian Centre for Occupational Health and Safety (CCOHS) in Hamilton, Ontario (905-572-4400) or CSST in Montreal, Quebec (514-873-3990).

Global Parts Order Processing
Material Safety Data Sheet
DC & FC TEST DEALER

C H R Y S L E R
HAZARD COMMUNICATION SHEET

5182604 DRAFT PART/COMMTY CD: 0VU01463
PREPARATION DATE: 03-09-10 STNDRD: N/AV SUPPLIER: 86056 MFGR: 03500
OSHA HAZ: YES HAZWOPER HAZ: YES CONS PROD/HAZ SUB: YES

*** SECTION 01 - PRODUCT INFORMATION ***

MFG BY: PART SALES & SERVICE FCA US LLC
26311 LAWRENCE AVE CENTERLINE MI 48015
EMERGENCY PHONE: 248-512-8002 AFTER HOURS: 248-576-8888
DIST BY: PART SALES & SERVICE FCA US LLC
26311 LAWRENCE AVE CENTERLINE MI 48015
EMERGENCY PHONE: 248-512-8002 AFTER HOURS: 248-576-8888
FCA US LLC INDUSTRIAL HYGIENE: 248-512-8260 AFTER HOURS: 248-576-8888
BRAND NAME: MOPAR MULTI-PURPOSE LUBE
MFG ID : N/AV
DESCRIPTION: LUBRICANT-POWERTRAIN,BODY

*** SECTION 02 - INGREDIENTS ***

HAZARDOUS INGREDIENTS: PERCENT
COMM NAME / CAS NO & CHEM NAME: BY WGT OSHA ACGIH CHRYS UNITS NOTATIONS
EXISTING INGREDIENTS
STODDARD SOLVENT 60-100 W 100 100 100 PPM
008052-41-3 STODDARD SOLVENT (8C
VM & P NAPHTHA 10-30 W 300 300 100 PPM
008032-32-4 MINERAL SPIRITS L 400 N/AP 400 A3
PETROLEUM PRODUCTS, LIQUEFIED GAS 10-30 W 1000 1000 1000 PPM
068476-86-8 PETROLEUM GASES, LIQ
GENERIC DESC: MULTIPURPOSE LUBRICANT CONTAINING MAINLY MINERAL SPIRITS.

*** SECTION 03 - PHYSICAL DATA ***

BOILING POINT : N/AV F SOLUB IN WATER: NEGLIGIBLE (< 0.1%)
VAPOR PRESSURE: N/AV EVAP. RATE: N/AV REF: N/AV
VAPOR DENSITY : > 1.000 AT N/AV SPECIFIC GRAVITY: > 0.800 AT 59 F
PH AT FULL STRENGTH: N/AV PH AT REC. DILUT: N/AV
%VOLATILE BY VOL : N/AV VOLATILE ORGANIC COMP: N/AV N/AV
ODOR THRESHOLD: N/AV PPM FOR % POPULATION
FREEZING POINT: N/AV COEFF. OF WATER/OIL DIST: N/AV
APPEARANCE & ODOR: STATE: LIQUID..... ODOR: HYDROCARBON..... COLOR:
YELLOW..... APPEARANCE: CLEAR.....

*** SECTION 04 - FIRE AND EXPLOSION DATA ***

FLASH POINT: 104 F PMCC IGN TEMP: N/AV LEL: N/AV UEL: N/AV
Page 1 of 4

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SPECIAL FIRE & EXPLOSION HAZARDS:

CONTENTS UNDER PRESSURE. MAY EXPLODE IF EXPOSED TO HEAT OR FLAME. MATERIAL IS FLAMMABLE. DO NOT LET IT RUN-OFF TO WATERCOURSE. REACTS ON CONTACT WITH OXIDIZERS. MIST OR AEROSOL ACCUMULATIONS MAY FLASH IF IGNITED. VAPOR/GAS IS HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND CAUSE FLASH FIRES OR BE IGNITED EXPLOSIVELY BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, OR OTHER SOURCES OF IGNITION AT LOCATIONS DISTANT FROM THE MATERIAL HANDLING POINT.

EXTINGUISHING MEDIA:

CARBON DIOXIDE, DRY CHEMICAL, FOAM OR WATER FOG OR ALCOHOL FOAM.

SPECIAL FIREFIGHTING PROCEDURES:

USE PROTECTIVE CLOTHING. USE SELF-CONTAINED BREATHING APPARATUS. AVOID BREATHING VAPOR OR FUMES. USE WATER TO COOL FIRE EXPOSED CONTAINERS. WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE.

SENSITIVE TO MECHANICAL IMPACT?: YES SENSITIVE TO STATIC DISCHARGE?: YES

HAZARDOUS COMBUSTION PRODUCTS:

ORGANIC COMPOUNDS, CARBON MONOXIDE AND CARBON DIOXIDE.

FLAME PROJECTION: > 15 IN

*** SECTION 05 - HEALTH HAZARD DATA ***

EFFECTS OF OVEREXPOSURE - ACUTE & CHRONIC:

<<---INHALATION--->> VAPOR AND/OR MIST MAY PRODUCE THE FOLLOWING: IRRITATION OF UPPER RESPIRATORY TRACT AND MAY BE IRRITATING TO EYES, NOSE, AND THROAT. HIGH CONCENTRATION MAY PRODUCE THE FOLLOWING: ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY HEADACHE, DIZZINESS, STAGGERING, CONFUSION, UNCONSCIOUSNESS OR COMA. <<---SKIN CONTACT--->> LIQUID AND/OR MIST MAY PRODUCE THE FOLLOWING: MINOR IRRITATION TO SLIGHT BURNING OF SKIN. <<---EYE CONTACT--->> LIQUID AND/OR MIST MAY PRODUCE THE FOLLOWING: IRRITATION AND TEARING. <<---INGESTION--->> MAY BE HARMFUL IF SWALLOWED. CAUSES A BURNING SENSATION IN THE MOUTH AND STOMACH AND MUCOUS MEMBRANE IRRITATION. MAY CAUSE UPSET STOMACH, NAUSEA, VOMITING AND DIARRHEA. ASPIRATION (GOING DOWN THE WRONG PIPE INTO THE WINDPIPE) MAY CAUSE THE FOLLOWING: CHEMICAL PNEUMONITIS (AN INFLAMMATION OF THE LUNGS SIMILAR TO PNEUMONIA, WHICH IS CAUSED BY GETTING THE LIQUID FORM OF A CHEMICAL INTO THE LUNGS). <<---SPECIAL TOXICITY--->> HIGH CONCENTRATION MAY PRODUCE THE FOLLOWING: CARDIAC ABNORMALITIES, DAMAGE TO THE NERVOUS SYSTEM AND/OR BRAIN DAMAGE.

EMERGENCY FIRST AID PROCEDURES:

<<---INHALATION--->> REMOVE TO FRESH AIR AT ONCE. IF PULMONARY SYMPTOMS DEVELOP, CONSULT A PHYSICIAN. IF BREATHING IS DIFFICULT, GIVE OXYGEN. ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED. CARDIAC RESUSCITATION IF INDICATED. <<---SKIN CONTACT--->> REMOVE CONTAMINATED CLOTHING. WIPE OFF WITH A CLOTH. IMMEDIATELY FLUSH CONTAMINATED AREA WITH LARGE AMOUNTS OF WATER. WASH WITH SOAP AND WATER. IF CONDITION PERSISTS, CONSULT A PHYSICIAN. <<---EYE CONTACT--->> REMOVE CONTACT LENSES TO ASSURE COMPLETE FLUSHING. RINSE EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER, OCCASIONALLY LIFTING

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BOTH UPPER AND LOWER LIDS. CONTINUE FOR 15 MINUTES. IF CONDITION PERSISTS, CONSULT A PHYSICIAN. <<---INGESTION--->> DO NOT INDUCE VOMITING. IF CONSCIOUS, GIVE LARGE QUANTITIES OF WATER OR MILK. CONTACT A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT MAKE UNCONSCIOUS PATIENT VOMIT. IF VOMITING OCCURS, KEEP HEAD BELOW HIPS TO PREVENT LIQUID FROM SEEPING INTO THE WINDPIPE AND LUNGS.

*** SECTION 06 - REACTIVITY DATA ***

STABILITY: STABLE

CONDITIONS TO AVOID:

HIGH TEMPERATURE, SPARKS OR OPEN FLAME.

MATERIALS TO AVOID:

STRONG OXIDIZING AGENTS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

POLYMERIZATION CONDITIONS TO AVOID:

POLYMERIZATION WILL NOT OCCUR.

HAZARDOUS DECOMPOSITION PRODUCTS:

ORGANIC COMPOUNDS, CARBON MONOXIDE AND CARBON DIOXIDE.

*** SECTION 07 - SPILL OR LEAK PROCEDURES ***

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

WIPE UP OR SCRAPE UP SMALL SPILL OR RESIDUE. ABSORB ON AN INERT MATERIAL. DISCARD INTO SEALED CONTAINERS FOR DISPOSAL. ELIMINATE ALL IGNITION SOURCES (FLAMES, HOT SURFACES AND ELECTRICAL, STATIC OR FRICTIONAL SPARKS). WEAR PROTECTIVE CLOTHING. WEAR RESPIRATORY PROTECTION. AVOID BREATHING VAPORS. VENTILATE AREA. DO NOT FLUSH INTO SEWER SYSTEM. LARGE SPILL-CONTAIN WITH DIKE. PUMP INTO STORAGE CONTAINER.

WASTE DISPOSAL METHODS:

DISPOSE OF IN A MANNER CONSISTENT WITH STATE, PROVINCIAL, LOCAL, AND FEDERAL REGULATIONS.

*** SECTION 08 - SPECIAL PROTECTION ***

RESPIRATORY PROTECTION:

NO SPECIAL PROTECTION NEEDED UNDER NORMAL CONDITIONS. TO MAINTAIN THE TLV, THE FOLLOWING MAY BE NEEDED: ORGANIC VAPOR RESPIRATOR.

VENTILATION TYPE:

TO MAINTAIN THE TLV, THE FOLLOWING MAY BE NEEDED: GOOD GENERAL VENTILATION AND/OR LOCAL EXHAUST VENTILATION. VENTILATION EQUIPMENT SHOULD BE EXPLOSION PROOF. VAPORS ARE HEAVIER THAN AIR. VENTILATION SHOULD DRAW FROM FLOOR LEVEL TO BE EFFECTIVE.

PROTECTIVE GLOVES:

RECOMMENDED. IMPERMEABLE GLOVES.

EYE PROTECTION:

RECOMMENDED. SAFETY GLASSES WITH SIDE SHIELDS.

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OTHER PROTECTIVE EQUIPMENT:

TO AVOID PROLONGED SKIN CONTACT, USE THE FOLLOWING: APRON (SAME MATERIAL AS GLOVES) AND BOOTS (SAME MATERIAL AS GLOVES)-WEAR LONG SLEEVES. A SAFETY SHOWER MAY BE NEEDED FOR EMERGENCY SITUATIONS. AN EYE WASH MAY BE NEEDED FOR EMERGENCY SITUATIONS.

*** SECTION 09 - SPECIAL PRECAUTIONS ***

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE:

STORE IN A COOL, DRY PLACE. STORE IN A WELL VENTILATED AREA. USE WITH ADEQUATE VENTILATION. KEEP FROM HEAT, SPARK OR OPEN FLAMES. DO NOT PUNCTURE, DROP OR SLIDE CONTAINERS. REACTS WITH OXIDIZERS. KEEP VALVE PROTECTION CAP IN PLACE EXCEPT WHEN USING CYLINDER. OPEN CYLINDER VALVE SLOWLY. KEEP CONTAINER UPRIGHT AND SECURED AT ALL TIMES. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED, SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID). DO NOT SMOKE OR EAT WHEN HANDLING THIS SUBSTANCE; WASH THOROUGHLY AFTER USING. REMOVE CONTAMINATED CLOTHING AND LAUNDRY BEFORE REUSE. MAINTAIN GOOD HOUSEKEEPING AND HYGIENIC PRACTICES. TAKE "NO SMOKING" PRECAUTIONS.

OTHER PRECAUTIONARY MEASURES:

AVOID BREATHING MIST. AVOID BREATHING VAPOR. AVOID EYE CONTACT. AVOID PROLONGED OR REPEATED SKIN CONTACT. AVOID INGESTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS, WHICH CAN BE FATAL. MAINTAIN GOOD HOUSEKEEPING AND HYGIENIC PRACTICES.

*** SECTION 10 - WASTE LABELING INFORMATION ***

DOT LABELING INFORMATION (49 CFR 100-199)

ID#: UN1950 ERG#: 126 HAZARD CLASS - PRMY: 2.1 PACKING GROUP: N/AP
PROPER SHIPPING NAME: WASTE AEROSOLS, FLAMMABLE
LABEL(S) REQUIRED: FLAMMABLE GAS

RCRA INFORMATION (40 CFR 122-124, 260-265)

WASTE CODE(S)/HZD: D001/I | MICH:

THE ABOVE INFORMATION IS BASED ON DATA PROVIDED BY SUPPLIERS. TESTING IS NOT NEEDED



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Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name Never-Seez Regular Grade Compound Series
Product Code BNRG

Product(s) Covered See section 16 for more information

1.2. Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommended use Lubricants, greases, release products.
Uses Advised Against No information available

1.3. Details of the Supplier of the Safety Data Sheet

Company Name

Bostik, Inc.
11320 W. Watertown Plank Road
Wauwatosa, Wisconsin 53226 USA
Phone: +1 (800) 843-0844 (Domestic Toll Free)
Phone: +1 (414) 774-2250 (International)
Fax: +1 (414) 774-8075
Email: msds@bostik-us.com

1.4. Emergency Telephone Number

Emergency Telephone Telephone: 1-800-227-0332
(Outside U.S.) 1-703-527-3887

Section 2: HAZARD IDENTIFICATION

2.1. Classification of the Substance or Mixture

Not a dangerous substance or mixture according to OSHA 29 CFR 1910.1200

2.2. Label Elements

EMERGENCY OVERVIEW

Not a dangerous substance or mixture according to OSHA 29 CFR 1910.1200.

Appearance Paste

Physical State Solid

Odor Petroleum

Precautionary Statements - Prevention

Not applicable

Precautionary Statements - Response

Not applicable

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Precautionary Statements - Storage

Not applicable

Precautionary Statements - Disposal

Not applicable

Hazards Not Otherwise Classified (HNOC)

Not applicable

Unknown Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

2.3. Other Information

No information available.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

This product is a mixture. Health hazard information is based on its components.

3.2 Mixtures

Chemical Name	CAS No	Weight-%
Graphite	7782-42-5	10 - 30
Copper	7440-50-8	5 - 10
Zinc oxide	1314-13-2	1 - 5
Aluminum	7429-90-5	1 - 5

The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General Advice

If medical advice is needed, have product container or label at hand.

Eye contact

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/ attention.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Self-protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms

No information available.

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4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to physicians Treat symptomatically.

4.4. Reference to Other Sections

Reference to Other Sections Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
Section 11: TOXICOLOGY INFORMATION

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media

Dry chemical, CO₂, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal.

Unsuitable Extinguishing Media

Do not scatter spilled material with high pressure water streams.

5.2. Special Hazards Arising from the Substance or Mixture

Specific Hazards Arising from the Chemical

Some may burn but none ignite readily.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

5.3. Advice for Firefighters

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Do not touch or walk through spilled material. Stop leak if you can do it without risk.

6.2. Environmental Precautions

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas.

6.3. Methods and Material for Containment and Cleaning up

Methods for Containment Prevent dust cloud.

Methods for Cleaning up Use personal protective equipment as required. Take up with sand or other non-combustible absorbent material and place into containers for later disposal. Clean contaminated surface thoroughly.

6.4. Reference to other sections

Reference to Other Sections Section 7: HANDLING AND STORAGE
Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION
Section 13: DISPOSAL CONSIDERATIONS

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Section 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Advice on Safe Handling Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas.

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

Incompatible Materials None known based on information supplied.

7.3. Specific End Use(s)

Other Information No information available.

7.4. References to Other Sections

Reference to Other Sections Section 13: DISPOSAL CONSIDERATIONS
Section 10: STABILITY AND REACTIVITY

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	NIOSH IDLH	OSHA PEL	Mexico
Graphite 7782-42-5	TWA: 2 mg/m ³ respirable fraction all forms except graphite fibers	IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³ natural respirable dust	TWA: 15 mg/m ³ total dust synthetic TWA: 5 mg/m ³ respirable fraction synthetic TWA: 15 mppcf natural	TWA: 2 mg/m ³
Copper 7440-50-8	TWA: 0.2 mg/m ³ fume TWA: 1 mg/m ³ Cu dust and mist	IDLH: 100 mg/m ³ dust, fume and mist IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ dust and mist TWA: 0.1 mg/m ³ fume TWA: 1 mg/m ³ Cu dust and mist	TWA: 0.1 mg/m ³ fume TWA: 1 mg/m ³ dust and mist	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³ STEL: 2 mg/m ³
Zinc oxide 1314-13-2	STEL: 10 mg/m ³ respirable fraction TWA: 2 mg/m ³ respirable fraction	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction	TWA: 5 mg/m ³ TWA: 10 mg/m ³ STEL: 10 mg/m ³
Aluminum 7429-90-5	TWA: 1 mg/m ³ respirable fraction	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust TWA: 5 mg/m ³ Al	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction	TWA: 10 mg/m ³ TWA: 5 mg/m ³

Chemical Name	Argentina	Brazil	Chile	Venezuela
Graphite 7782-42-5	TWA: 2 mg/m ³	-	TWA: 1.6 mg/m ³	TWA: 2 mg/m ³
Copper 7440-50-8	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³	-	TWA: 0.16 mg/m ³ TWA: 0.8 mg/m ³	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³
Zinc oxide 1314-13-2	TWA: 5 mg/m ³ TWA: 10 mg/m ³ STEL: 10 mg/m ³	-	TWA: 4 mg/m ³	STEL: 10 mg/m ³ TWA: 2 mg/m ³ TWA: 10 mg/m ³
Aluminum	TWA: 10 mg/m ³ TWA: 5	-	TWA: 8 mg/m ³ TWA: 4	TWA: 10 mg/m ³

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7429-90-5	mg/m ³		mg/m ³	
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8.2. Exposure Controls

Engineering Controls Showers
 Eyewash stations
 Ventilation systems.

Personal protective equipment [PPE]

Eye/Face Protection Wear safety glasses with side shields (or goggles).
Skin and Body Protection Wear suitable chemical resistant gloves. The selection of suitable gloves does not only depend on the material, but also on further marks of quality and various manufacturers.
Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State Solid
Appearance Paste
Color Grey
Odor Petroleum
Odor Threshold No information available

Property	Values	Remarks • Method
pH	No information available	
Melting Point/Freezing Point	No information available	
Boiling Point	No information available	
Flash Point	246.1 °C / 475 °F	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper Flammability Limit	No information available	
Lower Flammability Limit	No information available	
Vapor Pressure	No information available	
Vapor Density	No information available	
Specific Gravity	No information available	
Water Solubility	No information available	
Solubility in Other Solvents		
Partition Coefficient	No information available	
Autoignition Temperature	No information available	
Decomposition Temperature	No information available	
Kinematic Viscosity	No information available	
Dynamic Viscosity	No information available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other Information

Softening Point No information available
Molecular Weight No information available
Solvent Content (%) No information available
Solid Content (%) 100.0

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Density 1.190 g/cm³
VOC No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

None under normal use conditions.

10.2. Chemical Stability

Stable under recommended storage conditions.

10.3. Possibility of Hazardous Reactions

None under normal processing.

10.4. Conditions to Avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible Materials

None known based on information supplied.

10.6. Hazardous Decomposition Products

None known based on information supplied.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on Toxicological Effects

Product Information	No Data Available
Inhalation	No Data Available.
Eye contact	No Data Available.
Skin Contact	No Data Available.
Ingestion	No Data Available.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc oxide 1314-13-2	> 5000 mg/kg (Rat)	-	-

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Symptoms	No information available.
Skin Corrosion/Irritation	No information available.
Serious Eye Damage/Eye Irritation	No information available.
Irritation	No information available.
Corrosivity	No information available.
Sensitization	No information available.
Germ Cell Mutagenicity	No information available.
Reproductive Toxicity	No information available.
Developmental Toxicity	No information available.
Teratogenicity	No information available.

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STOT - Single Exposure	No information available.
STOT - Repeated Exposure	No information available.
Chronic Toxicity	May cause adverse liver effects.
Target Organ Effects	Central Vascular System (CVS), Eyes, Kidney, Liver, Respiratory system, Skin.
Aspiration Hazard	No information available.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by ACGIH, OSHA, IARC or NTP at or above 0.1 wt%.

Section 12: ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

12.1. Toxicity

Chemical Name	Algae/Aquatic Plants	Fish	Toxicity to Microorganisms	Crustacea
Copper 7440-50-8	EC50 72 h 0.0426 - 0.0535 mg/L (Pseudokirchneriella subcapitata) EC50 96 h 0.031 - 0.054 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h 0.0068 - 0.0156 mg/L (Pimephales promelas) LC50 96 h = 0.2 mg/L (Pimephales promelas flow-through) LC50 96 h = 0.052 mg/L (Oncorhynchus mykiss flow-through) LC50 96 h = 1.25 mg/L (Lepomis macrochirus static) LC50 96 h = 0.3 mg/L (Cyprinus carpio semi-static) LC50 96 h < 0.3 mg/L (Pimephales promelas static) LC50 96 h = 0.8 mg/L (Cyprinus carpio static) LC50 96 h = 0.112 mg/L (Poecilia reticulata flow-through)		EC50 48 h = 0.03 mg/L (Daphnia magna Static)
Zinc oxide 1314-13-2		LC50 (96h) =0.7 mg/L Fish (Danio rerio)		

12.2. Persistence and Degradability

No information available.

12.3. Bioaccumulative Potential

No information available.

12.4. Mobility in Soil

No information available.

12.5 Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

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13.1. Waste Treatment Methods

Disposal of Wastes It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations

Contaminated Packaging Dispose of in accordance with federal, state and local regulations

Section 14: TRANSPORTATION INFORMATION

Note: 49 CFR 171.4(c) "Exceptions. Except when all or part of the transportation is by vessel, the requirements of this subchapter specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car or aircraft."

DOT

UN/ID No UN3077
Proper Shipping Name Environmentally hazardous substances, solid, n.o.s
Hazard Class 9
Packing Group III
Special Provisions TP33, T1, IB8, IP3, N20, 146, A112, 335, 8, B54
Marine Pollutant This product contains a chemical which is listed as a severe marine pollutant according to DOT.
Description UN3077 Environmentally hazardous substances, solid, n.o.s. (Copper, Zinc oxide), 9, III
Emergency Response Guide Number 171

IATA

UN/ID No UN3077
Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.
Hazard Class 9
Packing Group III
ERG Code 9L
Special Provisions A158, A179, A97
Description UN3077 Environmentally hazardous substance, solid, n.o.s. (Copper, Zinc oxide), 9, III

IMDG

UN/ID No UN3077
Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.
Hazard Class 9
Packing Group III
EmS-No F-A, S-F
Special Provisions 274, 335
Description UN3077 Environmentally hazardous substance, solid, n.o.s. (Copper, Zinc oxide), 9, III

Section 15: REGULATORY INFORMATION

Global Inventories

TSCA	Listed
DSL	Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL - Canadian Domestic Substances List

Listed - The components of this product are either listed or exempt from listing on inventory.

Not Listed - One or more components of this product are not listed on inventory.

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Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class
Non-controlled

United States of America

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No
Copper	7440-50-8
Zinc oxide	1314-13-2
Aluminum	7429-90-5

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

California Proposition 65

This product does not contain one or more substances listed on Proposition 65 at or above 0.01 wt. %.

Europe

Restrictions of Use of Hazardous Substances (RoHS) Directive 2011/65/EU

This product does not contain Lead (7439-92-1), Cadmium (7440-43-9), Mercury (7439-97-6), Hexavalent chromium (7440-47-3), Polybrominated biphenyls (PBB), and Polybrominated diphenyl ethers (PBDE) above the regulated limit mentioned in this regulation.

EU-REACH (1907/2006) - Candidate List of Substances of Very High Concern (SVHC) for Authorization in accordance with Article 59

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Section 16: OTHER INFORMATION

Product(s) Covered

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BNRG1-BTC12	N/SEEZ REG GRADE BTC1LB/C12
BNRG1-CTGC12	N/SEEZ REG GRADE Ct1LB/C12
BNRG1-FTC12	N/SEEZ REG GRADE C1LB/C12
BNRG130K1	N/SEEZ REG GRADE FD130LB
BNRG425D1	N/SEEZ REG GRADE MD425LB
BNRG42PS1	N/SEEZ REG GRADE MP42LB/P40
BNRG4TC24	N/SEEZ REG GRADE T4OZ/C24
BNRG8-FTC4	N/SEEZ REG GRADE C8LB(1GL)/C4
BNRG8BTC12	N/SEEZ REG GRADE BTC8OZ/C12
BNRGETC100	N/SEEZ REGGRADE Ppt7.5ML/C100

HMIS **Health Hazards** 1 **Flammability** 1 **Physical Hazards** 0 **Personal Protection** X

Key or Legend to Abbreviations and Acronyms Used in the Safety Data Sheet
No information available

Key Literature References and Sources for Data
No information available

Prepared By Product Safety & Regulatory Affairs

Revision Date 05-Jul-2016

Revision Note Not applicable.

Training Advice No information available

Additional information No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Material Safety Data Sheet

Section 1: Material Identification and Use:

MATERIAL NAME/IDENTIFIER: ONE STEP HAND SANITIZER (ALCOHOL)

MANUFACTURER'S NAME	Belvedere International Inc.	CHEMICAL NAME:	Compounded Product
STREET ADDRESS:	5675 Keaton Crescent	CHEMICAL FAMILY:	Not Applicable
CITY:	Mississauga	CHEMICAL FORMULA:	Not Applicable
PROVINCE:	Ontario	MOLECULAR WEIGHT:	Not Applicable
POSTAL CODE:	L5R 3G3	TRADE NAME:	One Step
EMERGENCY PHONE NO.	(905) 568-0700	MATERIAL USE:	Sanitizer

HAZARDS	
HEALTH	2
FLAMMABILITY	3
REACTIVITY	0
PERSONAL PROTECTION	N

Section 2: Hazardous Ingredients:

HAZARDOUS INGREDIENTS	%	UN, NA, CAS NO.	LD-50(SPECIES & ROUTE)	LC-50 (SPECIES & ROUTE)
Ethyl Alcohol	62 %	CAS #64-17-5 UN # 1170	Not Available	Not Available

Section 3: Physical Data:

PHYSICAL STATE:	Viscous Liquid	BOILING POINT:	78.3 °C
COLOUR:	Colourless, Clear	FREEZING POINT:	- 114.1 °C
ODOUR:	Match Standard	% VOLATILES:	60 % - 65 %
SPECIFIC GRAVITY:	0.8850 – 0.8950	VAPOUR PRESSURE:	Not Available
pH:	7.0-8.0	VAPOUR DENSITY (AIR=1)	Not Available
EVAPORATION RATE:	1.7	SOLUBILITY IN WATER (20°C)	Complete

Section 4: Fire and Explosion Data:

FLAMMABILITY:	Flammable		
CONDITIONS OF FLAMMABILITY	Contact with spark or open flame		
METHODS OF EXTINCTION:	Water/Carbon Dioxide Foam		
SPECIAL PROCEDURES:	Keep product away from any source of sparks or open flame		
FLASHPOINT (°C) AND METHOD	21 °C (Tag closed cup, ASTM D-56)		
U.E.L. (% BY VOLUME)	Not Available	SENSITIVITY TO IMPACT:	None
L.E.L. (% BY VOLUME)	Not Available	SENSITIVITY TO STATIC DISCHARGE:	Not Available
AUTO IGNITION TEMP. (°C)	Not Available	RATE OF BURNING:	Not Available
TDG FLAMMABILITY CLASSIFICATION	Not Available	EXPLOSIVE POWER:	Not Available

Section 5: Reactivity Data:

CHEMICAL STABILITY:	Stable
COMPATIBLE WITH OTHER SUBSTANCES:	Yes
REACTIVITY UNDER WHAT CONDITIONS:	Burning
HAZARDOUS DECOMPOSITION PRODUCTS:	Burning can produce carbon monoxide and/or carbon dioxide
NAME UNSTABLE CONDITIONS:	Mixture with oxidizing materials
NAME INCOMPATIBILITIES:	Strong oxidizing materials

Material Safety Data Sheet

MATERIAL NAME/IDENTIFIER:	ONE STEP HAND SANITIZER (ALCOHOL)
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Section 6: Toxicological Properties:

ROUTE OF ENTRY: SKIN CONTACT <input type="checkbox"/> SKIN ABSORPTION <input type="checkbox"/> EYE CONTACT <input checked="" type="checkbox"/> INHALATION ACUTE <input checked="" type="checkbox"/> INHALATION CHRONIC <input checked="" type="checkbox"/> INGESTION <input checked="" type="checkbox"/>	
EFFECTS OF ACUTE EXPOSURE TO THE MATERIAL: None under normal conditions.	
EFFECTS OF CHRONIC EXPOSURE TO THE MATERIAL: None under normal conditions.	
LD-50 OF MATERIAL (ROUTE & SPECIES) Not Available EXPOSURE LIMIT FOR THE MATERIAL Not Available SENSITIZING CAPACITY OF THE MATERIAL None Known REPRODUCTIVE EFFECTS OF THE MATERIAL None Known	LC-50 OF MATERIAL (ROUTE & SPECIES) Not Available IRRITANCY OF THE MATERIAL Concentrated product may cause eye irritation CARCINOGENICITY OF THE MATERIAL None Known SYNERGISTIC MATERIALS None Known

Section 7: Preventive Measures:

PERSONAL PROTECTIVE EQUIPMENT: GLOVES (SPECIFY): RESPIRATOR (SPECIFY): FOOTWEAR (SPECIFY): CLOTHING (SPECIFY): ENGINEERING CONTROLS (SPECIFY): LEAK & SPILLAGE PROCEDURE: WASTE DISPOSAL: HANDLING PROCEDURES & EQUIPMENT: STORAGE REQUIREMENTS SPECIAL SHIPPING INFORMATION (TDG): OTHER INFORMATION:	None required under normal conditions None required under normal conditions None required under normal conditions None required under normal conditions None required under normal conditions Fire-proof and explosion-proof equipment must be used during manufacturing Pick up large spills and transfer to suitable sealed containers Contact local authorities for disposal method Keep the product away from sources of heat, spark or open flame Store between 15°C and 30°C Class 3 Flammable liquid ; Make certain that all shipping containers are properly labeled Do not mix with other chemicals
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Section 8: First Aid Measures:

INHALATION:	Give plenty of fresh air. Call physician if dizziness or any discomfort is observed.
INGESTION:	Give plenty of milk or water. Call Physician
EYE CONTACT:	Flush for 10 minutes with running water. Call physician, if any irritation is present or develops.
SKIN CONTACT:	None required under normal conditions

Section 9: Information Sources Used:

SOURCES:	Raw material suppliers' data sheets.
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Section 10: WHMIS Classification:

WHMIS CLASS:	Class B Division 2: Flammable liquid
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Section 11: MSDS Preparation Information:

PREPARED BY: Claude Raad	PHONE NUMBER: (905) 568-0700	DATE: December 11, 2014
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Pro Form Products Ltd.
604 McGeachie Drive
Milton; Ontario; L9T 3Y5
Canada

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A
Section 01: Chemical product and company identification

Product name..... PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A
 Manufactured for..... Pro Form Products Ltd.
 604 McGeachie Drive
 Milton, Ontario L9T3Y5
 Tel (905) 878-4990 Fax (905) 878-1189
 24 hour emergency number..... IN CANADA CALL CANUTEC (613) 996-6666-IN THE UNITED STATES CALL
 CHEMTREC (800) 424-9300.
 Material use..... Adhesive applications.
 Chemical family..... Aromatic isocyanate prepolymer.
 Preparation date..... April 3, 2014.
 Hazard rate
 NFPA rating..... Health: 2 Fire: 1 Reactivity: 1.
 HMIS..... H: 2* F: 1 R: 1.

Section 02: Hazards identification


Signal Word..... DANGER.
 Hazard Classification..... Respiratory Sensitizer 1. Skin Sensitizer 1. Eye Irritant 2. Skin Irritant 2. Acute Toxicity 4.
 STOT SE 3. STOT RE 2.
 Hazard Description..... H302 Harmful if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation.
 H317 May cause an allergic skin reaction. H320 Causes eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation. H373 May cause damage to the liver and kidneys through prolonged or repeated contact.
 Precautionary Statements..... P202 Do not handle this product until all safety instructions have been read and understood. P233 Keep container tightly closed. P251 Do not pierce or burn container, even after use. P261 Avoid breathing mists, vapours and sprays. P264 Wash thoroughly after handling. P270 Do not eat drink or smoke while using this product. P271 Use only outdoors or in a well ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves and eye protection. P284 In case of inadequate ventilation wear respiratory protection.

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS #	Wt. %
4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	101-68-8	30-40
TALC	14807-96-6	10-30
2,4-DIPHENYLMETHANE DIISOCYANATE (MDI)	5873-54-1	0.1-1.0

Section 04: First aid measures

Eye contact..... In case of contact, immediately flush eyes, keeping eyelids open, with plenty of water for at least 15 minutes. Check for and remove any contact lenses. Obtain medical attention.
 Skin contact..... Immediately flush skin with plenty of soap and water. Remove contaminated clothing. Wash clothing before reuse. Do not peel solidified product off the skin. If irritation persists, seek medical attention.
 Inhalation..... If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, obtain medical attention.
 Ingestion..... Do not induce vomiting. Rinse mouth with water. Give 1 to 2 glasses of water to drink. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs have victim lean forward with head down to prevent aspiration of fluid into the lungs. Get medical attention.

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A**Section 04: First aid measures**

Additional information..... Eye: stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapours have produced reversible corneal epithelial edema impairing vision. Skin: this compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn. Ingestion: treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound. Respiratory: this compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate. In the event of an incident involving this product ensure that medical authorities are provided a copy of this safety data sheet. In all cases, if irritation persists seek medical attention.

Section 05: Fire fighting measures

Extinguishing media..... Dry chemical. Carbon dioxide. Foam. In cases of larger fires, water spray should be used.
 Hazardous combustion products..... Oxides of carbon (CO,CO₂). Oxides of nitrogen. Smoke. Hydrogen cyanide. Isocyanates. Other potentially toxic fumes.
 Special fire fighting procedures..... Firefighter should be equipped with self-contained breathing apparatus and full protective clothing to protect against potentially toxic and irritating fumes. During a fire, isocyanate vapours and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Cool fire-exposed containers with cold water spray. Heat will cause pressure buildup and may cause explosive rupture. Heat will cause pressure buildup and may cause explosive rupture.
 Unusual fire / explosion hazards..... Reaction between water or foam and hot MDI can be vigorous.

Section 06: Accidental release measures

Leak/spill..... Isolate area and keep unauthorized people away. Do not walk through spilled material. Wear recommended protective equipment. Ventilate. Open windows and doors to allow air circulation. Dike area to prevent spreading. The use of absorbent socks or spill pillows may be required. Stop leak if safe to do so. Prevent runoff into drains, sewers, and other waterways.
 Major spills..... If temporary control of isocyanate vapour is required, a blanket of protein foam may be placed over spill. If transportation spill occurs in United States, call Chemtrec 1-800-424-9300. If transportation spill occurs in Canada, call Canutec at (613) 996-6666. Large quantities may be pumped into closed, but not sealed, containers for disposal.
 Minor spills..... Cover spill area with suitable absorbent material (e.g., sand, earth, sawdust, vermiculite, Oil-Dri, Kitty Litter, etc.). Saturate absorbent material with neutralizing solution. Recommended portion is ten parts neutralizing solution to one part spilled material. Suggested neutralization solution: 90% water + 5% concentrated ammonia + 5% detergent (dish soap). Add an additional layer of absorbent material. Use shovel to move absorbent material around to ensure that all spilled material comes in contact with the neutralizing solution. Shovel all absorbed material, including absorbent socks or spill pillows, into an appropriate salvage drum. Add further amounts of neutralizing solution. Allow to stand (covered loosely) for 48 to 72 hours, to allow any gases to escape.
 Clean up..... Decontaminate spill area with neutralizing solution. Area can then be washed with soap and water.

Section 07: Handling and storage

Handling procedures..... Avoid skin and eye contact. Do not breathe vapours, mist or dust. Use adequate ventilation. Decomposition products can be highly toxic and irritating. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapour or spray mist. Warning properties (irritation of the eyes, nose and throat or odour) are not adequate to prevent chronic overexposure from inhalation. Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Wear respiratory protection if material is heated, sprayed, used in confined space, or if exposure limit is exceeded. Employee education and training are important.
 Storage needs..... Store in tightly closed containers to prevent moisture contamination. Store in a cool, dry and well ventilated area. Do not reseal if contamination is suspected. Exposure to vapours of heated isocyanates can be extremely dangerous.

Section 08: Exposure controls / personal protection

Protective equipment
 Eye/type..... Chemical safety goggles. Chemical safety goggles and full faceshield if a splash hazard exists. Contact lenses should not be worn when working with this chemical.
 Respiratory/type..... In case of insufficient ventilation, wear suitable respiratory equipment. An approved air purifying respirator with organic vapour cartridges and particulate prefilter can be used to minimize exposure. However, this should be permitted only for short periods of time (< 1

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A**Section 08: Exposure controls / personal protection**

Respiratory/type.....	hour) at relatively low concentrations (at or near the exposure limit). Protection provided by air-purifying respirators is limited. The use of a positive pressure air supplied respirator is mandatory when airborne concentrations are not known or airborne solvent levels are 10 times the appropriate exposure limit or spraying is performed in a confined space or with limited ventilation. Be sure to use NIOSH approved respirator or equipment. Do not exceed the use limits of the respirator.
Gloves/ type.....	Chemical resistant gloves: butyl rubber, nitrile rubber, neoprene, PVC. Practice good hygiene, wash thoroughly before handling any food.
Clothing/type.....	Wear adequate protective clothes. Wear long sleeves and trousers to prevent dermal exposure.
Footwear/type.....	Safety boots per local regulations.
Other/type.....	Eye wash facility should be in close proximity. Emergency shower should be in close proximity. Educate and train employees on the safe use and handling of the product.
Ventilation requirements.....	Ventilate adequately. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Vent work area to ensure airborne concentrations are below the current occupational exposure limits. Avoid breathing mists; if general ventilation or local exhaust is inadequate, persons exposed to mists should wear approved breathing devices.
Monitoring.....	Exposure levels must be monitored by accepted monitoring techniques to ensure that the TLV is not exceeded.
Medical surveillance.....	Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should include preemployment and periodic medical examinations with pulmonary function test (FEC, FVC as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurring skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted. These should include preemployment and periodic medical examinations with pulmonary function test (fev, fvc as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

Exposure limits

Ingredients	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL NIOSH
4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	0.005 ppm	No data	0.02 ppm	No data	0.005 ppm
TALC	2 mg/m ³	No data	2 mg/m ³	No data	2 mg/m ³
2,4-DIPHENYLMETHANE DIISOCYANATE (MDI)	No data	No data	No data	No data	No data

Section 09: Physical and chemical properties

Physical state.....	Viscous liquid.
Colour.....	Beige.
Odour.....	No data.
Odour threshold (ppm).....	No data.
Vapour pressure (mm Hg).....	<0.013 hPa @ 25C.
Vapour density (air=1).....	>1.
pH.....	No data.
Specific gravity.....	1.288 g/cm ³ @ 20C - 10.72 lb/USG @ 25C.
Freezing point (deg C).....	No data.
Solubility.....	Reacts slowly with water to liberate CO ₂ gas.
Boiling point (deg C).....	>200.
Evaporation rate.....	<1. (butyl acetate = 1).
Flash point (deg C), method.....	>100.
Auto ignition temperature (deg C).....	No data.
Upper flammable limit (% vol).....	No data.
Lower flammable limit (% vol).....	No data.
Coefficient of water/oil distribution.....	No data.
VOC.....	0.0 g/L - 0.0 lb/usg.
Viscosity.....	No data.

Section 10: Stability and reactivity

Stability.....	Stable at normal temperatures and pressures.
Reactivity conditions.....	Contact with moisture and other materials will react with isocyanates.
Incompatibility.....	Water, amines, strong bases, alcohols. Copper alloys.
Hazardous products of decomposition.....	See hazardous combustion products.
Hazardous polymerization.....	Contact with moisture, other materials that react with isocyanates, or temperatures above 177C, may cause polymerization.

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A**Section 11: Toxicological information**

Route of entry	Eye contact. Skin contact. Inhalation.
Effects of acute exposure.....	Skin irritant. Can cause reddening, itching and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling and rash. Cured material is difficult to remove. Contact with MDI can cause discolouration. EYE: Product liquid, aerosols or vapours are irritating. Can cause tearing, reddening and swelling. May cause temporary corneal injury. INHALATION: Vapour/mists at concentrations above the exposure limits can irritate (burning sensation) the mucous membranes in the respiratory tract. This can cause a runny nose, sore throat, coughing, chest discomfort, difficulty breathing and reduced pulmonary functioning. Persons with pre-existing, nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. These symptoms can be delayed up to several hours after exposure. Effects are usually reversible. INGESTION: May cause irritation. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. Talc can be absorbed into the lungs and the digestive tract, and adversely affect lung function.
Effects of chronic exposure.....	As a result of previous repeated overexposure or a single large dose, certain individuals develop sensitization, which will cause them to react to a later exposure to product at levels well below the TLV. Symptoms, including chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed. There are reports that once sensitized, an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and, in severe cases, for several years. Prolonged or repeated exposure may cause lung damage, including a decrease in lung function. Possible risk of irreversible effects. Prolonged skin contact may cause reddening, swelling, rash, blistering, and in some cases, skin sensitization. Sensitization can be permanent. Prolonged vapour contact with eyes may cause conjunctivitis. Talc has been shown to cause fibrosis of the lungs.
Sensitizing capability of material.....	Isocyanates are known to cause skin and respiratory sensitization in humans. Animal tests have indicated that respiratory sensitization can result from skin contact with diisocyanates.
Carcinogenicity of material.....	This product contains non-asbestiform Talc, which is classified as a Group 3 (not classifiable as to carcinogenicity to humans) by IARC .
Note.....	This product is an inert plastic when fully cured, and as such, is non-hazardous. Exposure to unreacted chemicals can occur when handling the individual components in pails or when using cartridges from the time of dispensing until the mixed material has cured. The mixed material is actually curing as it is dispensed in an increasingly viscous form, making it unlikely to present an inhalation hazard. The semi-viscous mixture does not flow like a liquid when dispensed, thus minimizing the possibility of accidental skin contact.

Toxicological Data

Ingredients	LC50-inh, rat	LD50-Oral, rat
4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	369 mg/m ³ 4 hours rat	No data
TALC	No data	No data
2,4-DIPHENYLMETHANE DIISOCYANATE (MDI)	370-490 MG/M ³ (4HR) RAT	No data

Section 12: Ecological information

Environmental.....	Do not allow to enter waters, waste water or soil.
Biodegradability.....	No data.

Section 13: Disposal considerations

Waste disposal.....	Dispose of waste in accordance with all applicable federal, provincial/state and local regulations. Industrial incineration is the preferred method. Empty containers retain product residue; observe all precautions for the product. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. Do not heat or cut empty containers with electric or gas torch as vapours and gases may be toxic.
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Section 14: Transport information

TDG Classification (Road).....	Not regulated.
IATA Classification (Air).....	Not regulated.
IMDG Classification (Marine).....	Not regulated.
Marine Pollutant.....	No.

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A**Section 15: Regulatory information**

WHMIS classification.....	D2A. D2B.
CEPA status.....	On Domestic Substances List (DSL).
Section 313.....	None.
OSHA.....	This product is considered hazardous under the OSHA Hazard Communication Standard.
SARA Title III	
Section 302 - extremely hazardous substances	None.
Section 311/312 - hazard categories.....	Immediate health, delayed health.
EPA hazardous air pollutants (HAPS) 40CFR63	Methylene Diphenyl Diisocyanate (MDI).
TSCA inventory status.....	All components are listed.
California Proposition 65.....	This product does not contain any chemical(s) known to the State of California to cause cancer or reproductive toxicity.

Section 16: Other information

Prepared by:	REGULATORY AFFAIRS.
Telephone number:.....	(800) 387-7981.
Disclaimer:.....	DISCLAIMER: All information appearing herein is based upon data obtained from experience and recognized technical sources. To the best of our knowledge, it is believed to be correct as of the date of issue but we make no representations as to its accuracy or sufficiency and do not suggest or guarantee that any hazards listed herein are the only ones which exist. The hazard information contained herein is offered solely for the consideration of the user, subject to his own investigation and verification of compliance with applicable regulations, including the safe use of the product under every foreseeable condition. The information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.



MATERIAL SAFETY DATA SHEET

PYRO-CHEM ABC

Product Code: 2001-2-012 ANa

Issue Date: 01-08-2014

1. Product and Company Identification

Material name	PYRO-CHEM ABC
Version #	01
Revision date	01-08-2014
CAS #	Mixture
Product Code	2001-2-012 ANa
Product use	Fire extinguishing agent
Manufacturer / Importer / Supplier	
Name	Tyco Fire Protection Products
Address	One Stanton Street Marinette, WI 54143-2542
Phone	715-732-3465
Internet	http://www.pyrochem.com
Emergency Phone Number	CHEMTREC 800-424-9300 or 703-527-3887

2. Hazards Identification

Emergency overview	WARNING Irritating to eyes and skin.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Eye contact. Skin contact. Inhalation. Ingestion.
Eyes	Avoid contact with eyes. Contact with eyes may cause irritation.
Skin	Avoid contact with the skin. May cause skin irritation.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Ingestion	Not a likely route of entry.
Target organs	Eyes. Respiratory system. Skin.
Signs and symptoms	Irritation of eyes and mucous membranes.

3. Composition / Information on Ingredients

Non-hazardous components	CAS #	Percent
Pigment Yellow 14	5468-75-7	0.1 - 1
Silicone fluid	63148-57-2	0.1 - 1
Calcium hydroxide phosphate (Ca5(OH)(PO4)3)	12167-74-7	2.5 - 10
FULLERS EARTH	8031-18-3	2.5 - 10
Ammonium Sulfate	7783-20-2	20 - 40
Ammonium Phosphate	7722-76-1	60 - 80

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.
Skin contact	Wash off with warm water and soap. Get medical attention if irritation develops and persists.

Inhalation	Move to fresh air. Get medical attention, if needed.
Ingestion	Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Notes to physician	Symptoms may be delayed.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties	No unusual fire or explosion hazards noted.
Extinguishing media	
Suitable extinguishing media	This product is not flammable. Use extinguishing agent suitable for type of surrounding fire.
Protection of firefighters	
Specific hazards arising from the chemical	None known.
Hazardous combustion products	Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions	Local authorities should be advised if significant spillages cannot be contained. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect dust using a vacuum cleaner equipped with HEPA filter. Avoid dust formation. Following product recovery, flush area with water.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Keep formation of airborne dusts to a minimum. Do not breathe dust. Avoid contact with eyes. Do not use in areas without adequate ventilation. Wear personal protective equipment. Wash thoroughly after handling.
Storage	Store in a well-ventilated place. Keep container tightly closed. Guard against dust accumulation of this material. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Engineering controls	Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	
Eye / face protection	Do not get in eyes. Chemical goggles are recommended.
Skin protection	No special protective equipment required.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygiene considerations	Do not get in eyes.

9. Physical & Chemical Properties

Appearance	
Form	Powder.
Color	Yellow.
Odor	Odorless.
Physical state	Solid.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.

Flash point	Not available.
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	Not available.
Relative density	Not available.
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Incompatible materials	Strong acids.
Hazardous decomposition products	Carbon oxides.

11. Toxicological Information

Toxicological information	The toxicity of this product has not been tested.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Further information	This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicological data

Product	Test Results
PYRO-CHEM ABC (Mixture)	EC50 Daphnia: 167 mg/l 48.00 hours estimated LC50 Fish: 3181 mg/l 96.00 hours estimated
Components	Test Results
Ammonium Sulfate (7783-20-2)	EC50 Water flea (Ceriodaphnia dubia): 52 - 67 mg/l 48.00 hours LC50 Pink salmon (Oncorhynchus gorbuscha): 0.068 mg/l 96.00 hours
Ecotoxicity	This material is not expected to be harmful to aquatic life.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations.

14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Ammonium Phosphate (CAS 7722-76-1)	1.0 %
Ammonium Sulfate (CAS 7783-20-2)	1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Ammonium Phosphate (CAS 7722-76-1)	Listed.
Ammonium Sulfate (CAS 7783-20-2)	Listed.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Acute Health - No
Chronic Health - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Ammonium Sulfate (CAS 7783-20-2)	Listed.
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16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 0
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 0
Flammability: 0
Instability: 0

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Issue date 01-08-2014



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Product Use: Electronic cleaner

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

www.crcindustries.com

1-215-674-4300 (General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

www.crc-canada.ca

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luís Potosí, SLP CP 78394

www.crc-mexico.com

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Extremely Flammable. Harmful or Fatal if Swallowed. Contents Under Pressure.
Appearance & Odor: Clear, colorless liquid with alcohol odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause mild irritation including stinging and redness, but does not injure eye.

SKIN: Single, brief exposures may cause mild irritation. Frequent or prolonged contact may cause more severe irritation, defatting of the skin, and dermatitis.

INHALATION: High vapor concentrations are irritating to the respiratory tract and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. May cause peripheral nervous system disorder and/or damage.

INGESTION: Low order of toxicity by ingestion. Main hazard is aspiration into the lungs during swallowing or vomiting. Small amounts aspirated into the respiratory system may cause bronchopneumonia or pulmonary adema, possibly progressing to death.

CHRONIC EFFECTS: Overexposure to n-hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs.

TARGET ORGANS: Central nervous system, peripheral nervous system, respiratory system

Medical Conditions Aggravated by Exposure: skin and respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Hexane isomers	64742-49-0 / 107-83-5	85 – 95
n-Hexane	110-54-3	6.6
Ethanol	64-17-5	< 1
Carbon Dioxide	124-38-9	3 – 8

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do NOT induce vomiting. Contact a physician immediately.

Note to Physicians: Treat symptomatically. Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3©(6)).

Flash Point: < 0°F / < -17°C (TCC)	Upper Explosive Limit: 9.0
Autoignition Temperature: 489°F / 254°C	Lower Explosive Limit: 1.7

Fire and Explosion Data:

Suitable Extinguishing Media: Class B fire extinguishers, dry chemical, foam or CO₂

Products of Combustion: Fumes, smoke and carbon monoxide

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode. Vapors may accumulate in a confined space and create a flammable atmosphere.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition. Do not spray water directly on fire; product will float and could be reignited on surface of water.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Methods for Containment & Clean-up: Dike area to contain spill. Remove all sources of ignition. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Use proper grounding and bonding procedures for transferring materials. Do not use product near any source of ignition. Avoid contact with eyes and skin. Avoid breathing vapors. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120°F / 49°C to prevent cans from rupturing.

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Hexane isomers	500(v)	1000(v)	500	1000	NE		ppm
n-Hexane	500	NE	50(s)	NE	NE		ppm
Ethanol	1000	NE	1000	NE	NE		ppm
Carbon Dioxide	5000	30000 (v)	5000	30000	NE		ppm

N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVC, Viton®. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Physical State: liquid

Color: clear, colorless

Odor: alcohol

Odor Threshold: ND

Specific Gravity: 0.66

Initial Boiling Point: 140°F / 60°C

Freezing Point: < -76°F / < -60°C

Vapor Pressure: 175 mmHg @ 68°F / 20°C

Vapor Density: > 1 (air = 1)

Evaporation Rate: very fast

Solubility: negligible in water

Coefficient of water/oil distribution: ND

pH: NA

Volatile Organic Compounds: wt %: 95 g/L: 627 lbs./gal: 5.2

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Sources of ignition, temperature extremes

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: Oxides of carbon

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

<u>Component</u>	<u>Oral LD50 (rat)</u>	<u>Dermal LD50 (rabbit)</u>	<u>Inhalation LC50 (rat)</u>
Hexane isomers	> 15,000 mg/kg	> 2000 mg/kg	No data
n-Hexane	28,710 mg/kg	3000 mg/kg	48,000 ppm/4H
Ethanol	760 mg/kg	No data	20,000 ppm/10H
Carbon Dioxide	No data	No data	470,000 ppm/30M

Chronic Toxicity:

<u>Component</u>	<u>OSHA Carcinogen</u>	<u>IARC Carcinogen</u>	<u>NTP Carcinogen</u>	<u>Irritant</u>	<u>Sensitizer</u>
Hexane isomers	No	No	No	No	Unknown
n-Hexane	No	No	No	E, S & R (moderate)	Unknown
Ethanol	No	No	No	E (mild) / S (moderate)	Unknown
Carbon Dioxide	No	No	No	No	No

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available

Teratogenicity: No information available

Mutagenicity: No information available

Synergistic Effects: No information available

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: n-hexane - 48 Hr EC50 water flea: 3.87 mg/L
96 Hr LC50 Lepomis macrochirus: 4.12 mg/L
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001. (See 40 CFR Part 261.20 – 261.33)
Any liquid product should be managed as a hazardous waste. Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): UN1950, Aerosols, flammable, 2.1, Limited Quantity**

ICAO/IATA (air): UN1950, Aerosols, flammable, 2.1, Limited Quantity

IMO/IMDG (water): UN1950, Aerosols, 2.1, Limited Quantity

Special Provisions: **This product can be classified and labeled as 'Consumer Commodity, ORM-D' for domestic ground shipping until December 31, 2020.
If shipping as limited quantity by ground, note that shipping papers are not required.

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: n-hexane (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	Yes
	Reactive Hazard	No
	Release of Pressure	Yes

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Acute Health Hazard	Yes
Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
n-hexane (6.6%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): n-hexane

Occupational Safety and Health Administration:

This product is regulated by the Hazard Communications Standard.

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: NA

State Right to Know:

New Jersey: 75-83-2, 110-54-3, 79-29-8, 64-17-5, 124-38-9

Pennsylvania: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 64-17-5, 124-38-9

Massachusetts: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 64-17-5, 124-38-9

Rhode Island : 110-54-3, 64-17-5, 124-38-9

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A, B5, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

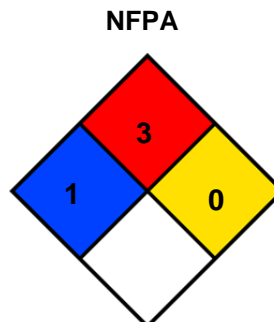
Additional Regulatory Information: None

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Section 16: Other Information

HMIS® (II)	
Health:	1
Flammability:	3
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 985
Revision Date: 07/23/2014

Changes since last revision: Section 14: Transport Information

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose

NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System

REFLEX 700 A

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: REFLEX 700 Component A
SYNONYMS: Modified Diphenylmethane Diisocyanate (MDI)
PRODUCT CODES: 872-1025

MANUFACTURER: Langeman Manufacturing Ltd.
ADDRESS: 56 Oak Street East
Leamington, ON, N8H 2C2
EMERGENCY PHONE: Chemtrec: 1-800-424-9300
OTHER CALLS: 1-519-326-6104
FAX PHONE: 1-519-326-4188

CHEMICAL NAME: Diphenylmethane Diisocyanate (MDI) Prepolymer
CHEMICAL FAMILY: Aromatic Isocyanate Prepolymer
CHEMICAL FORMULA: not applicable

PRODUCT USE: Polyurethane Coating for Truck Bedliners.
PREPARED BY: AdK

SECTION 1 NOTES:
CAS No. 39420-98-9

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

Polyurethane Prepolymer: Proprietary formulation based on polyurethane technology.

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

May cause lung damage; May cause eye, skin, and respiratory tract irritation; Harmful if inhaled; May cause allergic respiratory reaction; May cause allergic skin reaction; Toxic gases are given off during burning or thermal decomposition.

ROUTES OF ENTRY:

Skin: Contact from liquid and aerosols (spray application).

Inhalation: Although MDI is low in volatility, an inhalation hazard can exist from MDI aerosols or vapors formed during heating, foaming or spraying.

POTENTIAL HEALTH EFFECTS

Acute Skin Contact: Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

Acute Inhalation: MDI vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyper reactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g., fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure.

Acute Eye Contact: Liquid, aerosols or vapors are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible. See First Aid Measures for treatment.

Acute Ingestion: Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

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CHRONIC HEALTH HAZARDS:

Chronic Skin Contact: Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapors. Animal tests have indicated that respiratory sensitization can result from skin contact with MDI. This data reinforces the need to prevent direct skin contact with MDI. (See Toxicological Information, SENSITIZATION.)

Chronic Inhalation: As a result of previous repeated overexposures or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed (up to several hours after exposure). Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Overexposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

Chronic Eye Contact: None Found

Chronic Ingestion: None Found

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyper reactivity), skin allergies, eczema.

CARCINOGENICITY:

Neither MDI nor polymeric MDI are listed by the NTP, IARC or regulated by OSHA as carcinogens.

SECTION 4: FIRST AID MEASURES

Eyes: Flush with copious amount of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Refer individual to physician or ophthalmologist for immediate follow-up.

Skin: Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or persists after the area is washed.

Inhalation: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult physician should this occur.

Ingestion: DO NOT INDUCE VOMITING. Give 1 to 2 cups of milk or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult physician.

Note to Physician:

Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision.

Skin: This compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn. Ingestion. Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound.

Respiratory: This compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate.

SECTION 5: FIRE-FIGHTING MEASURES**Flammability Limits:**

Upper Explosive Limit: (UEL) (%): Not Established

Lower Explosive Limit (LEL) (%): Not Established

Auto-Ignition Temperature: ~860 F (460 C) (similar material)

Flash Point: 421.0 °F (216.1 °C) Pensky-Martens Closed Cup (ASTM D-93)

REFLEX 700 A

Extinguishing Media: Dry Chemical; Carbon Dioxide; Foam; Water spray for large fires.

Special Firefighting Procedures: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. (See Stability and Reactivity). At temperatures greater than 400 °F (204 °C), polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers.

Unusual Fire and Explosion Hazards: None reported for this product.

Health: 2 Flammability: 1 Reactivity: 1

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures:

Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during clean-up. (See Employee Protection Recommendations). Major Spill: Call Langeman Manufacturing at 519-326-6104. If transportation spill, call CHEMTREC 800-424-9300. If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, container for disposal. Minor Spill: Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80%) with non-ionic surfactant Tergitol TMN-10 (20%), or; water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO₂ escape. Clean-up: Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

SECTION 7: HANDLING AND STORAGE

Handling and Storage: Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Exposure to vapors of heated MDI can be extremely dangerous. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard.

Storage Temperature: 60 °F (15 °C)/95 °F (35 °C)

Special Sensitivity: If container is exposed to high heat, 400 °F (204 °C) it can be pressurized and possibly rupture. MDI reacts slowly with water to form CO₂ gas. This gas can cause sealed containers to expand and possibly rupture.

Shelf Life: 6 months @ 77 °F (25 °C)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: : Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heated or spray applied. Standard reference sources regarding industrial ventilation (i.e., ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation.

Eye Protection: Liquid chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be used in combination with a full face-shield.

Skin Protection: Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum. Ventilation Procedures

Respiratory Equipment: Concentrations greater than the TLV can occur when MDI is sprayed, heated or used in a poorly ventilated area. In such cases, or whenever concentration: of MDI exceed the TLV or are not known, respiratory protection must be worn. A supplied air respirator (either positive pressure or continuous flow type) is required. In an emergency situation, a self-contained breathing apparatus may be used. MDI has poor warning properties, since the concentration at which MDI can be smelled is substantially higher than the maximum exposure limit. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Monitoring: Isocyanate exposure levels must be monitored. Monitoring of airborne isocyanates in the breathing zone of individuals should become part of the overall employee exposure characterization program. Monitoring techniques have been developed by NIOSH, and OSHA.

Medical Surveillance: Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should include pre employment and periodic medical examinations with pulmonary function tests (FEV₁, FVC a: a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory disease or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

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Additional Protective Measures: Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Yellowing Liquid
 ODOR: Slightly musty odor
 PH: Not Applicable
 BOILING POINT: 406 °F (208 °C) @ 5 mmHg for MDI
 MELTING/FREEZING POINT: Range 50 °F (10 °C) for MDI to 60 °F (16 °C)
 VISCOSITY: Not Applicable
 SOLUBILITY IN WATER: Not soluble. Reacts slowly with water to liberate CO₂ gas.
 SPECIFIC GRAVITY: 1.090 @ 77 °F (25 °C)
 BULK DENSITY: 9.10 lbs/gal
 % VOLATILE BY VOLUME: 0%
 VAPOR PRESSURE: Less than 10-5 mmHg @ 77 °F (25 °C) for MDI
 VAPOR DENSITY 8.5 (MDI) (Air =1)

SECTION 10: STABILITY AND REACTIVITY

STABLE X

UNSTABLE

Stability: Stable under normal circumstances.

Hazardous Polymerization:

May occur; Contact with moisture, other materials which react with isocyanates, temperatures above 400 °F (204 °C), may cause polymerization.

Incompatibility (Materials to avoid): Water, amines, strong bases, alcohols, metal compounds and surface active materials.

Instability Conditions: Contamination with water.

Decomposition Conditions: By high heat and fire: carbon dioxide, carbon monoxide, oxides of nitrogen, HCN, HDI and other unknown aliphatic fragments.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity Data for: Diphenylmethane Diisocyanate (Monomeric and Polymeric)

Acute Toxicity:

ORAL LD50	Greater than 15,800 mg/kg (Rat)
DERHAL LD50.....	Greater 5010 but less than 7,940 mg/kg (Rabbit)
INHALATION LC50.....	The 4-hour LC50 for polymeric MDI in rats ranges from 370 to 490 mg/m3. The LC50 for monomeric MDI was estimated to be between 172 and 187 mg/m3.
EYE EFFECTS.....	Slight to moderate irritation.
SKIN EFFECTS.....	Slight to moderate irritation.
SENSITIZATION	MDI has been shown to produce dermal sensitization in laboratory animals. Evidence of respiratory sensitization has also been observed in guinea pigs. In addition, there is some evidence suggestive of cross-sensitization between different types of diisocyanates.

SECTION 12: ECOLOGICAL INFORMATION

Ecology Data for: Diphenylmethane Diisocyanate (Monomeric and Polymeric)

Aquatic Toxicity: LC50 - 24 hr. (static): Greater than 500 mg/liter for Daphnia magna, Limnea Stagnalis, and Zebra fish (Brachydanio rerio) for both polymeric and monomeric MDI.

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.

Empty Container Regulations: Empty containers must be handled with care due to product residue. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. **DO NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.** (See Fire Fighting Measures and Stability & Reactivity). Gases may be highly toxic.

Transportation Emergencies: Langeman Mfg Ltd. requires that CHEMTREC be immediately notified (800-424-9300) when this product is unintentionally released from its container during its course of distribution, regardless of the amount released. Distribution includes transportation, storage incidental to transportation, loading and unloading. Such notification must be immediate and made by the person having knowledge of the release.

SECTION 14: TRANSPORT INFORMATION

TECHNICAL SHIPPING NAME Methylene diphenyl diisocyanate
 FREIGHT CLASS BULK..... Methylene diphenyl diisocyanate
 FREIGHT CLASS PACKAGE..... Chemicals, NOI (Isocyanate), NMFC 60000
 PRODUCT LABEL..... Product Label Established
 DOT (DOMESTIC SURFACE)

PROPER SHIPPING NAME Other Regulated Substances, Liquid, N.O.S. * SEE NOTE BELOW
 HAZARD CLASS OR DIVISION 9
 UN/NA NUMBER NA3082
 PACKAGING GROUP PG III
 HAZARDOUS SUBSTANCE MDI, (Methylene diphenyl diisocyanate)
 DOT PRODUCT RQ lbs (kgs)..... 33333 lbs (15119.8 kgs)
 HAZARD LABEL(s)..... Class 9
 HAZARD PLACARD(s)..... Class 9

* WHEN IN INDIVIDUAL CONTAINERS OF LESS THAN THE PRODUCT RQ, THIS MATERIAL SHIPS AS NON-REGULATED.
 IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER: Non-Regulated
 ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER: Non-Regulated

SECTION 15: REGULATORY INFORMATION

OSHA STATUS This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
 TSCA STATUS..... On TSCA Inventory
 CERCLA REPORTABLE QUANTITY 5000 lbs for 4,4' - Diphenylmethane Diisocyanate, CAS# 101-68-8.
 SARA TITLE III:
 SECTION 302 EXTREMELY
 HAZARDOUS SUBSTANCES: None
 SECTION 311/312
 HAZARD CATEGORIES Immediate Health Hazard; Delayed Health Hazard; Reactive Hazard
 SECTION 313
 TOXIC CHEMICALS 4,4'-Diphenylmethane Diisocyanate, CAS# 101-68-8; Upper Bound 15%
 RCRA STATUS MDI is not listed as a hazardous waste. To the best of our knowledge, MDI does not meet the criteria of a hazardous waste if discarded in its purchased form. However, under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether a product meets any of the criteria for a hazardous waste. This is because product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics under the new Toxicity Characteristics Leaching Procedure (TCLP) 40 Code of Federal Regulations 261.20-24.

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

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CALIFORNIA PROPOSITION 65

To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects or other reproductive effects.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

NTP Not listed

IARC Not listed

OSHA Not regulated

DISCLAIMER:

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance that the information is current, applicable, and suitable to their circumstances.

COEFFICIENT OF WATER/OIL DIST: N/AV ODOR THRESHOLD: 1-30 ppm

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: 24 C METHOD USED: Not available.

FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: Not available.

UPPER: Not available.

EXTINGUISHING MEDIA:

Foam, CO2, dry chemical, water fog.

SPECIAL FIREFIGHTING PROCEDURES

Respiratory equipment should be worn to avoid inhalation of concentrated vapours. Water should not be used except as a fog to keep nearby containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Handle as a flammable liquid. Vapours form an explosive mixture in air between the upper and lower explosive limits, which, can be ignited by many sources such as pilot lights, open flames, electrical boxes and switches. Vapour may travel along the ground and flashback along vapour trail may occur.

FLAMMABILITY - T.D.G.R. CLASS:

TDG CLASS 3

SENSITIVITY TO IMPACT: NO

AUTO-IGNITION TEMPERATURE:

Not available

SENSITIVITY TO STATIC DISCHARGE: Yes

HAZARDOUS COMBUSTION PRODUCTS:

Carbon Monoxide, Carbon Dioxide and Oxides of Nitrogen.

===== SECTION V - REACTIVITY DATA =====

CHEMICAL STABILITY: STABLE

CONDITIONS TO AVOID:

Excessive heat, poor ventilation, corrosive atmospheres, excessive aging.

INCOMPATIBILITY (MATERIALS TO AVOID)

Alkaline materials, strong acids and oxidizing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Not available.

HAZARDOUS POLYMERIZATION:

Will not occur.

===== SECTION VI - TOXICOLOGICAL DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May cause respiratory irritation, dizziness, breathing difficulty, headaches and loss of co-ordination.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Eye Contact: May cause severe irritation, tearing, redness and blurred vision.
Skin Contact: May cause irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May dry and defat skin causing cracks, irritation and dermatitis.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Contains Methanol which is poisonous if swallowed. May cause blindness, narcosis, headache, nausea and vomiting leading to severe illness.

HEALTH HAZARDS (ACUTE AND CHRONIC)

Acute: Contains Methanol which is poisonous if swallowed. Causes blindness.
Chronic: Repeated exposure by inhalation or absorption may cause systemic poisoning. Prolonged exposure to crystalline silica dust by inhalation may cause delayed lung injury/disease (Silicosis).

SENSITIZING CAPABILITY: Not available.

CARCINOGENICITY: NTP CARCINOGEN:No IARC MONOGRAPHS:Yes OSHA REGULATED:No

Ethylbenzene has been classified by the IARC as a Group 2B substance on the basis of sufficient evidence for carcinogenicity in laboratory animals but inadequate evidence for cancer in humans. In a lifetime inhalation study, exposure to 250 mg/m³ titanium dioxide dust resulted in the development of lung tumors in rats. These tumors occurred only at dust levels that overwhelmed the animals' lung clearance mechanisms and were different from common human lung tumors in both type and location. The relevance of these findings to humans is unknown. The International Agency for Research on Cancer (IARC) has classified Titanium Dioxide as possibly carcinogenic to humans (Group 2B) based on inadequate evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

TERATOGENICITY AND EMBRYOTOXICITY

High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo/fetus. These effects were often at levels toxic to the mother. The significance of these findings to humans has not been determined.

REPRODUCTIVE TOXICITY

Not available.

MUTAGENICITY

Not available.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS

None known.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Anesthesia, respiratory tract irritation, dermatitis, nausea, vomiting.

===== SECTION VII - PREVENTIVE MEASURES =====

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Eliminate ignition sources. Provide good ventilation or wear appropriate breathing apparatus. Absorb small spills with non-flammable absorbent. Contain spills by diking with non-flammable absorbent. Notify environmental agency.

WASTE DISPOSAL METHOD

Reclaim or dispose of through a licensed waste disposal company according to Federal, Provincial and local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Flammable. Store in a cool, dry, well ventilated area away from heat and ignition sources. Keep containers closed when not in use. Avoid breathing vapours or mist and prolonged or repeated contact with skin. Launder contaminated clothing prior to re-use. Use good personal hygiene. Product is a static accumulator. Transfer equipment should be grounded or bonded.

OTHER PRECAUTIONS: Smoking in the area where this material is used must be strictly prohibited.

RESPIRATORY PROTECTION

NIOSH approved for organic vapours and particulate matter.

VENTILATION

General mechanical ventilation or local exhaust should be suitable to keep vapour concentrations below TLV. Ventilation equipment must be explosion proof. Make up air should be supplied to balance air exhausted.

PROTECTIVE GLOVES

Solvent impervious e.g. Viton, Nitrile, PVC.

EYE PROTECTION

Chemical safety glasses, goggles or face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Use impermeable aprons and protective clothing whenever possible to prevent skin contact.

WORK/HYGIENIC PRACTICES

Eye washes and safety showers in the workplace are recommended.

===== SECTION VIII - FIRST AID MEASURES =====

INHALATION OVEREXPOSURE: Move person to fresh air. If breathing stops, apply artificial respiration and seek immediate medical attention.

EYE CONTACT: Flush with water for at least 15 minutes. Seek medical attention.

SKIN CONTACT: Wash thoroughly with mild soap and water.

INGESTION: Do not induce vomiting. Aspiration of solvents in this product can cause inflammation of the lungs.

===== SECTION IX - PREPARATION =====

PREPARED BY: TECHNICAL DEPARTMENT

===== SECTION X - DISCLAIMER =====

To the best of our knowledge, the information contained herein is accurate, obtained from sources believed by Cloverdale Paint Inc. to be accurate. No warranty concerning the accuracy of these sources is made and Cloverdale Paint Inc. will not be held liable for claims relating to use of this information or recommendations.

Location	Product Name	Manufacturer Name	Manufacturer Part #
Welding	3M Scotch-Weld Epoxy Adhesive DP-100 Clear	Tyco Fire Protection Products	2001-2-012 ANa
Welding	Acrysol Body Solvent 16 Oz NW	Sika Canada Inc.	
Welding	Air Tool Oil	Sika Corporation	604270
Welding	Air Tool Oil	Henkel Loctite Canada Inc.	32530
Welding	Bactine Original First Aid Liquid	Praxair Inc.	10001
Welding	Bon Ami Power Foam Glass Cleaner	Sem Products Inc.	39143
Welding	Correction pen (Multi-Purpose)	Henkel Loctite Canada Inc.	135465
Welding	Cream Hardener	Sluyter Company Ltd.	
Welding	Crown 8034 General Purpose Silicone Lubricant	Stockhausen Inc.	
Welding	Dupli-Color Enamel Paint, Gloss Black (OSHA)	Virox Technologies	
Welding	Dupli-Color Enamel Paint, Gloss White (OSHA White)	Air Liquide Canada Inc	
Welding	Dupli-Color Engine Enamel with Ceramic, Aluminum	Lawson Products Inc	P60170
Welding	Dupli-Color Engine Enamel with Ceramic, Aluminum	Honeywell Safety Products	S461
Welding	Dupli-Color Lacquer Paint, Flat Black	CRC Industries	74095
Welding	Dupli-Color Lacquer Paint, Flat Black	Honeywell Safety Products	S468
Welding	Dupli-Color Primer Surfacer, Gray Hot Rod	Kleen-Flo Tumbler Industries Ltd.	4168
Welding	Dupli-Color Primer Surfacer, Gray Hot Rod	LA-CO Industries Inc.- Markal Company	96800
Welding	Envy Foaming Disinfectant Cleaner	Corrosion Control Coating Ltd.	
Welding	ETP Gold Cutting Fluid	Bayer Material Science	

Welding	ETP Gold Cutting Fluid	WD 40 Products Canada Ltd.	
Welding	European Auto Coat	Barnes Group Inc.	BD1108
Welding	European Auto Coat	Diversey Inc.	350000014153
Welding	Everglass quart	J. Walter Company Ltd.	53-G 245
Welding	Extend(R) Rust Treatment	Air Liquide Canada Inc	EXCELARC 18
Welding	Film Forming Lubricant	Air Liquide Canada Inc	AL-J-001-0
Welding	Glance Foaming Glass & Multi-Surface Cleaner	Lawson Products, Inc.	CW1533
Welding	Glass Cleaner	Air Liquide Canada	
Welding	High Build Undercoat 550G. Paintable - 890.9081	Carworx Distribution Inc.	126.061
Welding	Johnsens Brake Parts Cleaner	ITW Evercoat	100340
Welding	Kopr-Kote Thermal Grade	Aervoe Industries Inc	
Welding	LPS 1 (Aerosol)	Kleen-Flo Tumbler Industries Ltd.	022
Welding	Marvel Air Tool Oil	Diversey Lever	
Welding	Metal Glaze	Illinois Tool Works Inc.	100632
Welding	Moovit (Aerosol)	Henkel Corp	37557
Welding	Mopar Multi-Purpose Lube	Balmar, LLC	101G
Welding	One Step Hand Sanitizer	Henkel Loctite Canada Inc.	51831
Welding	PF 7770-3 Truck Line Pliogrip Urethane Adhesive Part A	Johnson Diversey	04553
Welding	Pyro-Chem ABC	Total Solutions	1447
Welding	QD Electronic Cleaner (Aerosol)	Würth Canada Limitée	893-1063
Welding	Rustex Primer Grey	Sherwin Williams	03702
Welding	Rustex Primer Grey	Kleen-Flo Tumbler Industries Ltd.	645
Welding	Stokolan intensive repair	Henkel Loctite Canada Inc.	27141
Welding	TEROSON SI 9160 CL known as SILATECH SILICONE SEALANT IND	OKS Spezialschmierstoffe GmbH	
Welding	Valve Action Paint Marker	Bostik Findley Inc.	

Welding	Way Oil Vistac 68, 229	Belvedere International Incorporated	
Welding	Windex Original Glass Cleaner with Ammonia- D	Allegro Industries	1001, 1001-05, 1001-10

Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	WD-40 Bulk Liquid	WD 40 Products Canada Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Windex Original Glass Cleaner with Ammonia- D	Diversey Inc.	350000014153	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Windshield Washer Fluid WWAF -40 & WWAF -35°C	Nemco Resources	0790	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Xk2	Zep Manufacturing Company of Canada	6745	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	Zep Spirit II Ready-To- Use Detergent Disinfectant	Zep Manufacturing Company of Canada	0679	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Washrack (CWIN91)	ZL-W01	Pentel of America Ltd		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	2-6 Casting Alloy, 15/85 ASTM 15B, 20/80 ASTM 20 B, 25/75 ASTM 30 A B, 30/70, 34/66, 35/65, 45/55 ASTM A B, Pirellie, "E" Alloy	The Canada Metal Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	39143 Trim Black	Sem Products Inc.	39143	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	3M Dynatron Putty-Cote 592, 592T, 593	3M General Office	LB-K100-0587-6	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	3M Panel Bonding Adhesive PN 08115	3M	08115	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	404 Quick Set Instant Adhesive	Henkel Loctite Canada Inc.	135465	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	470 Featherspray	Sluyter Company Ltd.		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	64001571, 64001573, 64001575, 64001577, 64001579, 64001581, 64001670, 64001671,	Radnor Products	64001571, 64001573, 64001575, 64001577, 64001579,	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Abrasive Sanding Discs	KWH Mirka		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Accel Tb Wipes	Virox Technologies		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Acetylene	Air Liquide Canada Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Acrysol Body Solvent 16 Oz NW	Lawson Products Inc	P60170	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Air Tool Oil	CRC Industries	74095	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Air Tool Oil	Kleen-Flo Tumbler Industries Ltd.	4168	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Alloy Steel - HR&CR	Castle Metals/A.M Castle & Co.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Argon (Gas/Liquid)	Air Liquide Canada Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Bactine Original First Aid Liquid	Bayer Material Science		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	BD7-77 Plus Penetrant	Barnes Group Inc.	BD1108	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Bio-Rust	J. Walter Company Ltd.	53-G 245	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Blueshield	Air Liquide Canada Inc	EXCELARC 18	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Blueshield LA 6010; LA Ultra 11; LA 6013; LA 6013P; LA 7014; LA 7024; LA 24-HD	Air Liquide Canada Inc	AL-J-001-0	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Bon Ami Power Foam Glass Cleaner	Diversey Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Bronze	Castle Metals/A.M Castle & Co.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Carbon Arc Electrodes - 1/4"	Lawson Products, Inc.	CW1533	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	carbon dioxide/ALIGAL	Air Liquide Canada		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Carbon Dioxide/Inert Gas Mixture	Praxair Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Carbon Steel - HR&CR	Castle Metals/A.M Castle & Co.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Carbon Steel Electrode Sidergas S6	Sidergas S.R.L.	850001	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Carbon Steel Welding Wire	National Standard Company		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Cavity Protection Spray	Carworx Distribution Inc.	126.061	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Coated Abrasives Flap Discs (Aluminum Oxide, Zirconia, Ceramic Grains, Surface Conditioning Disc, And Semiflex Discs)	Jet Equipment & Tools Ltd		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Coated Finished Flap Discs	Saint-Gobain Abrasives, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Cream Hardener	ITW Evercoat	100340	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Cronacut Eagle 1100	Lawson Products, Inc.	CW1906	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Crown 8034 General Purpose Silicone Lubricant	Aervoe Industries Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Duster	ITW Chemtronics Inc.	ES1617C	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	E3 Tungsten Electrodes	Praxair Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Eco-Care Engine Degreaser	Kleen-Flo Tumbler Industries Ltd.	022	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Envy Foaming Disinfectant Cleaner	Diversey Lever		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Everglass quart	Illinois Tool Works Inc.	100632	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Extend(R) Rust Treatment	Henkel Corp	37557	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Film Forming Lubricant	Balmar, LLC	101G	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Fleetweld 47	The Lincoln Electric Company of Canada, Limited		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Gasket Eliminator 518 Sealant	Henkel Loctite Canada Inc.	51831	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Glance Foaming Glass & Multi-Surface Cleaner	Johnson Diversey	04553	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Graffiti wipes	Total Solutions	1447	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	HHS 5000 500ml	Würth Canada Limitée	893-1063	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	HP Grinding, HP XX, Allsteel XX, Stainless, ALU, Concrete, Pipefitter, Xcavator, Ripcut, Chopcut, Chopcut ALU, Portacut, Zip, Zip Stainless, Zipcut, Zip ALU, Railcut, HP Cup Wheel, Flexcut, Flexcut Milscale	J. Walter Company Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Jetweld 1	The Lincoln Electric Company of Canada, Limited		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Johnsens Brake Parts Cleaner	Technical Chemical Company	2420	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Kopr-Kote Thermal Grade	Jet Lube of Canada Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Krylon Industrial Quik- Mark Solvent-Based Inverted Marking Paint (Fluorescent), Orange	Sherwin Williams	03702	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Leaded Carbon and Alloy Steels	Joseph T. Ryerson & Son, Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Loctite 222Ms Threadlocker Low Strength	Henkel Loctite Canada Inc.	22221	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Loctite 242 Threadlocker	Henkel Loctite Canada Inc.	135355	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Loctite 262 Threadlocker	Henkel Loctite Canada Inc.	26231	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Loctite 271 Threadlocker High Strength Part No. 27141	Henkel Loctite Canada Inc.	27141	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Loctite 290 Threadlocker	Henkel Loctite Canada Inc.	29031	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Low Carbon Steels	Main Manufacturing Products		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Lusin Alro OW 22 O	OKS Spezienschmierstoffe GmbH		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Marvel Air Tool Oil	Marvel Oil Company Inc.	50093	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Moovit (Aerosol)	Lloyds Laboratories Inc.	11008	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Never-Seez Regular Grade Cmpd.	Bostik Findley Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Nickel Based Alloy Steel	Castle Metals/A.M Castle & Co.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	One Step Hand Sanitizer	Belvedere International Incorporated		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Oxygen (Gas)	Air Liquide Canada Inc	7782-44-7	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Personal Respirator Cleaning Pad	Allegro Industries	1001, 1001-05, 1001-10	Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Propane	Air Liquide Canada Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Prostar Anti-Spatter Nozzle Tip Dip	Praxair Inc.	10001	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Prostar D-2	Sidergas SRL		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Prostar E7018; E7018- 1; E7018 AC	Praxair		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Prostar Mild Steel and Low Hydrogen Covered Electrodes	Groupe Esab Canada Inc		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Prostar S-3	Sidergas SPA		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Prostar S-6	Sidergas SPA		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Pyro-Chem ABC	Tyco Fire Protection Products	2001-2-012 ANa	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	QD Electronic Cleaner (Aerosol)	CRC Industries	75012	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Quench Oil	Nemco Resources	0576	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	RG45 - RG60 Welding Rods	Aufhauser Corporation		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Rust PReventive Coating, Black	Dominion Sure Seal Group of Companies	DOM 16P, DOM16Q	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Shielded Metal ARC Welding (Smaw) Electrodes	Hobart Brothers Company		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Sika Cleaner-205	Sika Canada Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Sikaflex 252	Sika Corporation	604270	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	SpeedBonder 325 Structural Adhesive	Henkel Loctite Canada Inc.	32530	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Stainless Specialty Steel	Brunswick Steel	D2A, D2B	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Stainless Steel	Castle Metals/A.M Castle & Co.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Stainless Steel and Alloys of Stainless Steel	Thyssen Krupp Materials NA		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Stainless Steel Products, All Grades	North American Stainless Product		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Stainless Steels	Main Manufacturing Products		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Stokolan intensive repair	Deb		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Super Duster 134 and Super Duster 134 Plus	MG Chemicals Ltd.	402A-140G	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Thoriated Tungsten Electrodes	Osram Sylvania		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Travabon	Stockhausen Inc.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Tungsten	Uniweld Products, Inc		Matched	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Tungsten 2% Thoriated	X-Ergon, A Partsmaster Co Div of NCH	65042000	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Tungsten Electrodes Various Sizes (Puretung, Zirtung, TIG Welding, GTA Welding Electrodes)	Global Tungsten & Powders Corp.	M0101	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Uvex Clear Lens Cleaner	Honeywell Safety Products	S461	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Uvex Clear Lens Cleaning Towelette	Honeywell Safety Products	S468	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Valve Action Paint Marker	LA-CO Industries Inc.- Markal Company	96800	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Vitrified Abrasive Product	Saint Gobain North America	66253109044	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Water Based Rush Inhibitor	Corrosion Control Coating Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	WD-40 Bulk Liquid	WD 40 Products Canada Ltd.		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Windex Original Glass Cleaner with Ammonia- D	Diversey Inc.	350000014153	Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Wrought Aluminum Products	Sapa Extrusions North America		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	ZL-W01	Pentel of America Ltd		Matched	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	41 Cut-Off Wheel	Tyrolit North America Inc.	384142	In Progress	English Canada WHMIS

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Anti-Borax No. 1	Superior Flux & Mfg. Co.		In Progress	English Canada WHMIS
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Aluminum Alloys	Castle Metals/A.M Castle & Co.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Arctec 1080 FC	Arctec Alloys Ltd.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Arctec 207 CNMG (AC- DC)	Arctec Alloys Ltd.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Arctec Unicrom 265 S	Arctec Alloys Ltd.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Bactine Original First Aid Liquid	Bayer Healthcare LLC - Consumer Care		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Brass	Castle Metals/A.M Castle & Co.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Carbon Arc Electrodes - 1/4"	Lawson Products	CW1533	Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	CEC 9598	Eutectic Castolin		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Cert 297 Hface Arc 3/16' 10#	Lawson Products Inc	19478	Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	CERT 7700 STL ARC ACDC 1/8	Premier Farnell Corp.		Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Cert 7700 STL ARC AC- DC 1/8	Premier Farnell Corporation	12200	Deactivated	
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Certanium 701 1/8	Certanium Alloys & Research Co.	12804	Deactivated	

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Certanium 705 1/8 AC- DC	Certanium Alloys & Research Co.	12370	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Certanium 706 1/8 AC- DC	Certanium Alloys & Research Co.	12775	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Certanium 707	Lawson Products	P12565	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Certanium 707 1/8	Certanium Alloys & Research Co.	12610	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Certanium 707 3/32	Certanium Alloys & Research Co.	12565	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Certanium 707 5/32	Certanium Alloys & Research Co.		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Copper - HR&CR	Castle Metals/A.M Castle & Co.		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Cronacast 211	Lawson Products Inc	CW1034	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Cronacut Eagle 1100	Lawson Products	CW1906	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Cronaweld 333	Lawson Products	CW1047	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Crystal Flux, Cmc No. 153	The Canada Metal Company		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Dynabrade Air Lube (10W/NR)	Dynabrade, Inc.	95821, 9842, 95843	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Dynaflux Chem Sharp Chemical Tungsten Sharpener	Dynaflux Inc.	600B	Deactivated

Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	EutecRod 180	Eutectic Castolin		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Inweld HF507	Inweld Canada		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Inweld SX554	Inweld Canada		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Inweld SX555	Inweld Canada		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Kleen-Flo Engine Shampoo	Kleen-Flo Tumbler Industries Ltd.	645	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Leaded Carbon and Alloy Steels	Ryerson Inc		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	PF 500 Non-Paintable Rubberized Undercoat	Pro-Form Products Ltd.	PF 500	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Quench Oil 15	Petro-Canada		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Reflex 700 A	Langeman Manufacturing Ltd.	872-1025	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Reflex 700 B	Langeman Manufacturing Ltd.	983-1030	Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Resinoid Bonded Abrasives	United Abrasives, Inc.		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	Titanium	Castle Metals/A.M Castle & Co.		Deactivated
Transit Dept (8050) > 421 Osborne (8080) > Welding Shop	W1060 (R45) - W1200 (R60) Welding Rods	The Harris Products Group		Deactivated

Transit Dept (8050) > Welcing Electrode/Rod L-TEC Welding & Deactivated
421 Osborne (8080) > Cutting Systems

Welding Shop
Transit Dept (8050) > Xuper 6868 XHD Eutectic Castolin Deactivated
421 Osborne (8080) >

Welding Shop



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Product Use: Electronic cleaner

Manufacturer / Supplier Contact Information:

In United States:

CRC Industries, Inc.

885 Louis Drive

Warminster, PA 18974

www.crcindustries.com

1-215-674-4300 (General)

(800) 521-3168 (Technical)

(800) 272-4620 (Customer Service)

In Canada:

CRC Canada Co.

2-1246 Lorimar Drive

Mississauga, Ontario L5S 1R2

www.crc-canada.ca

1-905-670-2291

In Mexico:

CRC Industries Mexico

Av. Benito Juárez 4055 G

Colonia Orquídea

San Luís Potosí, SLP CP 78394

www.crc-mexico.com

52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

DANGER: Extremely Flammable. Harmful or Fatal if Swallowed. Contents Under Pressure.
Appearance & Odor: Clear, colorless liquid with alcohol odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause mild irritation including stinging and redness, but does not injure eye.

SKIN: Single, brief exposures may cause mild irritation. Frequent or prolonged contact may cause more severe irritation, defatting of the skin, and dermatitis.

INHALATION: High vapor concentrations are irritating to the respiratory tract and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. May cause peripheral nervous system disorder and/or damage.

INGESTION: Low order of toxicity by ingestion. Main hazard is aspiration into the lungs during swallowing or vomiting. Small amounts aspirated into the respiratory system may cause bronchopneumonia or pulmonary adema, possibly progressing to death.

CHRONIC EFFECTS: Overexposure to n-hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs.

TARGET ORGANS: Central nervous system, peripheral nervous system, respiratory system

Medical Conditions Aggravated by Exposure: skin and respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Hexane isomers	64742-49-0 / 107-83-5	85 – 95
n-Hexane	110-54-3	6.6
Ethanol	64-17-5	< 1
Carbon Dioxide	124-38-9	3 – 8

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do NOT induce vomiting. Contact a physician immediately.

Note to Physicians: Treat symptomatically. Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol flammability definitions. (See 16 CFR 1500.3©(6)).

Flash Point: < 0°F / < -17°C (TCC)	Upper Explosive Limit: 9.0
Autoignition Temperature: 489°F / 254°C	Lower Explosive Limit: 1.7

Fire and Explosion Data:

Suitable Extinguishing Media: Class B fire extinguishers, dry chemical, foam or CO₂

Products of Combustion: Fumes, smoke and carbon monoxide

Explosion Hazards: Aerosol containers, when exposed to heat from fire, may build pressure and explode. Vapors may accumulate in a confined space and create a flammable atmosphere.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition. Do not spray water directly on fire; product will float and could be reignited on surface of water.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Methods for Containment & Clean-up: Dike area to contain spill. Remove all sources of ignition. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Use proper grounding and bonding procedures for transferring materials. Do not use product near any source of ignition. Avoid contact with eyes and skin. Avoid breathing vapors. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120°F / 49°C to prevent cans from rupturing.

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

COMPONENT	OSHA		ACGIH		OTHER		UNIT
	TWA	STEL	TWA	STEL	TWA	SOURCE	
Hexane isomers	500(v)	1000(v)	500	1000	NE		ppm
n-Hexane	500	NE	50(s)	NE	NE		ppm
Ethanol	1000	NE	1000	NE	NE		ppm
Carbon Dioxide	5000	30000 (v)	5000	30000	NE		ppm

N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVC, Viton®. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Physical State: liquid

Color: clear, colorless

Odor: alcohol

Odor Threshold: ND

Specific Gravity: 0.66

Initial Boiling Point: 140°F / 60°C

Freezing Point: < -76°F / < -60°C

Vapor Pressure: 175 mmHg @ 68°F / 20°C

Vapor Density: > 1 (air = 1)

Evaporation Rate: very fast

Solubility: negligible in water

Coefficient of water/oil distribution: ND

pH: NA

Volatile Organic Compounds: wt %: 95 g/L: 627 lbs./gal: 5.2

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Sources of ignition, temperature extremes

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: Oxides of carbon

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Hexane isomers	> 15,000 mg/kg	> 2000 mg/kg	No data
n-Hexane	28,710 mg/kg	3000 mg/kg	48,000 ppm/4H
Ethanol	760 mg/kg	No data	20,000 ppm/10H
Carbon Dioxide	No data	No data	470,000 ppm/30M

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Hexane isomers	No	No	No	No	Unknown
n-Hexane	No	No	No	E, S & R (moderate)	Unknown
Ethanol	No	No	No	E (mild) / S (moderate)	Unknown
Carbon Dioxide	No	No	No	No	No

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available

Teratogenicity: No information available

Mutagenicity: No information available

Synergistic Effects: No information available

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: n-hexane - 48 Hr EC50 water flea: 3.87 mg/L
96 Hr LC50 Lepomis macrochirus: 4.12 mg/L
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001. (See 40 CFR Part 261.20 – 261.33)
Any liquid product should be managed as a hazardous waste. Empty aerosol containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): UN1950, Aerosols, flammable, 2.1, Limited Quantity**

ICAO/IATA (air): UN1950, Aerosols, flammable, 2.1, Limited Quantity

IMO/IMDG (water): UN1950, Aerosols, 2.1, Limited Quantity

Special Provisions: **This product can be classified and labeled as 'Consumer Commodity, ORM-D' for domestic ground shipping until December 31, 2020.
If shipping as limited quantity by ground, note that shipping papers are not required.

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: n-hexane (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard	Yes
Reactive Hazard	No
Release of Pressure	Yes

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Acute Health Hazard	Yes
Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
n-hexane (6.6%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): n-hexane

Occupational Safety and Health Administration:

This product is regulated by the Hazard Communications Standard.

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: NA

State Right to Know:

New Jersey: 75-83-2, 110-54-3, 79-29-8, 64-17-5, 124-38-9

Pennsylvania: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 64-17-5, 124-38-9

Massachusetts: 107-83-5, 75-83-2, 110-54-3, 79-29-8, 64-17-5, 124-38-9

Rhode Island : 110-54-3, 64-17-5, 124-38-9

Canadian Regulations:

Controlled Products Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: A, B5, D2B

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

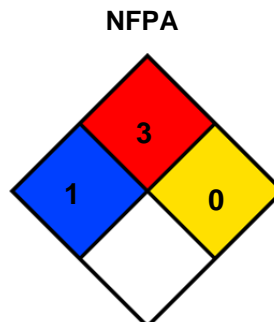
Additional Regulatory Information: None

Product Name: QD™ Electronic Cleaner (aerosol)

Product Number (s): 75012, 75102

Section 16: Other Information

HMIS® (II)	
Health:	1
Flammability:	3
Reactivity:	0
PPE:	B



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 985
Revision Date: 07/23/2014

Changes since last revision: Section 14: Transport Information

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose

NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System

REFLEX 700 A

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: REFLEX 700 Component A
SYNONYMS: Modified Diphenylmethane Diisocyanate (MDI)
PRODUCT CODES: 872-1025

MANUFACTURER: Langeman Manufacturing Ltd.
ADDRESS: 56 Oak Street East
Leamington, ON, N8H 2C2
EMERGENCY PHONE: Chemtrec: 1-800-424-9300
OTHER CALLS: 1-519-326-6104
FAX PHONE: 1-519-326-4188

CHEMICAL NAME: Diphenylmethane Diisocyanate (MDI) Prepolymer
CHEMICAL FAMILY: Aromatic Isocyanate Prepolymer
CHEMICAL FORMULA: not applicable

PRODUCT USE: Polyurethane Coating for Truck Bedliners.
PREPARED BY: AdK

SECTION 1 NOTES:
CAS No. 39420-98-9

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

Polyurethane Prepolymer: Proprietary formulation based on polyurethane technology.

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

May cause lung damage; May cause eye, skin, and respiratory tract irritation; Harmful if inhaled; May cause allergic respiratory reaction; May cause allergic skin reaction; Toxic gases are given off during burning or thermal decomposition.

ROUTES OF ENTRY:

Skin: Contact from liquid and aerosols (spray application).

Inhalation: Although MDI is low in volatility, an inhalation hazard can exist from MDI aerosols or vapors formed during heating, foaming or spraying.

POTENTIAL HEALTH EFFECTS

Acute Skin Contact: Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

Acute Inhalation: MDI vapors or mist at concentrations above the TLV can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyper reactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms (e.g., fever, chills) has also been reported. These symptoms can be delayed up to several hours after exposure.

Acute Eye Contact: Liquid, aerosols or vapors are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible. See First Aid Measures for treatment.

Acute Ingestion: Can result in irritation and corrosive action in the mouth, stomach tissue and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea.

REFLEX 700 A

CHRONIC HEALTH HAZARDS:

Chronic Skin Contact: Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapors. Animal tests have indicated that respiratory sensitization can result from skin contact with MDI. This data reinforces the need to prevent direct skin contact with MDI. (See Toxicological Information, SENSITIZATION.)

Chronic Inhalation: As a result of previous repeated overexposures or a single large dose, certain individuals develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed (up to several hours after exposure). Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Overexposure to isocyanates has also been reported to cause lung damage (including decrease in lung function) which may be permanent. Sensitization can either be temporary or permanent.

Chronic Eye Contact: None Found

Chronic Ingestion: None Found

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyper reactivity), skin allergies, eczema.

CARCINOGENICITY:

Neither MDI nor polymeric MDI are listed by the NTP, IARC or regulated by OSHA as carcinogens.

SECTION 4: FIRST AID MEASURES

Eyes: Flush with copious amount of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Refer individual to physician or ophthalmologist for immediate follow-up.

Skin: Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or persists after the area is washed.

Inhalation: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult physician should this occur.

Ingestion: DO NOT INDUCE VOMITING. Give 1 to 2 cups of milk or water to drink. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult physician.

Note to Physician:

Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision.

Skin: This compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn. Ingestion. Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound.

Respiratory: This compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate.

SECTION 5: FIRE-FIGHTING MEASURES**Flammability Limits:**

Upper Explosive Limit: (UEL) (%): Not Established

Lower Explosive Limit (LEL) (%): Not Established

Auto-Ignition Temperature: ~860 F (460 C) (similar material)

Flash Point: 421.0 °F (216.1 °C) Pensky-Martens Closed Cup (ASTM D-93)

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Extinguishing Media: Dry Chemical; Carbon Dioxide; Foam; Water spray for large fires.

Special Firefighting Procedures: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. (See Stability and Reactivity). At temperatures greater than 400 °F (204 °C), polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers.

Unusual Fire and Explosion Hazards: None reported for this product.

Health: 2 Flammability: 1 Reactivity: 1

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures:

Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during clean-up. (See Employee Protection Recommendations). Major Spill: Call Langeman Manufacturing at 519-326-6104. If transportation spill, call CHEMTREC 800-424-9300. If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, container for disposal. Minor Spill: Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80%) with non-ionic surfactant Tergitol TMN-10 (20%), or; water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO₂ escape. Clean-up: Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

SECTION 7: HANDLING AND STORAGE

Handling and Storage: Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Exposure to vapors of heated MDI can be extremely dangerous. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard.

Storage Temperature: 60 °F (15 °C)/95 °F (35 °C)

Special Sensitivity: If container is exposed to high heat, 400 °F (204 °C) it can be pressurized and possibly rupture. MDI reacts slowly with water to form CO₂ gas. This gas can cause sealed containers to expand and possibly rupture.

Shelf Life: 6 months @ 77 °F (25 °C)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: : Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heated or spray applied. Standard reference sources regarding industrial ventilation (i.e., ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation.

Eye Protection: Liquid chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be used in combination with a full face-shield.

Skin Protection: Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum. Ventilation Procedures

Respiratory Equipment: Concentrations greater than the TLV can occur when MDI is sprayed, heated or used in a poorly ventilated area. In such cases, or whenever concentration: of MDI exceed the TLV or are not known, respiratory protection must be worn. A supplied air respirator (either positive pressure or continuous flow type) is required. In an emergency situation, a self-contained breathing apparatus may be used. MDI has poor warning properties, since the concentration at which MDI can be smelled is substantially higher than the maximum exposure limit. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Monitoring: Isocyanate exposure levels must be monitored. Monitoring of airborne isocyanates in the breathing zone of individuals should become part of the overall employee exposure characterization program. Monitoring techniques have been developed by NIOSH, and OSHA.

Medical Surveillance: Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should include pre employment and periodic medical examinations with pulmonary function tests (FEV₁, FVC a: a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory disease or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

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Additional Protective Measures: Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Yellowing Liquid
ODOR: Slightly musty odor
PH: Not Applicable
BOILING POINT: 406 °F (208 °C) @ 5 mmHg for MDI
MELTING/FREEZING POINT: Range 50 °F (10 °C) for MDI to 60 °F (16 °C)
VISCOSITY: Not Applicable
SOLUBILITY IN WATER: Not soluble. Reacts slowly with water to liberate CO₂ gas.
SPECIFIC GRAVITY: 1.090 @ 77 °F (25 °C)
BULK DENSITY: 9.10 lbs/gal
% VOLATILE BY VOLUME: 0%
VAPOR PRESSURE: Less than 10-5 mmHg @ 77 °F (25 °C) for MDI
VAPOR DENSITY 8.5 (MDI) (Air =1)

SECTION 10: STABILITY AND REACTIVITY

STABLE X

UNSTABLE

Stability: Stable under normal circumstances.

Hazardous Polymerization:

May occur; Contact with moisture, other materials which react with isocyanates, temperatures above 400 °F (204 °C), may cause polymerization.

Incompatibility (Materials to avoid): Water, amines, strong bases, alcohols, metal compounds and surface active materials.

Instability Conditions: Contamination with water.

Decomposition Conditions: By high heat and fire: carbon dioxide, carbon monoxide, oxides of nitrogen, HCN, HDI and other unknown aliphatic fragments.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity Data for: Diphenylmethane Diisocyanate (Monomeric and Polymeric)

Acute Toxicity:

ORAL LD50 Greater than 15,800 mg/kg (Rat)
DERHAL LD50..... Greater 5010 but less than 7,940 mg/kg (Rabbit)
INHALATION LC50..... The 4-hour LC50 for polymeric MDI in rats ranges from 370 to 490 mg/m³. The LC50 for monomeric MDI was estimated to be between 172 and 187 mg/m³.
EYE EFFECTS Slight to moderate irritation.
SKIN EFFECTS Slight to moderate irritation.
SENSITIZATION MDI has been shown to produce dermal sensitization in laboratory animals. Evidence of respiratory sensitization has also been observed in guinea pigs. In addition, there is some evidence suggestive of cross-sensitization between different types of diisocyanates.

SECTION 12: ECOLOGICAL INFORMATION

Ecology Data for: Diphenylmethane Diisocyanate (Monomeric and Polymeric)

Aquatic Toxicity: LC50 - 24 hr. (static): Greater than 500 mg/liter for Daphnia magna, Limnea Stagnalis, and Zebra fish (Brachydanio rerio) for both polymeric and monomeric MDI.

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.

Empty Container Regulations: Empty containers must be handled with care due to product residue. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. **DO NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.** (See Fire Fighting Measures and Stability & Reactivity). Gases may be highly toxic.

Transportation Emergencies: Langeman Mfg Ltd. requires that CHEMTREC be immediately notified (800-424-9300) when this product is unintentionally released from its container during its course of distribution, regardless of the amount released. Distribution includes transportation, storage incidental to transportation, loading and unloading. Such notification must be immediate and made by the person having knowledge of the release.

SECTION 14: TRANSPORT INFORMATION

TECHNICAL SHIPPING NAME Methylene diphenyl diisocyanate
 FREIGHT CLASS BULK..... Methylene diphenyl diisocyanate
 FREIGHT CLASS PACKAGE..... Chemicals, NOI (Isocyanate), NMFC 60000
 PRODUCT LABEL..... Product Label Established
 DOT (DOMESTIC SURFACE)

PROPER SHIPPING NAME Other Regulated Substances, Liquid, N.O.S. * SEE NOTE BELOW
 HAZARD CLASS OR DIVISION 9
 UN/NA NUMBER NA3082
 PACKAGING GROUP PG III
 HAZARDOUS SUBSTANCE MDI, (Methylene diphenyl diisocyanate)
 DOT PRODUCT RQ lbs (kgs)..... 33333 lbs (15119.8 kgs)
 HAZARD LABEL(s)..... Class 9
 HAZARD PLACARD(s)..... Class 9

* WHEN IN INDIVIDUAL CONTAINERS OF LESS THAN THE PRODUCT RQ, THIS MATERIAL SHIPS AS NON-REGULATED.
 IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER: Non-Regulated
 ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER: Non-Regulated

SECTION 15: REGULATORY INFORMATION

OSHA STATUS..... This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.
 TSCA STATUS..... On TSCA Inventory
 CERCLA REPORTABLE QUANTITY 5000 lbs for 4,4' - Diphenylmethane Diisocyanate, CAS# 101-68-8.
 SARA TITLE III:
 SECTION 302 EXTREMELY
 HAZARDOUS SUBSTANCES: None
 SECTION 311/312
 HAZARD CATEGORIES Immediate Health Hazard; Delayed Health Hazard; Reactive Hazard
 SECTION 313
 TOXIC CHEMICALS 4,4'-Diphenylmethane Diisocyanate, CAS# 101-68-8; Upper Bound 15%
 RCRA STATUS..... MDI is not listed as a hazardous waste. To the best of our knowledge, MDI does not meet the criteria of a hazardous waste if discarded in its purchased form. However, under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether a product meets any of the criteria for a hazardous waste. This is because product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics under the new Toxicity Characteristics Leaching Procedure (TCLP) 40 Code of Federal Regulations 261.20-24.

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

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CALIFORNIA PROPOSITION 65

To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects or other reproductive effects.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

NTP Not listed

IARC Not listed

OSHA Not regulated

DISCLAIMER:

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance that the information is current, applicable, and suitable to their circumstances.

M A T E R I A L S A F E T Y D A T A S H E E T

71024

Page 1

===== SECTION I - PRODUCT IDENTIFICATION =====

PRODUCT NAME: RUSTEX PRIMER GREY HMIS CODES: H F R P
 PRODUCT IDENTIFIER: 71024 2 3 0 G
 *
 PRODUCT USE: General purpose coating.
 PRODUCT IDENTIFICATION NUMBER: UN1263
 WHMIS INFO: B2, D1B, D2A, D2B

MANUFACTURER'S NAME: Cloverdale Paint Inc
 ADDRESS : 6950 King George Boulevard
 Surrey, BC,
 EMERGENCY PHONE : 613-996-6666 REVISION DATE: 28-May-14
 INFORMATION PHONE : 604-596-6261
 ABBREVIATIONS : N/AP - NOT APPLICABLE N/AV - NOT AVAILABLE

===== SECTION II - HAZARDOUS INGREDIENTS =====

REPORTABLE COMPONENTS	CAS NUMBER	WEIGHT PERCENT	O.E.L.
*XYLENE	1330-20-7	15-40	ACGIH TLV: 100 PPM LD50: ORAL:4g/kg rat, LC50: 6500 ppm/4H(RAT) LD50: SKIN:5000 mg/kg(RABBIT)
TITANIUM DIOXIDE	13463-67-7	7-13	TLV (ACGIH): 10 mg/m3, total dust, 8 hr. TWA
ETHYLBENZENE	100-41-4	5-10	TWA: 100ppm LD50 (ORAL-RAT): 3500 mg/kg LD50: SKIN:17800 mg/kg(RABBIT)
HIGH FLASH NAPHTHA	MIXTURE	1-5	ACGIH TLV: 50 ppm LD50:ORAL:>8.0 ml/kg(RAT), LC50:>10200 mg/m3/4H(RAT)
METHANOL	67-56-1	0.1-1	ACGIH TLV: 200 ppm LD50: ORAL:5628 mg/kg(RAT), LC50: 64000 ppm/4H(RAT)

*** No toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372 are present. ***

===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING POINT: 65.0 deg C SPECIFIC GRAVITY (H2O=1): 1.18
 VAPOR DENSITY: Heavier than air. PHYSICAL STATE: Liquid.
 EVAPORATION RATE: Slower than n-Butyl Acetate.
 COATING V.O.C.: 571 g/l (before thinning)
 SOLUBILITY IN WATER: Insoluble.
 APPEARANCE AND ODOR: Moderately thick liquid; Aromatic odor.
 FREEZING POINT: Not available. pH: Not available.

COEFFICIENT OF WATER/OIL DIST: N/AV ODOR THRESHOLD: 1-30 ppm

===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: 24 C METHOD USED: Not available.

FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: Not available.

UPPER: Not available.

EXTINGUISHING MEDIA:

Foam, CO2, dry chemical, water fog.

SPECIAL FIREFIGHTING PROCEDURES

Respiratory equipment should be worn to avoid inhalation of concentrated vapours. Water should not be used except as a fog to keep nearby containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Handle as a flammable liquid. Vapours form an explosive mixture in air between the upper and lower explosive limits, which, can be ignited by many sources such as pilot lights, open flames, electrical boxes and switches. Vapour may travel along the ground and flashback along vapour trail may occur.

FLAMMABILITY - T.D.G.R. CLASS:

TDG CLASS 3

SENSITIVITY TO IMPACT: NO

AUTO-IGNITION TEMPERATURE:

Not available

SENSITIVITY TO STATIC DISCHARGE: Yes

HAZARDOUS COMBUSTION PRODUCTS:

Carbon Monoxide, Carbon Dioxide and Oxides of Nitrogen.

===== SECTION V - REACTIVITY DATA =====

CHEMICAL STABILITY: STABLE

CONDITIONS TO AVOID:

Excessive heat, poor ventilation, corrosive atmospheres, excessive aging.

INCOMPATIBILITY (MATERIALS TO AVOID)

Alkaline materials, strong acids and oxidizing agents.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Not available.

HAZARDOUS POLYMERIZATION:

Will not occur.

===== SECTION VI - TOXICOLOGICAL DATA =====

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May cause respiratory irritation, dizziness, breathing difficulty, headaches and loss of co-ordination.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Eye Contact: May cause severe irritation, tearing, redness and blurred vision.
Skin Contact: May cause irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

May dry and defat skin causing cracks, irritation and dermatitis.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE

Contains Methanol which is poisonous if swallowed. May cause blindness, narcosis, headache, nausea and vomiting leading to severe illness.

HEALTH HAZARDS (ACUTE AND CHRONIC)

Acute: Contains Methanol which is poisonous if swallowed. Causes blindness.
Chronic: Repeated exposure by inhalation or absorption may cause systemic poisoning. Prolonged exposure to crystalline silica dust by inhalation may cause delayed lung injury/disease (Silicosis).

SENSITIZING CAPABILITY: Not available.

CARCINOGENICITY: NTP CARCINOGEN:No IARC MONOGRAPHS:Yes OSHA REGULATED:No

Ethylbenzene has been classified by the IARC as a Group 2B substance on the basis of sufficient evidence for carcinogenicity in laboratory animals but inadequate evidence for cancer in humans. In a lifetime inhalation study, exposure to 250 mg/m³ titanium dioxide dust resulted in the development of lung tumors in rats. These tumors occurred only at dust levels that overwhelmed the animals' lung clearance mechanisms and were different from common human lung tumors in both type and location. The relevance of these findings to humans is unknown. The International Agency for Research on Cancer (IARC) has classified Titanium Dioxide as possibly carcinogenic to humans (Group 2B) based on inadequate evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

TERATOGENICITY AND EMBRYOTOXICITY

High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo/fetus. These effects were often at levels toxic to the mother. The significance of these findings to humans has not been determined.

REPRODUCTIVE TOXICITY

Not available.

MUTAGENICITY

Not available.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS

None known.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Anesthesia, respiratory tract irritation, dermatitis, nausea, vomiting.

===== SECTION VII - PREVENTIVE MEASURES =====**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Eliminate ignition sources. Provide good ventilation or wear appropriate breathing apparatus. Absorb small spills with non-flammable absorbent. Contain spills by diking with non-flammable absorbent. Notify environmental agency.

WASTE DISPOSAL METHOD

Reclaim or dispose of through a licensed waste disposal company according to Federal, Provincial and local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Flammable. Store in a cool, dry, well ventilated area away from heat and ignition sources. Keep containers closed when not in use. Avoid breathing vapours or mist and prolonged or repeated contact with skin. Launder contaminated clothing prior to re-use. Use good personal hygiene. Product is a static accumulator. Transfer equipment should be grounded or bonded.

OTHER PRECAUTIONS: Smoking in the area where this material is used must be strictly prohibited.

RESPIRATORY PROTECTION

NIOSH approved for organic vapours and particulate matter.

VENTILATION

General mechanical ventilation or local exhaust should be suitable to keep vapour concentrations below TLV. Ventilation equipment must be explosion proof. Make up air should be supplied to balance air exhausted.

PROTECTIVE GLOVES

Solvent impervious e.g. Viton, Nitrile, PVC.

EYE PROTECTION

Chemical safety glasses, goggles or face shield.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Use impermeable aprons and protective clothing whenever possible to prevent skin contact.

WORK/HYGIENIC PRACTICES

Eye washes and safety showers in the workplace are recommended.

===== SECTION VIII - FIRST AID MEASURES =====

INHALATION OVEREXPOSURE: Move person to fresh air. If breathing stops, apply artificial respiration and seek immediate medical attention.

EYE CONTACT: Flush with water for at least 15 minutes. Seek medical attention.

SKIN CONTACT: Wash thoroughly with mild soap and water.

INGESTION: Do not induce vomiting. Aspiration of solvents in this product can cause inflammation of the lungs.

===== SECTION IX - PREPARATION =====

PREPARED BY: TECHNICAL DEPARTMENT

===== SECTION X - DISCLAIMER =====

To the best of our knowledge, the information contained herein is accurate, obtained from sources believed by Cloverdale Paint Inc. to be accurate. No warranty concerning the accuracy of these sources is made and Cloverdale Paint Inc. will not be held liable for claims relating to use of this information or recommendations.



SECTION I: PRODUCT INFORMATION

PRODUCT: **Sikaflex®-252** REVISION DATE: February 24th, 2015

USAGE: ONE COMPONENT URETHANE BASED ADHESIVE / SEALANT

SUPPLIER: SIKA CANADA INC.
601, avenue Delmar
Pointe Claire, QC
H9R 4A9

EMERGENCY TELEPHONE NUMBER: CANUTEC (collect) (613) 996-6666

TDG CLASSIFICATION: Not Regulated WHMIS Classification: B3, D2A
UN NUMBER: Not Established Class: Not Applicable
Packaging Group: Not Applicable

SECTION II: HAZARDOUS INGREDIENTS

Hazardous ingredients	%	T.L.V.	# CAS	LD ₅₀ (mg/kg) (route, species)	LC ₅₀ (species, route)
XYLENE	1-5	ACGIH 100ppm (TWA) 150ppm (STEL)	1330-20-7	4300 (oral, rat)	6350ppmh/4H
POLYOL AND ISOCYANATE PREPOLYMER	30-60	Not Established	Not Available	Not Established	Not Established
AMORPHOUS SILICA	5-10	Not Available	7631-86-9	Not Available	Not Available
METHYLENE BIS PHENYL ISOCYANATE	0,1-1,0	ACGIH 0,005 ppm	101-68-8	31 600 (oral, rat)	369mg/m ³ /4H (rat)

SECTION III: PHYSICAL CHARACTERISTICS

Physical State:	Paste	Boiling Point:	Not Established
Appearance and Odor:	Various color, odorless	Freezing Point:	Not Established
Odor Threshold:	Not Established	Density:	1,21 g/ml
Evaporation Rate:	Not Established	Water Solubility:	Not Established
Vapor Density:	Not Established	pH:	Not Established
Vapor Pressure:	Not Established	% volatile:	Not Established
		Water/Oil Distribution:	Not Established



PRODUCT: Sikaflex®-252

SECTION IV: FIRE AND EXPLOSION HAZARDS

Flammability:	No	TDG inflammability Class:	Not Regulated
If Yes, under what conditions:		Flammable upper limits (% vol.):	Not Established
Extinguishing methods:	Foam, dry chemical products, CO ₂ , water for large flames.	Flammable lower limits (% vol.):	Not Established
Special Methods:	Firefighters must wear complete protective clothing with respiratory equipment and they must protect any exposed skin. Heated isocyanates react strongly with water.	Flash Point (method used):	> 80°C (TCC)
		Auto-ignition temperature:	Not Established
		Dangerous Combustion Products:	Carbon oxides, Nitrogen oxide.
		Protect from mechanical impact:	No
		Protect from static discharge:	No

SECTION V: REACTIVITY DATA

Chemical stability:	Yes	Dangerous decomposition products:	Carbon oxides, Nitrogen oxide,
If not, under what conditions:			
Incompatibility with other material:	Yes	Polymerization Risks:	No
If Yes, which ones:	Acid, strong oxidizer, amine.		



PRODUCT: Sikaflex®-252

SECTION VI: TOXIC PROPERTIES

ROUTE OF ENTRY / CONTACT

Eyes: Irritating.

Skin: Irritating. Contact may result in dermatitis, allergic reactions, and sensitization.

Inhalation: Vapor or mist from this product may cause irritation.

Ingestion: May cause nausea, vomiting, fainting, diarrhea, lung damage, G.I. system disorder, constipation, ulcers.

Over exposure may cause breathing difficulties, sensitization, headaches, nausea, vomiting. May aggravate respiratory, skin, eye, lung problems and allergies.

If the product is applied according to the manufacturer, none of these symptoms should be encountered.

A person who is sensitized to isocyanate may have a reaction with a level of isocyanate well below the T.L.V.

Xylene is a central nervous system depressor and in rare cases, may cause a sensitization of the heart muscle causing arrhythmia.

Carcinogenicity: Not Established

Toxic effects on reproduction: Not Established

Teratogenicity: Xylene is classified as a development toxicant (Embryo toxin)

Mutagenicity: Not Established

Product with synergistic effects: Not Established

An acute or chronic exposure will increase the toxic effects mentioned in this section and may aggravate respiratory problems. An over exposure may cause death.



PRODUCT: Sikaflex®-252

SECTION VII: PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT

Gloves: Use chemical resistant gloves.

Respiratory equipment: Use a NIOSH approved respirator if the TLV is exceeded.

Eyes: Full face mask or safety glasses

Shoes: Leather

Clothing: Rubber Apron

Other: Eye wash station, shower

OTHERS

Ventilation: Sufficient ventilation required

Procedure in case of leaks: Absorb with sand or other absorbent material.

Handling and Equipment methods: Avoid skin, eye and clothing contact

Warehouse Requirements: Keep all containers closed in a cool, dry and well ventilated area. Keep away from heat and open flame.

Special Shipping Instructions: See TDG class

Waste Disposal: Dispose of sand and rinse water according to municipal, provincial or federal laws for disposal of chemical.



PRODUCT: Sikaflex®-252

SECTION VIII: FIRST AID

- Skin : Remove contaminated clothing and shoes.
Wash immediately with plenty of water.
Wash clothing before re-wearing.
Consult a physician if required.
- Eyes : Rinse eyes immediately with plenty of water for several minutes, while holding eyelids wide open, to ensure a proper wash.
See a physician immediately.
- Inhalation : In the case of overexposure, evacuate to fresh air.
Consult a physician if required.
- Ingestion : Drink plenty of water. Do not induce vomiting.
Do not give anything by mouth to an unconscious person.
See a physician immediately.

SECTION IX: PREPARATION INFORMATION

Prepared By: R & D of Sika Canada Inc.
 Telephone #: (514) 697-2610
 Fax #: (514) 694-2792

Notice To Reader

The information contained in this Material Safety Data Sheet applies only to the actual Sika Canada product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Material Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section IX of this MSDS.

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All sales of Sika products are subject to its current terms and conditions of sale available at www.sika.ca or 514-697-2610.



SAFETY DATA SHEET

Stokolan® intensive repair

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product name Stokolan® intensive repair

Product number 99036413,99036414,99036415,99036416,99042843,99036417,99036418,99036419,99036420

Internal identification M 961

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Hand Cream

1.3. Details of the supplier of the safety data sheet

Supplier Deb Ltd
Denby Hall Way
Denby
Derbyshire
DE5 8JZ
Main Tel. 01773 855100
Technical Tel 01773 855105
reach@deb.co.uk

1.4. Emergency telephone number

Emergency telephone National Poisons Information Service (UK) 0844 8920111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Classification (67/548/EEC or -
1999/45/EC)

2.2. Label elements

Hazard statements NC Not Classified

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Stokolan® intensive repair

INCI	AQUA (WATER) VITIS VINIFERA SEED OIL CAPRYLIC/CAPRIC TRIGLYCERIDE DICAPRYLY ETHER POLYGLYCERYL-4 DIISOSTEARATE/POLYHYDROXYSTEARATE/SEBACATE ISOPROPYL PALMITATE UREA SORBITOL ZINC SULFATE GINKGO BILOBA LEAF EXTRACT ALLANTOIN TOCOPHEROL CERA ALBA GLYCERIN CHOLESTEROL CERAMIDE NP CERAMIDE NS CERAMIDE EOS CERAMIDE EOP CERAMIDE AP CAPROOYL PHYTOSPHINGOSINE CAPROOYL SPHINGOSINE HYDROGENATED CASTOR OIL CERA MICROCRISTALLINA/PARAFFIN CETYL ALCOHOL BEHENIC ACID CETEARETH-25 PHENOXYETHANOL BENZOIC ACID DEHYDROACETIC ACID ETHYLHEXYLGLYCERIN TRISODIUM DICARBOXYMETHYL ALANINATE ALCOHOL PROPYLENE GLYCOL ASCORBYL PALMITATE ASCORBIC ACID CITRIC ACID LACTIC ACID PARFUM (FRAGRANCE)
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SECTION 4: First aid measures**4.1. Description of first aid measures**

Inhalation	Not relevant. Unlikely route of exposure as the product does not contain volatile substances.
Ingestion	Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
Skin contact	Not relevant.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.

Stokolan® intensive repair

Skin contact Does not decompose when used and stored as recommended.

Eye contact May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor No specific recommendations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products No known hazardous decomposition products.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes.

6.2. Environmental precautions

Environmental precautions Not considered to be a significant hazard due to the small quantities used.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Flush away spillage with plenty of water. Avoid contamination of ponds or watercourses with washing down water. Absorb spillage with non-combustible, absorbent material. Do not discharge into drains or watercourses or onto the ground.

6.4. Reference to other sections

Reference to other sections For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in closed original container at temperatures between 0°C and 30°C.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

8.2. Exposure controls

Appropriate engineering controls Not relevant.

Stokolan® intensive repair

Eye/face protection	Not relevant.
Hygiene measures	Not relevant.
Respiratory protection	No specific recommendations.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
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9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	None known.
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10.4. Conditions to avoid

Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
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10.5. Incompatible materials

Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended.
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SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Inhalation	No specific health hazards known.
Ingestion	May cause discomfort if swallowed.
Skin contact	Skin irritation should not occur when used as recommended.
Eye contact	May cause temporary eye irritation.

SECTION 12: Ecological Information

Ecotoxicity	Not regarded as dangerous for the environment.
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12.1. Toxicity

12.2. Persistence and degradability

Persistence and degradability	The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.
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Stokolan® intensive repair

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

Road transport notes Not classified.

Rail transport notes Not classified.

Sea transport notes Not classified.

Air transport notes Not classified.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

Stokolan® intensive repair**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU legislation This is a cosmetic product regulated by Regulation EC no 1223/2009 (as amended) and is thus exempt from the Safety Data Sheet requirements of Regulation EC no 453/2010. It is also exempt from the classification and labelling rules of the Classification, Labelling and Packaging Regulation (EC) No 1272/2008.

Water hazard classification WGK 1

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	Revision of information NOTE: Lines within the margin indicate significant changes from the previous revision.
Revision date	18/06/2015
Revision	1
SDS number	21025

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



Revision Number: 005.3

Issue date: 03/17/2016

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	TEROSON SI 9160 CL known as SILATECH® SILICONE SEALANT IND	IDH number:	475372
Product type:	Silicone	Item number:	32389
		Region:	Canada
Company address:	Contact information:		
Henkel Corporation	Telephone: 905.814.6511		
2515 Meadowpine Boulevard	MEDICAL EMERGENCY Phone: Poison Control Center		
Mississauga, Ontario L5N 6C3	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Paste	WHMIS hazard class:	D.2.B
Color:	Translucent		
Odor:	Acetic acid		
WARNING:	<p>PROLONGED OR REPEATED CONTACT WITH UNCURED SEALANT MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. REPEATED OR PROLONGED CONTACT MAY CAUSE ALLERGIC SKIN REACTION.</p>		

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Acetic acid produced during cure may irritate eyes, nose and throat. When heated to temperatures exceeding 300° F (150° C) in the presence of air, silicones may form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Vapors irritate the eyes, nose and throat. Safe handling conditions may be maintained by keeping formaldehyde vapor concentrations below the OSHA permissible limit.

Skin contact: Prolonged or repeated contact with uncured sealant may cause skin irritation.

Eye contact: Vapors may irritate eyes. Contact with eyes will cause irritation.

Ingestion: Not expected under normal conditions of use. Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Silicone Resin	Proprietary	60 - 100
Distillates (petroleum), hydrotreated middle	64742-46-7	10 - 30
Silicon dioxide	7631-86-9	10 - 30
Triacetoxyethylsilane	17689-77-9	1 - 5
Methylsilanetriyl triacetate	4253-34-3	1 - 5

IDH number: 475372

Product name: TEROSON SI 9160 CL known as SILATECH® SILICONE SEALANT IND

Exposure to moisture during cure will release 1-5% acetic acid.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
Skin contact:	Wipe off paste with paper towel or cloth. Wash with soap and water. If symptoms develop and persist, get medical attention.
Eye contact:	Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
Ingestion:	Do not induce vomiting. If a person feels unwell or symptoms of skin irritation appear, consult a physician.

5. FIRE FIGHTING MEASURES

Flash point:	> 93 °C (> 199.4 °F)
Autoignition temperature:	Not available.
Flammable/Explosive limits - lower:	4 % Upper/lower explosion limit
Flammable/Explosive limits - upper:	19.9 % Upper/lower explosion limit
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special firefighting procedures:	None
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Formaldehyde. Silica mist. Acrid smoke and fumes.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Scrape up as much material as possible. Spilled material will solidify. Store in a partly filled, closed container until disposal. Maintain good ventilation for large spills.

7. HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Do not handle contact lenses until all sealant has been removed from hands. Residual sealant may transfer to lenses and cause eye irritation.
Storage:	Store in a dry area below 90° F. Keep container closed.

For information on product shelf life contact Henkel Canada Customer Service at 800-263-5043.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Silicone Resin	None	None	None	None
Distillates (petroleum), hydrotreated middle	5 mg/m3 TWA Inhalable fraction.	5 mg/m3 PEL Mist.	None	None
Silicon dioxide	6 mg/m3 TWA	20 MPPCF TWA 0.8 mg/m3 TWA	None	3 mg/m3 TWA Respirable fraction.
Triacetoxylethylsilane	None	None	None	None
Methylsilanetriyl triacetate	None	None	None	None
Acetic acid	15 ppm STEL 10 ppm TWA	10 ppm (25 mg/m3) PEL	None	None

Engineering controls:	Ensure adequate ventilation, especially in confined areas. Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Eye/face protection:	Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.
Skin protection:	Chemical resistant, impermeable gloves. Nitrile gloves. Butyl rubber gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	Translucent
Odor:	Acetic acid
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	< 10 mm hg (20 °C (68°F))
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Specific gravity:	1.01 at 20 °C (68°F)
Vapor density:	Heavier than air.
Flash point:	> 93 °C (> 199.4 °F)
Flammable/Explosive limits - lower:	4 %
Flammable/Explosive limits - upper:	19.9 %
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Not determined
Partition coefficient (n-octanol/water):	Not available.
VOC content:	3.0 %; 30 g/l
Viscosity:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable
Sensitivity to Mechanical Impact:	Not available.
Sensitivity to static discharge:	Not available.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Acetic acid is liberated slowly upon contact with moisture. Formaldehyde.
Incompatible materials:	Acids. Bases. Oxidizing agents. Water.
Conditions to avoid:	Prolonged heating at temperatures above 150 °C. Exposure to moisture.

11. TOXICOLOGICAL INFORMATION

Toxicologically synergistic products: Not available.

Refer to the following for Irritancy of Product, Sensitization to Product, Carcinogenicity, Reproductive Toxicity, Teratogenicity, and Mutagenicity.

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)	ACGIH Carcinogen
Silicone Resin	No	No	No	No
Distillates (petroleum), hydrotreated middle	No	No	No	Group A4
Silicon dioxide	No	No	No	No
Triacetoxylethylsilane	No	No	No	No
Methylsilanetriyl triacetate	No	No	No	No
Acetic acid	No	No	No	No

Hazardous components	LD50s and LC50s	Health Effects/Target Organs
Silicone Resin	None	No Target Organs
Distillates (petroleum), hydrotreated middle	None	Irritant
Silicon dioxide	Oral LD50 (RAT) = > 22,500 mg/kg	Nuisance dust
Triacetoxylethylsilane	None	No Target Organs
Methylsilanetriyl triacetate	None	Irritant, Allergen
Acetic acid	Oral LD50 (RABBIT) = 1,200 mg/kg Oral LD50 (RAT) = 3.53 g/kg Oral LD50 (RAT) = 3.31 g/kg Dermal LD50 (RABBIT) = 1,060 mg/kg Inhalation LC50 (RAT, 4 h) = 11.4 mg/l	Allergen, Corrosive, Eyes, Gastrointestinal, Immune system, Irritant, Kidney

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended cleaning agents: Follow all local, state, federal and provincial regulations for disposal. Cured rubber can be incinerated or landfilled following EPA and local regulations.

Hazardous waste number: Not available.

14. TRANSPORT INFORMATION

Canada Transportation of Dangerous Goods - Ground

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

15. REGULATORY INFORMATION

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: Reviewed MSDS. Reissued with new date.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the MSDS contains all the information required by the CPR.

Prepared by: Timothy Pratt, Regulatory Affairs Specialist

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Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 16/04/2015

Revision date: 06/11/2015

Version: 1.1

1.1. Product identifier

Product form : Article
 Trade name : Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers
 Synonyms : Valve Action® Paint Marker White, Yellow, Black, Blue, Green, Aluminum, Purple, Light Blue, Light Green, Fluorescent Yellow, Fluorescent Green, Fluorescent Orange, Fluorescent Pink, Invisible UV, Red, Orange, Pink, Brown, Gold
 CERTIFIED Valve Action® Paint Marker White, Yellow, Red, Black

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

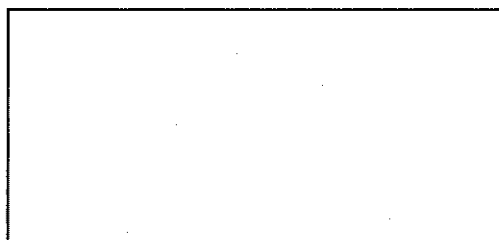
Main use category : Professional use
 Use of the substance/mixture : Marking.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LA-CO Industries Europe S.A.S.
 Parc Industriel de la Plaine de l'Ain - Allée des Combes.
 01150.BLYES.France.
 Phone: +33 (0)4 74 46 23 23
 Fax: +33 (0)4 74 46 23 29
 E-mail: info@eu.laco.com
 Web: http://www.markal.com



1.4. Emergency telephone number

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887

EU Member State	Competent authority	Address	Phone number
AUSTRIA	Vergiftungsinformationszentrale (Poisons Information Centre)	Allgemeines Krankenhaus Waehringer Geurtel 16-20 1080 Wien	+43 1 406 43 43
BELARUS	The Belarus Republican Poisons Centre	Kizhevatova str. 58 220115 Minsk	+375 (0)17 201 9158
BELGIUM	Centre Anti-Poisons/Antigifocentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 B - 1120 Bruxelles/Brussel	+32 70 245 245
BULGARIA	Национален токсикологичен информационен център National Clinical Toxicology Centre, Emergency Medical Institute "Pirogov"	21 Tottleben Boulevard 1606 SOFIA	+359 2 9154 409
CROATIA	Poisons Control Centre Institute of Medical Research & Occupational Health	Ksaverska Cesta 2 P.O. Box 291 HR-10000 Zagreb	+385 1 234 8342
CZECH REPUBLIC	Toxikologické informační středisko Clinic For Occupational Medicine, 1st Medical Faculty, Charles University	Ná Bojišti 1 120 00 Praha 2	+42 2 2491 9293 +42 2 2491 5402
DENMARK	Gifflinjen Bispebjerg Hospital	Bispebjerg Bakke 23, 60, 1 DK-2400 København NV	+45 82 12 12 12 +45 35 31 55 55
ESTONIA	Mürgistusteabekeskus	Gonsiori 29 15027 Tallinn	+372 626 93 90
FINLAND	Myrkytystietokeskus	P.O.B 340 (Haartmaninkatu 4) HUS SF - 00029 Helsinki	+358 9 471 977
FRANCE	ORFILA		+33 1 45 42 59 59
GERMANY	Berliner Betrieb für Zentrale Gesundheitliche Aufgaben	Oranienburger Strasse 285 13437 Berlin	+49 30 19240
GERMANY	Informations und Beratungszentrum für Vergiftungsfälle	Kirberger Straße, Gebäude 9 D-66421 Homburg/Saar	+49 6841 19240
GERMANY	Beratungstelle bei Vergiftungen, Klinische Toxikologie und Beratungstelle bei Vergiftungen	Langenbeckstrasse 1 55131 Mainz	+49 6131 19240
GREECE	Poisons Information Centre	11527 Athens	+30 10 779 3777

Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers

Safety Data Sheet

according to Regulation (EC) No. 453/2010

HUNGARY	Országos Kémiai Biztonsági Intézet (National Institute of Chemical Safety) Egészségügyi Toxikológiai Tájékoztató Szolgálat (Health Toxicological Information Service)	1437 Budapest PO Box 839 1097 Budapest, Nagyvárad tér 2	+36 80 20 11 99
ICELAND	Eitrunarmiðstöðin	Eitrunarmiðstöðin 108 Reykjavík	+354 543 22 22
IRELAND	National Poisons Information Centre	Beaumont Hospital PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2166
LATVIA	Valsts Toksikoloģijas centra Saindēšanās un zāļu informācijas centrs	2 Hipocrate Street LV 1036 Riga	+371 67 04 24 73
LITHUANIA	Apsinuodijimų kontrolės ir informacijos biuras	Siltnamiu 29 2043 Vilnius	+370 5 236 20 52/+370 687 53 378
MALTA	Medicines & Poisons Info Office	Mater Dei Hospital, Msida MSD 2090 Malta	25450000
NETHERLANDS	Nationaal Vergiftigingen Informatie Centrum National Institute for Public Health and the Environment, NB this service is only available to health professionals	Huispostnummer B.00.118, PO Box 85500 3508 GA Utrecht	+31 30 274 88 88
PORTUGAL	Centro de Informação Antivenenos Instituto Nacional de Emergência Médica (INEM)	Rua Almirante Barroso, 36 1000-013 Lisboa	808 250 143 (for use only in Portugal), +351 21 330 3284
ROMANIA	Biroul pentru Regulamentul Sanitar International si Informare Toxicologica	Str. Dr. Leonte Anastasievici Nr.1-3, Sector 5 50463 Bucuresti	+40 21 318 36 06
SLOVAKIA	Národné toxikologické informačné centrum University Hospital Bratislava	Limbóvá 5 833 05 Bratislava	+421 2 54 77 4 166
SPAIN	Servicio de Información Toxicológica Instituto Nacional de Toxicología, Departamento de Madrid	Calle Luis Cabrera 9 E-28002 Madrid	+34 91 562 04 20
SWEDEN	Giflinformationscentralen Swedish Poisons Information Centre, Karolinska Hospital	Box 60 500 SE-171 76 Stockholm	+46 8 33 12 31 (International) 112 (National)
SWITZERLAND	Centre Suisse d'Information Toxicologique	Freiestrasse 16 Postfach CH-8028 Zurich	+41 44 251 51 51 (International) 145 (National)

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH phrases : EUH210 - Safety data sheet available on request

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1-Methoxy-2-propanol	(CAS No) 107-98-2 (EC no) 203-539-1 (EC Index no) 603-064-00-3	40 – 75	Flam. Liq. 3, H226 STOT SE 3, H336
aluminium powder (stabilised)	(CAS No) 7429-90-5 (EC no) 231-072-3 (EC Index no) 013-001-00-1	0 – 65	Flam. Sol. 1, H228 Water-react. 2, H261
Titanium dioxide	(CAS No) 13463-67-7 (EC no) 236-675-5	1 – 25	Not classified
zinc sulphide	(CAS No) 1314-98-3 (EC no) 215-251-3	0 – 25	Not classified

Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Name	Product Identifier	%	Classification according to Regulation (EC) No. 1272/2008 (GHS)
ethanol	(CAS No) 64-17-5 (EC no) 200-578-6 (EC index no) 603-002-00-5	5 – 20	Flam. Liq. 2, H225
2-methoxy-1-methylethyl acetate	(CAS No) 108-65-6 (EC no) 203-603-9 (EC index no) 607-195-00-7	0.01 – 2	Flam. Liq. 3, H226
4-[[4-(aminocarbonyl)phenyl]azo]-N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide, C.I. Pigment Red 170	(CAS No) 2786-76-7 (EC no) 220-509-3	0 – 5	Skin Sens. 1, H317 (Naphthol <1%)
Isopropanol	(CAS No) 67-63-0 (EC no) 200-661-7 (EC index no) 603-117-00-0	0 – 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Ethyl acetate	(CAS No) 141-78-6 (EC no) 205-500-4 (EC index no) 607-022-00-5	0.1 – 3	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Carbon black	(CAS No) 1333-86-4 (EC no) 215-609-9	0 – 3	Carc. 2, H351
4-Methyl-7-diethylaminocoumarin	(CAS No) 91-44-1 (EC no) 202-068-9	0 – 3	Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Aluminum hydroxide	(CAS No) 21645-51-2 (EC no) 244-492-7	0.01 – 2	Not classified
propyl acetate	(CAS No) 109-60-4 (EC no) 203-686-1 (EC index no) 607-024-00-6	0 – 2	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Butyl acetate	(CAS No) 123-86-4 (EC no) 204-658-1 (EC index no) 607-025-00-1	< 1	Flam. Liq. 3, H226 STOT SE 3, H336
(2-Methoxymethylethoxy)-propanol	(CAS No) 34590-94-8 (EC no) 252-104-2	< 1	Not classified
Aluminum oxide	(CAS No) 1344-28-1 (EC no) 215-691-6	< 1	Not classified
2-methoxypropyl acetate	(CAS No) 70657-70-4 (EC no) 274-724-2 (EC index no) 607-251-00-0	< 0.1	Flam. Liq. 3, H226 Repr. 1B, H360D STOT SE 3, H335
barium sulfate	(CAS No) 7727-43-7 (EC no) 231-784-4	< 0.1	Not classified
Toluene	(CAS No) 108-88-3 (EC no) 203-625-9 (EC index no) 601-021-00-3	< 0.1	Flam. Liq. 2, H225 Repr. 2, H361d Asp. Tox. 1, H304 STOT RE 2, H373 Skin Irrit. 2, H315 STOT SE 3, H336

Full text of R- and H-phrases: see section 16

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
First-aid measures after eye contact	: In case of contact, immediately flush eyes with plenty of water.
First-aid measures after ingestion	: Do NOT induce vomiting. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: May cause moderate irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry chemical. Inert gas. Foam. Water spray. Water fog.
Unsuitable extinguishing media	: Do not use a heavy water stream.

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5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour. Burning produces irritating, toxic and noxious fumes.
 Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂). Hydrocarbon.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses. Eliminate all ignition sources if safe to do so.
 Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus. EN469.

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Avoid all eye and skin contact and do not breathe vapour and mist.

6.1.1. For non-emergency personnel

Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves.
 Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Chemical goggles or safety glasses. Wear suitable gloves.
 Emergency procedures : Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Eliminate all ignition sources. Stop the flow of material, if this is without risk.
 Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Take up in non-combustible absorbent material and shove into container for disposal.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
 Precautions for safe handling : No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid all eye and skin contact and do not breathe vapour and mist. Use only outdoors or in a well-ventilated area.
 Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep away from open flames, hot surfaces and sources of ignition.
 Incompatible products : Strong oxidizers.
 Incompatible materials : Heat sources.
 Heat and ignition sources : Keep away from heat, sparks and flame.
 Prohibitions on mixed storage : Keep away from incompatible materials.
 Storage area : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Marking.

8.1. Control parameters

Methoxy-2-propanol (4070332)		
EU	IOELV TWA (mg/m ³)	375 mg/m ³
EU	IOELV TWA (ppm)	100 ppm
EU	IOELV STEL (mg/m ³)	568 mg/m ³
EU	IOELV STEL (ppm)	150 ppm
EU	Notes	Skin

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1-Methoxy-2-propanol (107-99-2)		
Austria	MAK (mg/m ³)	187 mg/m ³
Austria	MAK (ppm)	50 ppm
Austria	MAK Short time value (mg/m ³)	187 mg/m ³
Austria	MAK Short time value (ppm)	50 ppm
Austria	Remark (AT)	(gemessen als Momentanwert), (H)
Belgium	Limit value (mg/m ³)	375 mg/m ³
Belgium	Limit value (ppm)	100 ppm
Belgium	Short time value (mg/m ³)	568 mg/m ³
Belgium	Short time value (ppm)	150 ppm
Belgium	Remark (BE)	D
Czech Republic	Expoziční limity (PEL) (mg/m ³)	270 mg/m ³
Czech Republic	Expoziční limity (PEL) (ppm)	73.17 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m ³)	550 mg/m ³
Czech Republic	Expoziční limity (NPK-P) (ppm)	149.05 ppm
Czech Republic	Remark (CZ)	D
Denmark	Grænseværdie (langvarig) (mg/m ³)	185 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	50 ppm
Denmark	Grænseværdie (kortvarig) (mg/m ³)	370 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	100 ppm
Finland	HTP-arvo (8h) (mg/m ³)	370 mg/m ³
Finland	HTP-arvo (8h) (ppm)	100 ppm
Finland	HTP-arvo (15 min)	560 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	150 ppm
Finland	Huomautus (FI)	iho
France	VME (mg/m ³)	188 mg/m ³
France	VME (ppm)	50 ppm
France	VLE (mg/m ³)	375 mg/m ³
France	VLE (ppm)	100 ppm
France	Note (FR)	Peau
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	370 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	100 ppm
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	740 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	200 ppm
Hungary	AK-érték	375 mg/m ³
Hungary	CK-érték	568 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	375 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	100 ppm
Ireland	OEL (15 min ref) (mg/m ³)	568 mg/m ³
Ireland	OEL (15 min ref) (ppm)	150 ppm
Lithuania	IPRV (mg/m ³)	190 mg/m ³
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m ³)	300 mg/m ³
Lithuania	TPRV (ppm)	75 ppm
Netherlands	Grænswaarde TGG 8H (mg/m ³)	375 mg/m ³
Netherlands	Grænswaarde TGG 15MIN (mg/m ³)	563 mg/m ³
Netherlands	Remark (MAC)	(H)
Poland	NDS (mg/m ³)	180 mg/m ³
Poland	NDSCh (mg/m ³)	360 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	375 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	100 ppm

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1-Methoxy-2-propanol (107-98-2)		
Slovakia	Upozornenie (SK)	(K)
Spain	VLA-ED (mg/m ³)	375 mg/m ³
Spain	VLA-ED (ppm)	100 ppm
Spain	VLA-EC (mg/m ³)	568 mg/m ³
Spain	VLA-EC (ppm)	150 ppm
Spain	Notes	vía dérmica, VLI
Sweden	nivågränsvärde (NVG) (mg/m ³)	190 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	300 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	75 ppm
Sweden	Anmärkning (SE)	H
United Kingdom	WEL TWA (mg/m ³)	375 mg/m ³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m ³)	560 mg/m ³
United Kingdom	WEL STEL (ppm)	150 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	180 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	50 ppm
Norway	Merknader (NO)	H
Switzerland	VME (mg/m ³)	360 mg/m ³
Switzerland	VME (ppm)	100 ppm 20 ppm (urina; fine dell'esposizione / del turno)
Switzerland	VLE (mg/m ³)	720 mg/m ³
Switzerland	VLE (ppm)	200 ppm
Ethyl acetate (141-78-6)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	1080 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	300 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	500 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	150 ppm
Spain	VLA-ED (mg/m ³)	1460 mg/m ³
Spain	VLA-ED (ppm)	400 ppm
United Kingdom	WEL TWA (mg/m ³)	730 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	1460 mg/m ³
Titanium dioxide (13463-67-7)		
Belgium	Remark (BE)	(dioxyde de)
Denmark	Grænseværdie (kortvarig) (mg/m ³)	12 mg/m ³
France	Note (FR)	inhalable aerosol
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Slovakia	NPHV (priemerná) (mg/m ³)	5 mg/m ³
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Spain	Notes	inhalable aerosol
Sweden	nivågränsvärde (NVG) (mg/m ³)	5 mg/m ³
Sweden	Anmärkning (SE)	total dust, 1
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ inhalable aerosol 4 mg/m ³ respirable aerosol
Switzerland	Remark (CH)	(respirable aerosol)
Aluminum oxide (134-28-3)		
Austria	MAK (mg/m ³)	10 mg/m ³ (gemessen als einatembarer Aerosolanteil) 5 mg/m ³ (alveolengängiger Anteil)
Austria	MAK Short time value (mg/m ³)	20 mg/m ³ (gemessen als einatembarer Aerosolanteil) max. 2x60 min./Schicht 10 mg/m ³ (alveolengängiger Anteil) max. 2x60 min./Schicht
Belgium	Limit value (mg/m ³)	10 mg/m ³

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Aluminium oxide (1344-29-1)		
Belgium	Remark (BE)	(oxyde d') (en Al)
Denmark	Grænseværdie (langvarig) (mg/m³)	5 mg/m³ (total) 2 mg/m³ (respirabel)
Denmark	Grænseværdie (kortvarig) (mg/m³)	10 mg/m³ (total) 4 mg/m³ (respirabel)
France	VME (mg/m³)	10 mg/m³
France	Note (FR)	(respirable aerosol)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	3 mg/m³
Germany	Remark (TRGS 900)	(gemessen als alveolengängiger Staubanteil)
Hungary	AK-érték	6 mg/m³
Hungary	Megjegyzések (HU)	(respirable aerosol)
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³ (total inhalable dust) 4 mg/m³ (respirable dust)
Lithuania	IPRV (mg/m³)	2 mg/m³
Lithuania	Remark (LT)	(alveolinė frakcija, piūrėk IX skyriaus 3 pastabą.)
Poland	NDS (mg/m³)	2.5 mg/m³ (dymy, pyl całkowity) 1.2 mg/m³ (dymy, pyl respirabilny)
Slovakia	NPHV (priemerná) (mg/m³)	1.5 mg/m³ (respirabilná frakcia) 4 mg/m³ (inhalovateľná frakcia)
Spain	VLA-ED (mg/m³)	10 mg/m³
Sweden	nivågränsvärde (NVG) (mg/m³)	5 mg/m³ (inhalable aerosol) 2 mg/m³ (respirable aerosol)
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ (inhalable aerosol) 4 mg/m³ (respirable aerosol)
Norway	Gjennomsnittsverdier (AN) (mg/m³)	10 mg/m³
Norway	Merknader (NO)	1)
Switzerland	VME (mg/m³)	3 mg/m³
Switzerland	Remark (CH)	(respirable aerosol)
Aluminium hydroxide (21645-51-2)		
Austria	MAK (ppm)	10 ppm (gemessen als einatembarer Aerosolanteil) 5 ppm (alveolengängiger Anteil)
Austria	MAK Short time value (ppm)	20 ppm (gemessen als einatembarer Aerosolanteil) max. 2x60 min./Schicht 10 ppm (alveolengängiger Anteil) max. 2x60 min./Schicht
Poland	NDS (mg/m³)	2.5 mg/m³ dymy, pyl całkowity 1.2 mg/m³ dymy, pyl respirabilny
Slovakia	NPHV (priemerná) (mg/m³)	1.5 mg/m³ (respirabilná frakcia) 4 mg/m³ (inhalovateľná frakcia)
Switzerland	VME (mg/m³)	3 mg/m³
Switzerland	Remark (CH)	(alveolengängige Fraktion)
Ethyl acetate (123-86-4)		
Austria	MAK (mg/m³)	480 mg/m³
Austria	MAK (ppm)	100 ppm
Austria	MAK Short time value (mg/m³)	480 mg/m³
Austria	MAK Short time value (ppm)	100 ppm
Austria	Remark (AT)	(gemessen als Momentanwert)
Denmark	Grænseværdie (kortvarig) (mg/m³)	1420 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	300 ppm
Lithuania	IPRV (mg/m³)	500 mg/m³
Lithuania	IPRV (ppm)	100 ppm
Lithuania	TPRV (mg/m³)	700 mg/m³
Lithuania	TPRV (ppm)	150 ppm
Slovakia	NPHV (priemerná) (mg/m³)	500 mg/m³
Slovakia	NPHV (priemerná) (ppm)	100 ppm

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Butyl acetate (123-86-4)		
Spain	VLA-ED (mg/m ³)	724 mg/m ³
Spain	VLA-ED (ppm)	150 ppm
Spain	VLA-EC (mg/m ³)	965 mg/m ³
Spain	VLA-EC (ppm)	200 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	700 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	150 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	355 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	75 ppm
2-methoxy-1-methylethyl acetate (109-65-6)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	550 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	100 ppm
Finland	Huomautus (FI)	iho
France	Note (FR)	Peau
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	270 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	50 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	275 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	50 ppm
Slovakia	Upozornenie (SK)	(K)
Spain	VLA-ED (mg/m ³)	275 mg/m ³
Spain	VLA-ED (ppm)	50 ppm
Spain	VLA-EC (mg/m ³)	550 mg/m ³
Spain	VLA-EC (ppm)	100 ppm
Spain	Notes	VLI
Sweden	Anmärkning (SE)	H
2-methoxypropyl acetate (70657-70-4)		
Czech Republic	Remark (CZ)	D
Denmark	Grænseværdie (kortvarig) (mg/m ³)	220 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	40 ppm
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	224 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	40 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	110 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	20 ppm
Slovakia	Upozornenie (SK)	(K)
Spain	VLA-ED (mg/m ³)	28 mg/m ³
Spain	VLA-ED (ppm)	5 ppm
Spain	VLA-EC (mg/m ³)	220 mg/m ³
Spain	VLA-EC (ppm)	40 ppm
Spain	Notes	TR1B,r
(2-Methoxymethylethoxy)propanol (34590-94-8)		
Denmark	Grænseværdie (kortvarig) (mg/m ³)	600 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	100 ppm
Finland	Huomautus (FI)	iho
France	Note (FR)	Peau
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	310 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	50 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	308 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	50 ppm
Slovakia	Upozornenie (SK)	poznámka K
Spain	VLA-ED (mg/m ³)	308 mg/m ³
Spain	VLA-ED (ppm)	50 ppm
Spain	Notes	via dérmica, VLI

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(2-Methoxymethyl)ethylpropanol (34590-94-8)		
Sweden	Anmärkning (SE)	H
ethanol (64-17-5)		
Denmark	Grænseværdie (kortvarig) (mg/m³)	3800 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	2000 ppm
Slovakia	NPHV (priemerná) (mg/m³)	960 mg/m³
Slovakia	NPHV (priemerná) (ppm)	500 ppm
Spain	VLA-ED (mg/m³)	1910 mg/m³
Spain	VLA-ED (ppm)	1000 ppm
Spain	Notes	s,
isopropanol (67-63-0)		
Denmark	Grænseværdie (kortvarig) (mg/m³)	980 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	400 ppm
Germany	TRGS 903 (BGW)	50 mg/l Aceton (Blut; Expositionsende bzw. Schichtende)
Netherlands	Grenswaarde TGG 8H (mg/m³)	650 mg/m³
Netherlands	Grenswaarde TGG 8H (ppm)	250 ppm
Slovakia	NPHV (priemerná) (mg/m³)	500 mg/m³
Slovakia	NPHV (priemerná) (ppm)	200 ppm
Spain	VLA-ED (mg/m³)	500 mg/m³ VLB, s
Spain	VLA-ED (ppm)	200 ppm VLB, s 40 ppm F, I "(Acetona en orina; Final de la semana, laboral 1)"
Spain	VLA-EC (mg/m³)	1000 mg/m³ VLB, s
Spain	VLA-EC (ppm)	400 ppm VLB, s
propyl acetate (109-60-4)		
Austria	Remark (AT)	(gemessen als Momentanwert)
Czech Republic	Remark (CZ)	I
Denmark	Grænseværdie (kortvarig) (mg/m³)	1250 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	300 ppm
Slovakia	NPHV (priemerná) (mg/m³)	400 mg/m³
Slovakia	NPHV (priemerná) (ppm)	100 ppm
Spain	VLA-ED (mg/m³)	849 mg/m³
Spain	VLA-ED (ppm)	200 ppm
Spain	VLA-EC (mg/m³)	1060 mg/m³
Spain	VLA-EC (ppm)	250 ppm
aluminium powder (stabilised) (7429-90-5)		
Belgium	Limit value (mg/m³)	1 mg/m³
Belgium	Remark (BE)	(Aluminium, métal et composés insolubles, fraction alvéolaire)
Denmark	Grænseværdie (kortvarig) (mg/m³)	4 mg/m³ (respirabel) 10 mg/m³ (total)
Finland	HTP-arvo (8h) (mg/m³)	2 mg/m³
Finland	Huomautus (FI)	(Alumiini, liukoiset yhdisteet)
France	VME (mg/m³)	5 mg/m³ (pulvérulent) 10 mg/m³ (métal)
Germany	TRGS 903 (BGW)	200 µg/l
Germany	Remark (TRGS 903)	Aluminium (Urin; Expositionsende bzw. Schichtende)
Hungary	Megjegyzések (HU)	(respirabilis por)
Ireland	OEL (8 hours ref) (mg/m³)	1 mg/m³
Ireland	Notes (IE)	(respirable dust)
Lithuania	IPRV (mg/m³)	2 mg/m³ (alveoline frakcija) 1 mg/m³ (Aluminis (metalas) ir jo tirpus junginiai, kaip Al) 5 mg/m³ (akvepiamoji frakcija)

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aluminium powder (stabilised) (7429-90-6)		
Netherlands	Grenswaarde TGG 8H (mg/m³)	10 mg/m³
Poland	NDS (mg/m³)	2.5 mg/m³ (dymy, pyl calkowity) 1.2 mg/m³ (dymy, pyl respirabilny)
Slovakia	NPHV (priemerná) (mg/m³)	2 mg/m³
Slovakia	NPHV (priemerná) (ppm)	60 µg/g creatinine (Hlinik, M,a) 25 µg/g creatinine (Celkový, M.,d) 150 µg/g creatinine (Celkový,M,b)
Spain	VLA-ED (mg/m³)	10 mg/m³ (inhalable aerosol) 5 mg/m³ (respirable aerosol)
Sweden	nivågränsvärde (NVG) (mg/m³)	1 mg/m³ (Aluminium, lösliga föreningar, som Al) 5 mg/m³ (totaldamm, som Al) 2 mg/m³ (respirabelt damm, som Al)
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ (inhalable dust) 4 mg/m³ (respirable dust)
Norway	Merknader (NO)	(Aluminiumpulver, pyroteknikk)
Switzerland	VME (mg/m³)	3 mg/m³
Switzerland	Remark (CH)	(alveolengängiger Staub)
Carbon black (1333-86-4)		
Belgium	Limit value (mg/m³)	3.5 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	3.5 mg/m³
Denmark	Anmærkninger (DK)	K
Finland	HTP-arvo (8h) (mg/m³)	3.5 mg/m³
Finland	HTP-arvo (15 min)	7 mg/m³
France	VME (mg/m³)	3.5 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	3.5 mg/m³
Ireland	OEL (15 min ref) (mg/m³)	7 mg/m³
Spain	VLA-ED (mg/m³)	3.5 mg/m³
Sweden	nivågränsvärde (NVG) (mg/m³)	3 mg/m³
United Kingdom	Local name	Carbon black
United Kingdom	WEL TWA (mg/m³)	3.5 mg/m³
United Kingdom	WEL STEL (mg/m³)	7 mg/m³
Norway	Gjennomsnittsverdier (AN) (mg/m³)	3.5 mg/m³
zinc sulphide (1314-98-3)		
Lithuania	IPRV (mg/m³)	5 mg/m³
barium sulfate (7727-43-7)		
Belgium	Remark (BE)	(sulfate de)
Slovakia	NPHV (priemerná) (mg/m³)	1.5 mg/m³ (respirabilná frakcia) 4 mg/m³ (Inhalovateľná frakcia)
United Kingdom	WEL TWA (mg/m³)	10 mg/m³ inhalable aerosol 4 mg/m³ respirable aerosol
Toluene (108-88-3)		
EU	IOELV TWA (mg/m³)	192 mg/m³
EU	IOELV TWA (ppm)	50 ppm
EU	IOELV STEL (mg/m³)	384 mg/m³
EU	IOELV STEL (ppm)	100 ppm
EU	Notes	Skin
Denmark	Grænseværdie (kortvarig) (mg/m³)	188 mg/m³
Denmark	Grænseværdie (kortvarig) (ppm)	50 ppm
France	Note (FR)	Peau
Germany	TRGS 903 (BGW)	3 mg/l o-Kresol (Urin; bei Langzeitexposition/Expositionsende bzw. Schichtende) 1 mg/l Toluol (Blut; Expositionsende bzw. Schichtende)
Slovakia	NPHV (priemerná) (mg/m³)	192 mg/m³ (K)

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Toluene (108-88-3)		
Slovakia	NPHV (priemerná) (ppm)	50 ppm (K) 600 ppm (Toluén) 1,5 ppm (O-krezol) 2401 ppm (Kyselina hippurová)
Sweden	Anmärkning (SE)	(B,H)

8.2. Exposure controls

Appropriate engineering controls	: Provide local exhaust ventilation of closed transfer systems to minimize exposures.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: None under normal use. It is a good industrial hygiene practice to minimize skin contact. Wear suitable gloves, rubber. EN 374.
Eye protection	: No special eye protection equipment recommended under normal conditions of use. Eye protection should only be necessary where liquid could be splashed or sprayed. EN 166.
Respiratory protection	: No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges. EN 12083.
Consumer exposure controls	: Keep out of reach of children.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Solid marker containing liquid colored paint.
Colour	: Variable.
Odour	: Solvent.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: < 1
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 120 °C
Flash point	: 31 °C
Auto-ignition temperature	: 287 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour
Vapour pressure	: 11.8
Relative vapour density at 20 °C	: No data available
Relative density	: 1 - 1.33
Solubility	: insoluble in water.
Log Pow	: 0.7
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content	: 50 - 60 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Flammable liquid and vapour.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

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10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

May release flammable gases. Burning produces irritating, toxic and noxious fumes. Carbon oxides (CO, CO₂).

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

1-Methoxy-2-propanol (107-98-2)	
LD50 oral rat	4016 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 inhalation rat (ppm)	> 7000 ppm 6 hr
ATE CLP (oral)	4016.000 mg/kg bodyweight
Ethyl acetate (141-78-6)	
LD50 oral rat	5620 mg/kg
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (mg/l)	> 18 mg/l/4h
ATE CLP (oral)	5620.000 mg/kg bodyweight
Titanium dioxide (13463-67-7)	
LD50 oral rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 6.82 mg/l/4h
Aluminum oxide (1344-28-1)	
LD50 oral rat	> 15900 mg/kg
LC50 inhalation rat (mg/l)	7.6 mg/l/4h
ATE CLP (vapours)	7.600 mg/l/4h
ATE CLP (dust,mist)	7.600 mg/l/4h
Butyl acetate (123-86-4)	
LD50 oral rat	10760 mg/kg
LD50 dermal rabbit	> 14112 mg/kg
LC50 inhalation rat (mg/l)	> 21 mg/l/4h
ATE CLP (oral)	10760.000 mg/kg bodyweight
2-Methoxy-1-methylethyl acetate (108-46-6)	
LD50 oral rat	8532 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (ppm)	4345 ppm 6 h
ATE CLP (oral)	8532.000 mg/kg bodyweight
2-methoxypropyl acetate (70657-70-4)	
LC50 inhalation rat (ppm)	2700 ppm 6 h
4-[[4-(aminocarbonyl)phenylazo]N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide; C.I. Pigment Red 170 (2786-78-7)	
LD50 oral rat	> 15000 mg/kg
LC50 inhalation rat (mg/l)	> 1580 mg/m ³ 4 h
(2-Methoxymethylethoxy)-propanol (34590-94-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 19020 mg/kg
LC50 inhalation rat (mg/l)	> 1667 mg/l/4h
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 1667 mg/l/4h
Ethanol (64-17-5)	
LD50 oral rat	10470 mg/kg
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (mg/l)	133.8 mg/l/4h
ATE CLP (oral)	10470.000 mg/kg bodyweight
ATE CLP (vapours)	133.800 mg/l/4h
ATE CLP (dust,mist)	133.800 mg/l/4h

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Isobutanol (97-63-0)	
LD50 oral rat	5840 mg/kg
LD50 dermal rabbit	16.4 ml/kg
LC50 inhalation rat (ppm)	> 10000 ppm/4h
ATE CLP (oral)	5840.000 mg/kg bodyweight

Propyl acetate (109-60-4)	
LD50 oral rat	8700 mg/kg
LD50 dermal rabbit	> 17800 mg/kg
LC50 inhalation rat (mg/l)	32 mg/l/4h
ATE CLP (oral)	8700.000 mg/kg bodyweight
ATE CLP (vapours)	32.000 mg/l/4h
ATE CLP (dust,mist)	32.000 mg/l/4h

aluminium powder (stabilised) (7429-90-5)	
LD50 oral rat	> 15900 mg/kg
LC50 inhalation rat (mg/l)	> 2.3 mg/l/4h No mortality observed in this study.

Carbon black (1333-86-4)	
LD50 oral rat	> 8000 mg/kg
LC50 inhalation rat (mg/l)	> 4.6 mg/m³ 4 h

zinc sulphide (1314-98-3)	
LD50 oral rat	> 15000 mg/kg
LC50 inhalation rat (mg/l)	> 5410 mg/m³ read-across Zinc

4-Methyl-7-diethylaminocoumarin (91-44-1)	
LD50 oral rat	> 5000 mg/kg
ATE CLP (dermal)	1100.000 mg/kg bodyweight
ATE CLP (dust,mist)	1.500 mg/l/4h

barium sulfate (7727-43-7)	
LD50 oral rat	307 g/kg
LD50 dermal rat	> 2000 mg/kg
ATE CLP (oral)	307000.000 mg/kg bodyweight

Toluene (108-88-3)	
LD50 oral rat	5580 mg/kg EU Method B.1 (Acute Toxicity (Oral))
LC50 inhalation rat (mg/l)	> 20 mg/l/4h OECD Guideline 403 (Acute Inhalation Toxicity)
ATE CLP (oral)	5580.000 mg/kg bodyweight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified.

Titanium dioxide (13463-97-7)	
NOAEL (chronic, oral, animal/male, 2 years)	5 mg/kg bodyweight rat

barium sulfate (7727-43-7)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight
NOAEL (chronic, oral, animal/female, 2 years)	75 mg/kg bodyweight

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified. May cause drowsiness or dizziness
Specific target organ toxicity (repeated exposure)	: Not classified

Toluene (108-88-3)	
LOAEL (inhalation, rat, gas, 90 days)	1250 ppmv/6h/day
NOAEL (oral, rat, 90 days)	625 mg/kg bodyweight/day EU Method B.26. Increased relative weights of liver and kidney are interpreted as toxicologically insignificant differences in the absence of histological findings.
NOAEL (inhalation, rat, gas, 90 days)	300 ppmv/6h/day OECD Guideline 453

Aspiration hazard	: Not classified
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SECTION 12: Ecological Information

12.1. Toxicity

1-Methoxy-2-propanol (107-98-2)	
LC50 fish 1'	20800 mg/l
EC50 Daphnia 1	23300 mg/l
ErC50 (algae)	> 1000 mg/l
Ethyl acetate (141-78-6)	
LC50 fish 1	220 mg/l
EC50 Daphnia 1	1200 mg/l
NOEC chronic fish	< 9.35 mg/l
Aluminium oxide (1344-28-1)	
EC50 Daphnia 1	> 1470 mg/l
NOEC (acute)	> 50 mg/l
2-methoxy-1-methylethyl acetate (108-90-6)	
LC50 fish 1	100 - 180 mg/l
EC50 Daphnia 1	> 500 mg/l 48 h
ErC50 (algae)	> 1000 mg/l
4-[4-(aminocarbonyl)phenyl]azop-N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide, C.I. Pigment Red 170 (2786-76-7)	
LC50 fish 1	> 500 mg/l 96 h
EC50 Daphnia 1	> 110 mg/l 48 h
(2-Methoxymethyl)ethoxy-propanol (34590-94-8)	
LC50 fish 1	> 1000 mg/l <i>Poecilia reticulata</i>
ErC50 (algae)	> 1000 mg/l
ethanol (64-17-5)	
LC50 fish 1	14200 mg/l
EC50 Daphnia 1	5012 mg/l
isopropanol (67-63-0)	
LC50 fish 1	10000 mg/l
propyl acetate (109-60-4)	
LC50 fish 1	60 mg/l 96 h
EC50 Daphnia 1	91.5 mg/l 48 h
aluminium powder (stabilised) (7429-90-6)	
LC50 fish 1	> 218.64 mg/l ASTM 2000; test material: aluminium chloride hexahydrate; <i>Pimephales promelas</i>
EC50 Daphnia 1	1.4 mg/l OECD Guideline 202; test material: Aluminium hydroxide
LOEC (acute)	72.89 mg/l
NOEC (acute)	37.2 mg/l
zinc sulphide (1314-98-3)	
LC50 fish 1	> 0.25 mg/l 96 h
EC50 Daphnia 1	> 29 µg/l 48 h
barium sulfate (7727-43-7)	
LC50 fish 1	> 3.5 mg/l 96 h
EC50 Daphnia 1	14500 µg/l 48 h
Toluene (108-88-3)	
LC50 fish 1	5.5 mg/l
EC50 Daphnia 2	3.78 mg/l
ErC50 (algae)	134 mg/l
LOEC (chronic)	2.77 mg/l
NOEC chronic fish	1.39 mg/l
NOEC chronic crustacea	0.74 mg/l

12.2. Persistence and degradability

1-Methoxy-2-propanol (107-98-2)	
Persistence and degradability	Readily biodegradable.
Biodegradation	96 % 28 d

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Ethyl acetate (141-78-6)	
Persistence and degradability	Readily biodegradable.
2-methoxy-1-methylethyl acetate (108-45-6)	
Persistence and degradability	Readily biodegradable.
Biodegradation	89 % 10 d
4-[(4-aminocarbonyl)phenyl]azo)-N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide, C.I. Pigment Red 170 (2786-76-7)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	0 % 28 d
(2-Methoxymethyl)ethoxy)propanol (34860-94-8)	
Persistence and degradability	Readily biodegradable.
Glycol (64-17-5)	
Biodegradation	> 96 % 28 d
Isopropyl alcohol (67-63-0)	
Persistence and degradability	Readily biodegradable.
Propyl acetate (109-80-4)	
Persistence and degradability	Readily biodegradable.
Biodegradation	62 % 5 d
Carbon black (1333-86-4)	
Persistence and degradability	Not readily biodegradable.
Toluene (108-88-3)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers	
Log Pow	0.7
1-Methoxy-2-propanol (107-98-2)	
Bioaccumulative potential	Not expected to bioaccumulate.
Ethyl acetate (141-78-6)	
Bioaccumulative potential	Not expected to bioaccumulate.
2-methoxy-1-methylethyl acetate (108-45-6)	
Log Pow	0.43
4-[(4-aminocarbonyl)phenyl]azo)-N-(2-ethoxyphenyl)-3-hydroxynaphthalene-2-carboxamide, C.I. Pigment Red 170 (2786-76-7)	
BCF fish 1	53 l/kg
Log Pow	1.28
Glycol (64-17-5)	
Bioaccumulative potential	Not expected to bioaccumulate.
Isopropyl alcohol (67-63-0)	
Bioaccumulative potential	Not expected to bioaccumulate.
Propyl acetate (109-80-4)	
Log Pow	1.23
Barium sulfate (7727-43-7)	
BCF fish 1	68.4 L/kg
Toluene (108-88-3)	
Bioconcentration factor (BCF REACH)	90
Log Kow	2.73

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Valve Action® Paint Markers, CERTIFIED Valve Action® Paint Markers	
PBT: not yet assessed	
vPvB: not yet assessed	
Component	
Ethyl acetate (141-78-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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12.6. Other adverse effects

No additional information available

SECTION 13: Waste treatment methods

13.1. Waste treatment methods

- Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapours are flammable.
European List of Waste (LoW) code : For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.
20 01 27* - paint, inks, adhesives and resins containing dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

- UN-No. (ADR) : 1263
UN-No. (IATA) : 1263
UN-No. (IMDG) : 1263
UN-No. (ADN) : 1263

14.2. UN proper shipping name

- Proper Shipping Name (ADR) : Paint
Proper Shipping Name (IATA) : Paint
Proper Shipping Name (IMDG) : PAINT
Proper Shipping Name (ADN) : PAINT
Transport document description (ADR) : UN 1263 PAINT, 3, III, (D/E)

14.3. Transport hazard class(es)

- Class (ADR) : 3
Classification code (ADR) : F1
Class (IATA) : 3
Class (IMDG) : 3
Class (ADN) : 3
Classification code (ADN) : F1

14.4. Packing group

- Packing group (ADR) : III
Packing group (IATA) : III
Packing group (IMDG) : III
Packing group (ADN) : III

14.5. Environmental hazards

- Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

- Hazard identification number (Kemler No.) : 30
Classification code (ADR) : F1
Orange plates :



- Tunnel restriction code (ADR) : D/E
EAC code : 3YE

14.6.2. Transport by sea

- EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Stowage category (IMDG) : A

14.6.3. Inland waterway transport

- Carriage prohibited (ADN) : No

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15 Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no substance on the REACH candidate list

VOC content : 50 - 60 %

15.1.2. National regulations

Germany

Water hazard class (WGK) : 1 - low hazard to waters

WGK remark : Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16 Other Information

according to Regulation (EC) No. 453/2010

Indication of changes:

Added. Product.

Abbreviations and acronyms:

	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	PBT: Persistent, Bioaccumulative, Toxic
	TWA: Time Weight Average
	TSCA: Toxic Substances Control Act

Data sources : ESIS (European chemical Substances Information System; accessed at: <http://esis.jrc.ec.europa.eu/index.php?PGM=cla>.
European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.
Kriester Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition.
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 1	Flammable solids, Category 1
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2

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Skin Sens. 1	Sensitisation — Skin, category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
Water-react. 2	Substances and Mixtures which, in contact with water, emit flammable gases, Category 2
H225	Highly flammable liquid and vapour
H226	Flammable liquid and vapour
H228	Flammable solid
H261	In contact with water releases flammable gases
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H360D	May damage the unborn child
H361d	Suspected of damaging the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
EUH208	Contains . May produce an allergic reaction
EUH210	Safety data sheet available on request
R10	Flammable
R11	Highly flammable
R15	Contact with water liberates extremely flammable gases
R20/21	Harmful by inhalation and in contact with skin
R36	Irritating to eyes
R36/38	Irritating to eyes and skin
R37	Irritating to respiratory system
R38	Irritating to skin
R40	Limited evidence of a carcinogenic effect
R43	May cause sensitisation by skin contact
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation
R61	May cause harm to the unborn child
R63	Possible risk of harm to the unborn child
R65	Harmful: may cause lung damage if swallowed
R66	Repeated exposure may cause skin dryness or cracking
R67	Vapours may cause drowsiness and dizziness
F	Highly flammable
Xi	Irritant
Xn	Harmful

LA-CO EU CLP SDS

SDS Prepared by: The Redstone Group, LLC
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www.redstonegrp.com

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

Safety Data Sheet



SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Way Oil Vistac 68, 220

Product Use: Industrial Oil

Product Number(s): 232511, 232512

Company Identification

Chevron Products Company
a division of Chevron U.S.A. Inc.
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

email : lubemsds@chevron.com
Product Information: 1 (800) 582-3835, LUBETEK@chevron.com

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Not classified as hazardous according to 29 CFR 1910.1200 (2012).

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 99 %wt/wt
Distillates, hydrotreated middle	64742-46-7	70 - 99 %wt/wt

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Most important symptoms and effects, both acute and delayed

IMMEDIATE SYMPTOMS AND HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Not expected to be harmful if swallowed.

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR OTHER SYMPTOMS AND HEALTH EFFECTS: Not classified.

Indication of any immediate medical attention and special treatment needed

Not applicable.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this

material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Brown
Physical State: Liquid
Odor: Petroleum odor
Odor Threshold: No data available
pH: Not Applicable
Vapor Pressure: <0.01 mmHg @ 37.8 °C (100 °F)
Vapor Density (Air = 1): >1
Initial Boiling Point: 315°C (599°F)
Solubility: Soluble in hydrocarbons; insoluble in water
Freezing Point: Not Applicable
Specific Gravity: 0.9117 @ 15.6°C (60.1°F) / 15.6°C (60.1°F) Minimum
Density: Not Applicable
Viscosity: 61.2 mm²/s @ 40°C (104°F) Minimum
Evaporation Rate: No data available
Decomposition temperature: No Data Available
Octanol/Water Partition Coefficient: No data available

FLAMMABLE PROPERTIES:

Flammability (solid, gas): No Data Available
Flashpoint: (Cleveland Open Cup) 170 °C (338 °F) (Min)
Autoignition: No data available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity: This material is not expected to react.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for product components.

Skin Corrosion/Irritation: The skin irritation hazard is based on evaluation of data for product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for product components.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for product components.

Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.

Carcinogenicity: The hazard evaluation is based on data for components or a similar material.

Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

This material is not expected to be harmful to aquatic organisms. The ecotoxicity hazard is based on an evaluation of data for the components or a similar material. The product has not been tested. The statement has been derived from the properties of the individual components.

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material. The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: NOT REGULATED AS A HAZARDOUS MATERIAL UNDER 49 CFR

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1. Immediate (Acute) Health Effects:	NO
2. Delayed (Chronic) Health Effects:	NO
3. Fire Hazard:	NO
4. Sudden Release of Pressure Hazard:	NO
5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

No components of this material were found on the regulatory lists above.

CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan).

NEW JERSEY RTK CLASSIFICATION:

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Lubricating oil)

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 0 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:

Label Category : INDUSTRIAL OIL 1 - IND1

REVISION STATEMENT: This revision updates the following sections of this Safety Data Sheet: 1-16
Revision Date: JUNE 03, 2014

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road San Ramon, CA 94583.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

Version 1.2

Print Date 03/24/2016

Revision Date 03/14/2016

SDS Number 350000014153

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

Recommended use : Hard Surface Cleaner

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252
Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.

Labelling

Precautionary statements

Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain hazardous chemicals at or above a reportable level as defined by OSHA 29 CFR 1910.1200

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : No special requirements

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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SDS Number 350000014153

- Skin contact** : No special requirements
- Inhalation** : No special requirements.
- Ingestion** : No special requirements

5. FIREFIGHTING MEASURES

- Suitable extinguishing media** : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during firefighting** : Container may melt and leak in heat of fire.
- Further information** : Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Wash thoroughly after handling.
- Environmental precautions** : Outside of normal use, avoid release to the environment.
- Methods and materials for containment and cleaning up** : Dike large spills.
Clean residue from spill site.

7. HANDLING AND STORAGE

- Handling**
- Precautions for safe handling** : Avoid contact with skin, eyes and clothing.
For personal protection see section 8.
KEEP OUT OF REACH OF CHILDREN AND PETS.
- Advice on protection** : Normal measures for preventive fire protection.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

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against fire and explosion

Storage

Requirements for storage areas and containers : Keep container closed when not in use.

Other data : Stable under normal conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients unless noted in the table above.

Personal protective equipment

Respiratory protection : No special requirements.

Hand protection : No special requirements.

Eye protection : No special requirements.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid

Color : blue

Odor : floral

Odour Threshold : Test not applicable for this product type

pH : 10.7
at (25 C)

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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- Melting point/freezing point** : 0 C
- Initial boiling point and boiling range** : 100 C
- Flash point** : does not flash
- Evaporation rate** : Test not applicable for this product type
- Flammability (solid, gas)** : Does not sustain combustion.
- Upper/lower flammability or explosive limits** : Test not applicable for this product type
- Vapour pressure** : Calculated 31.7 hPa
- Vapour density** : Test not applicable for this product type
- Relative density** : 1.00 g/cm³ at 25 C
- Solubility(ies)** : soluble
- Partition coefficient: n-octanol/water** : Test not applicable for this product type
- Auto-ignition temperature** : Test not applicable for this product type
- Decomposition temperature** : Heating can release hazardous gases.
- Viscosity, dynamic** : similar to water

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

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SDS Number 350000014153

Viscosity, kinematic	:	similar to water	:
Oxidizing properties	:	Test not applicable for this product type	:
Volatile Organic Compounds Total VOC (wt. %)*	:	0.2 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations	:
Other information	:	None identified	:

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	If accidental mixing occurs and toxic gas is formed, exit area immediately. Do not return until well ventilated.
Conditions to avoid	:	Direct sources of heat.
Incompatible materials	:	Do not mix with bleach or any other household cleaners. Strong bases
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview	:	This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.
Acute oral toxicity	:	LD50 > 5000 mg/kg
Acute inhalation toxicity	:	LC50 > 10 mg/L
Acute dermal toxicity	:	LD50 > 5000 mg/kg

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	Oral
Acute toxicity	No classification proposed	Dermal
Acute toxicity	No classification proposed	Inhalation - Dust and Mist
Acute toxicity	No classification proposed	Inhalation - Vapour
Acute toxicity	No classification proposed	Inhalation - Gas
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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Toxicity

The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

No environmental data required.

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

Land transport

Not classified as dangerous in the meaning of transport regulations.

Sea transport

Not classified as dangerous in the meaning of transport regulations.

Air transport

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



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Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	0
Reactivity	0

NFPA Ratings

Health	1
Fire	0
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



WINDEX® CLENER ORIGINAL WITH AMMONIA-D®

Version 1.2

Print Date 03/24/2016

Revision Date 03/14/2016

SDS Number 350000014153

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

Trade Names and Synonyms	2-6 Casting Alloy, 15/85 ASTM 15B, 20/80 ASTM 20 B, 25/75 ASTM 30 A B, 30/70, 34/66, 35/65, 45/55 ASTM A B, Pirellie, "E" Alloy
Chemical Names and Synonyms	Leaded Solders
Chemical Family	Lead Based Alloys & Solders

SECTION II - INGREDIENTS

Ingredient	C.A.S. Number	% W/W		Exposure Limit	LD50 oral, rat
		Min	Max		
Lead	7439-92-1	50.00	93.50	0.05 mg/m3	790 mg/kg
Tin	7440-31-5	0.35	50.00	2.00 mg/m3	72 mg/kg (mouse)
Antimony	7440-36-0	0.00	2.20	0.50 mg/m3	15 mg/Kg (LDLo Man)

SECTION III - PHYSICAL DATA

Boiling Point (deg C)	Pb 1740, Sb 1320	Spec Gravity	9.46 - 11
Vapour Pressure (mm Hg)	Pb 1 mm @ 975 deg C	% Volatile (by volume)	NP
Vapour Density (Air=1)	NP	Evaporation Rate (Ether = 1)	NP
Solubility in Water	Nil	pH	NP
Appearance	Metallic Silver Grey or Metallic Grey	Melting Point (deg C)	183 - 290
Odour	None		
Form	Solid		

WHMIS Classification	D2-A	TDG Information
NP - Not Pertinent:		Shipping Name: Not Regulated
U - Unknown:		UN Number: NP
		Class / Division: NP
		Packing Group: NP

SECTION IV - FIRE AND EXPLOSION HAZARDS

Flash Point (deg C) and Method	Flammable Limits in Air (Vol %)	
NP	Upper:	NP
	Lower:	NP
Means of Extinction:	Class D - Dry Chemical, or Dry Sand	

SECTION V - HEALTH HAZARD AND FIRST AID DATA

Ingestion	EFFECTS: May cause headache, nausea, abdominal pains, fatigue, muscle/joint pain, kidney disjunction, wrist-drop.
	FIRST AID: Give water or milk. If conscious, induce vomiting. Report suspect cases to a physician for blood testing.
Eye Contact	EFFECTS: Molten lead could splash into eye.
	FIRST AID: Flush with cool water for 15 minutes and seek immediate medical aid.
Skin Contact	EFFECTS: May cause local irritation.
	FIRST AID: NP
Skin Absorption	NP
Inhalation	See "Ingestion", CNS damage (results in fatigue, tremors, hallucinations, convulsions, delirium), weight loss, sleep disturbance.
Effects of Acute Exposure	See " Ingestion Effects " and " Inhalation Effects ".
Effects of Chronic Exposure	Possible anemia, central nervous system and kidney damage.
Carcinogenicity:	IARC (Yes)
Mutagenicity:	No
Teratogenicity:	Yes
Reproductive Effects:	Yes

SECTION V I - REACTIVITY DATA

Stability:	Stable - Yes	Conditions to Avoid:	NP
Incompatible Materials	Water:	No	Acid: No
	Corrosive:	No	Alkali: No
	Other:	No	Oxidizers: Yes
			Reducers: No
Hazardous Decomposition Products:	Toxic lead oxide fumes will form at elevated temperature. Contact with sodium azide generates lead azide - a detonating compound.		
Hazardous Polymerization:	May Occur -	NO	Conditions to Avoid: NP
	May not Occur -	X	

SECTION V I I - PREVENTIVE MEASURES

Steps to be Taken in Case Material is Released or Spilled:	Collect in an appropriate container. (Example:a strong cardboard box.) Wash hands and arms well after clean up is finished. Use water and wet sweep or vacuum.		
Waste Disposal Method:	Return to manufacturer, scrap dealer, or secondary lead smelter.		
Respiratory Protection:	For prolonged exposure (> 4 hrs/day or 20 hrs/week) Use respirator effective against lead fumes or dust depending on particular job		
Engineering Controls	Local Exhaust:	Essential if particular TWA's are exceeded.	Special:
	Mechanical (General):		Other:
Protective Gloves:	Cotton or other cloth glove	Eye Protection:	Safety glasses, goggles, face shield if molten.
Other Protective Equipment:	Heat resistant leggings and gloves if pouring molten metal.		

SECTION V I I I - SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing:	Wash hands and arms well after handling and/or Eating or Smoking. Adequate ventilation and respiratory protection should be provided when handling dross from solder bath.
Special Precautions and Waste Disposal Methods:	Do not dispose of into municipal garbage. Do not dispose of into sewers or any body of water. Do not dispose of in a landfill site.

SECTION IX - PREPARATION INFORMATION

Prepared By: Health, Safety and Environmental Department

CANADA
MÉTAL
(EST) LTÉE
(EASTERN) LTD.

8271 rue Lafrenais • St. Leonard, Quebec • H1P 2B1
(514) 327-2011 Toll Free (800) 363-7110 Fax (514) 327-7810

After-Hours Emergency Contact Number: 1 (613) 966-6666

Date: February 10, 2014



Safety Data Sheet

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Document Group: 24-2410-9
Issue Date: 03/12/15
Version Number: 2.00
Supersedes Date: 07/20/09

Product identifier

3M™ Dynatron Putty-Cote 592, 593

ID Number(s):

70-0080-0354-6, 70-0080-0355-3

Recommended use

Automotive, Autobody repair.

Supplier's details

MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

26-9510-4, 24-2371-3

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3M™ Dynatron Putty-Cote 592, 593 03/12/15

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Safety Data Sheet

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Document Group:	26-9510-4	Version Number:	9.01
Issue Date:	03/07/14	Supersedes Date:	02/19/14

SECTION 1: Identification

1.1. Product identifier

3M™ Blue Cream Hardener

Product Identification Numbers

LB-K100-0788-3, LB-K100-0801-2, 41-0003-6567-0, 41-0003-6575-3, 41-0003-6576-1, 41-0003-6577-9, 41-0003-6578-7, 41-0003-6610-8, 41-0003-6613-2, 41-0003-6614-0, 60-4550-4563-7, 60-4550-4689-0, 70-0080-0038-5, 70-0080-0373-6, 70-0080-0377-7, 70-0080-0380-1, 70-0080-0382-7, 70-0080-0386-8, 70-0080-0389-2, 70-0080-0609-3

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Hardener for Body Fillers

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Organic Peroxide: Type E.
Serious Eye Damage/Irritation: Category 2A.
Skin Sensitizer: Category 1.

2.2. Label elements

Signal word
Warning

Symbols

Flame | Exclamation mark |

Pictograms



Hazard Statements

Heating may cause a fire.

Causes serious eye irritation.
May cause an allergic skin reaction.

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep away from clothing and other combustible materials.
Keep only in original container.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves and eye/face protection.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.

Storage:

Protect from sunlight.
Store at temperatures not exceeding 32C/90F. Keep cool.
Store away from other materials.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

Notes to Physician:

Not applicable

2.3. Hazards not otherwise classified

None.

8% of the mixture consists of ingredients of unknown acute dermal toxicity.
15% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Benzoyl Peroxide	94-36-0	30 - 60 Trade Secret *
Water	7732-18-5	10 - 30 Trade Secret *
Benzoic Acid, C9-11-Branched Alkyl Esters	131298-44-7	10 - 30 Trade Secret *
Zinc Stearate	557-05-1	5 - 10 Trade Secret *
Calcium Sulfate	7778-18-9	3 - 7 Trade Secret *
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	9038-95-3	1 - 5 Trade Secret *
Ferric Ferrocyanide	14038-43-8	< 1 Trade Secret *
Ferric Ammonium Ferrocyanide	25869-00-5	< 1 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode. Part of the oxygen for combustion is supplied by the peroxide itself.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide
Toxic Vapor, Gas, Particulate

Condition

During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible using non-sparking tools. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing of dust created by cutting, sanding, grinding or machining. Keep out of reach of children. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

Protect from sunlight. Store at temperatures not exceeding 32C/90F. Keep cool. Keep only in original container. Store away from other materials. Keep/store away from clothing and other combustible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Zinc Stearate	557-05-1	US Dept of Labor - OSHA	TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³	
Calcium Sulfate	7778-18-9	Amer Conf of Gov. Indust. Hyg.	TWA(inhalable fraction):10 mg/m ³	
Calcium Sulfate	7778-18-9	US Dept of Labor - OSHA	TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³	
Benzoyl Peroxide	94-36-0	Amer Conf of Gov. Indust. Hyg.	TWA:5 mg/m ³	
Benzoyl Peroxide	94-36-0	US Dept of Labor - OSHA	TWA:5 mg/m ³	

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists
 American Indust. Hygiene Assoc : American Industrial Hygiene Association
 Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

US Dept of Labor - OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Wear eye/face protection. Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Wear protective gloves.

Gloves made from the following material(s) are recommended: Nitrile Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Nitrile

Respiratory protection

Wear respiratory protection if ventilation is inadequate to prevent overexposure. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program.

Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure: Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	Blue paste with slight ester odor
Odor threshold	No Data Available
pH	No Data Available
Melting point	No Data Available
Boiling Point	Not Applicable
Flash Point	111 °C [Test Method: Estimated]
Evaporation rate	No Data Available
Flammability (solid, gas)	Organic Peroxide: Type E.
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	No Data Available

Vapor Density	No Data Available
Density	1.2 g/ml
Specific Gravity	1.2 [RefStd: WATER=1] [Details: @ 25 C]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	410 °C [Test Method: Estimated]
Decomposition temperature	No Data Available
Viscosity	70,000 centipoise - 150,000 centipoise
Hazardous Air Pollutants	2.0 % weight [Test Method: Calculated]
Volatile Organic Compounds	0 % weight [Test Method: calculated per CARB title 2]
Volatile Organic Compounds	0 g/l [Test Method: calculated SCAQMD rule 443.1]
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Accelerators

10.6. Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

May be harmful if inhaled. Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Dust from cutting, grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

May be harmful in contact with skin.

Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Dust created by cutting, grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE 4,386 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE 10.5 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
Benzoyl Peroxide	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
Benzoyl Peroxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 24.3 mg/l
Benzoyl Peroxide	Ingestion	Rat	LD50 > 5,000 mg/kg
Benzoic Acid, C9-11-Branched Alkyl Esters	Dermal	Rabbit	LD50 > 2,000 mg/kg
Benzoic Acid, C9-11-Branched Alkyl Esters	Inhalation-Dust/Mist (4 hours)	Rat	LC50 2 mg/l
Benzoic Acid, C9-11-Branched Alkyl Esters	Ingestion	Rat	LD50 > 5,000 mg/kg
Zinc Stearate	Dermal	Rabbit	LD50 > 2,000 mg/kg
Zinc Stearate	Ingestion	Rat	LD50 > 5,000 mg/kg
Calcium Sulfate	Ingestion	Rat	LD50 > 5,000 mg/kg
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Dermal	Rabbit	LD50 > 16,960 mg/kg
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5 mg/l
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Rat	LD50 4,240 mg/kg
Ferric Ammonium Ferrocyanide	Ingestion	Rat	LD50 > 5,110 mg/kg
Ferric Ferrocyanide	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
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Benzoyl Peroxide	Rabbit	Minimal irritation
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Rabbit	Minimal irritation

Serious Eye Damage/Irritation

Name	Species	Value
Benzoyl Peroxide	Rabbit	Severe irritant
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Benzoyl Peroxide	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value

Germ Cell Mutagenicity

Name	Route	Value
Benzoyl Peroxide	In Vitro	Not mutagenic
Benzoyl Peroxide	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Benzoyl Peroxide	Ingestion	Multiple animal species	Not carcinogenic
Benzoyl Peroxide	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Benzoyl Peroxide	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	prematuring & during gestation
Benzoyl Peroxide	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	prematuring & during gestation
Benzoyl Peroxide	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	prematuring & during gestation
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Not toxic to female reproduction	Rat	NOAEL 3,770 mg/kg/day	90 days
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	Not toxic to male reproduction	Rat	NOAEL 3,770 mg/kg/day	90 days
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 1 mg/l	2 weeks

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Oxirane, Polymer with Methyloxirane, Monobutyl	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for	Rat	NOAEL Not available	

Ether			classification			
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Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	endocrine system hematopoietic system liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL .005 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL .001 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Inhalation	heart	All data are negative	Rat	NOAEL .5 mg/l	2 weeks
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 145 mg/kg/day	90 days
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	hematopoietic system	All data are negative	Rat	NOAEL 500 mg/kg/day	2 years
Oxirane, Polymer with Methyloxirane, Monobutyl Ether	Ingestion	heart endocrine system respiratory system	All data are negative	Rat	NOAEL 3,770 mg/kg/day	90 days

Aspiration Hazard

Name	Value

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Zinc Stearate (ZINC COMPOUNDS)	557-05-1	5 - 10
Benzoyl Peroxide	94-36-0	30 - 60

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 2 Instability: 0 Special Hazards: Oxidizer

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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Safety Data Sheet

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Issue Date:	12/15/15	Supersedes Date:	05/26/15

SECTION 1: Identification

1.1. Product identifier

3M™ DYNATRON® PUTTY-COTE 592, 592T, 593

Product Identification Numbers

LB-K100-0587-6, LB-K100-0587-7, LB-K108-2014-3, 41-3701-1520-0

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Autobody repair.

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Flammable Liquid: Category 3.
Serious Eye Damage/Irritation: Category 1.
Skin Sensitizer: Category 1B.
Carcinogenicity: Category 1A.
Specific Target Organ Toxicity (single exposure): Category 1.
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Flame | Corrosion | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Flammable liquid and vapor.

Causes serious eye damage.
May cause an allergic skin reaction.
May cause cancer.

Causes damage to organs:
liver |
sensory organs |

Causes damage to organs through prolonged or repeated exposure:
respiratory system |
sensory organs |

May cause damage to organs through prolonged or repeated exposure:
liver |

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Ground/bond container and receiving equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Keep container tightly closed.
Use explosion-proof electrical/ventilating/lighting equipment.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves and eye/face protection.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Get medical advice/attention if you feel unwell.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

None.

36% of the mixture consists of ingredients of unknown acute oral toxicity.

41% of the mixture consists of ingredients of unknown acute dermal toxicity.

49% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Proprietary Polyester Resin	Trade Secret*	15 - 40 Trade Secret *
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro- .omega.-hydroxy-	25322-69-4	10 - 30 Trade Secret *
Styrene Monomer	100-42-5	10 - 30 Trade Secret *
Defoamer	Trade Secret*	10 - 30 Trade Secret *
2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	126-86-3	5 - 10 Trade Secret *
Limestone	1317-65-3	3 - 7 Trade Secret *
Polyester Polymer	Trade Secret*	3 - 7 Trade Secret *
Talc	14807-96-6	1 - 5 Trade Secret *
Titanium Dioxide	13463-67-7	1 - 5 Trade Secret *
Fatty Acid Amide	Trade Secret*	1 - 5 Trade Secret *
Thickening Agent	Trade Secret*	< 3 Trade Secret *
Quartz Silica	14808-60-7	< 0.5 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam. An appropriate aqueous film forming foam (AFFF) is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent loss of stabilizing materials. Protect from sunlight. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents. Store away from areas where product may come into contact with food or pharmaceuticals. Store in a dry place.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Styrene Monomer	100-42-5	ACGIH	TWA:20 ppm;STEL:40 ppm	A4: Not class. as human carcin
Styrene Monomer	100-42-5	OSHA	TWA:100 ppm;CEIL:200 ppm	
Limestone	1317-65-3	OSHA	TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m ³	A4: Not class. as human carcin
Titanium Dioxide	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m ³	
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m ³	
Talc	14807-96-6	OSHA	TWA concentration(as total dust):0.3 mg/m ³ ;TWA concentration(respirable):0.1 mg/m ³ (2.4 millions of particles/cu. ft.);TWA:20 millions of particles/cu. ft.	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2 mg/m ³	A4: Not class. as human carcin
Talc	14807-96-6	CMRG	TWA(as respirable dust):0.5 mg/m ³	
Quartz Silica	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m ³	A2: Suspected human carcin.
Quartz Silica	14808-60-7	OSHA	TWA concentration(as total dust):0.3 mg/m ³ ;TWA concentration(respirable):0.1 mg/m ³ (2.4 millions of particles/cu. ft.)	
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-	25322-69-4	AIHA	TWA(as aerosol):10 mg/m ³	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure

Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Full Face Shield
Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Paste
Odor, Color, Grade:	Solvent odor White Paste
Odor threshold	<i>No Data Available</i>
pH	<i>No Data Available</i>
Melting point	<i>No Data Available</i>
Boiling Point	293 °F
Flash Point	90 °F [<i>Test Method:</i> Closed Cup]
Flash Point	32 °C [<i>Test Method:</i> SETAFLASH]
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	<i>No Data Available</i>
Vapor Density	3.6 [<i>Ref Std:</i> AIR=1]
Density	2.75 g/ml
Specific Gravity	2.75 [<i>Ref Std:</i> WATER=1]
Solubility In Water	<i>No Data Available</i>

Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	352,000 - 476,000 centipoise
Hazardous Air Pollutants	0.55 lb HAPS/lb solids [<i>Test Method:</i> Calculated]
Volatile Organic Compounds	15.1 % weight [<i>Test Method:</i> calculated per CARB title 2]
Volatile Organic Compounds	414 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Percent volatile	13.2 % weight
Percent volatile	15.2 % volume
VOC Less H2O & Exempt Solvents	415 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable. Stable under normal conditions. May become unstable at elevated temperatures and/or pressure.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat
Sparks and/or flames

10.5. Incompatible materials

Strong oxidizing agents
Strong acids
Alkali and alkaline earth metals
Strong oxidizing agents
Strong bases

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

May be harmful if inhaled.

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

May be harmful if swallowed.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Prolonged or repeated exposure may cause target organ effects:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
SILICA, CRYSTAL AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
Quartz Silica	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Styrene Monomer	100-42-5	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Styrene Monomer	100-42-5	Anticipated human carcinogen	National Toxicology Program Carcinogens
Titanium Dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value

Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation-Vapor(4 hr)		No data available; calculated ATE 20 - 50 mg/l
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
Styrene Monomer	Dermal	Rat	LD50 > 2,000 mg/kg
Styrene Monomer	Inhalation-Vapor (4 hours)	Rat	LC50 8.3 mg/l
Styrene Monomer	Ingestion	Rat	LD50 5,000 mg/kg
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-	Dermal	Rabbit	LD50 > 10,000 mg/kg
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-	Ingestion	Rat	LD50 > 2,000 mg/kg
2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Dermal	Rat	LD50 > 2,000 mg/kg
2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Ingestion	Rat	LD50 > 500 mg/kg
Limestone	Dermal	Rat	LD50 > 2,000 mg/kg
Limestone	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Limestone	Ingestion	Rat	LD50 6,450 mg/kg
Polyester Polymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg
Thickening Agent	Dermal		LD50 estimated to be > 5,000 mg/kg
Thickening Agent	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 12.6 mg/l
Thickening Agent	Ingestion	Rat	LD50 > 5,000 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Styrene Monomer	official classification	Mild irritant
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Rabbit	No significant irritation
Limestone	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Thickening Agent	Rat	No significant irritation
Quartz Silica	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Styrene Monomer	official classification	Moderate irritant
Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Rabbit	No significant irritation
	Rabbit	Corrosive

Limestone	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Talc	Rabbit	No significant irritation
Thickening Agent	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Styrene Monomer	Guinea pig	Not sensitizing
2,4,7,9-Tetramethyl-5-Decyne-4,7-Diol	Mouse	Sensitizing
Titanium Dioxide	Human and animal	Not sensitizing

Respiratory Sensitization

Name	Species	Value
Talc	Human	Not sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Styrene Monomer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Styrene Monomer	In vivo	Some positive data exist, but the data are not sufficient for classification
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Styrene Monomer	Ingestion	Mouse	Carcinogenic
Styrene Monomer	Inhalation	Human and animal	Carcinogenic
Titanium Dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	Inhalation	Human and animal	Carcinogenic

Reproductive Toxicity**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
Styrene Monomer	Ingestion	Not toxic to female reproduction	Rat	NOAEL 21 mg/kg/day	3 generation
Styrene Monomer	Inhalation	Not toxic to female reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene Monomer	Inhalation	Not toxic to male reproduction	Rat	NOAEL 2.1 mg/l	2 generation
Styrene Monomer	Ingestion	Some positive male reproductive data	Rat	NOAEL 400	60 days

		exist, but the data are not sufficient for classification		mg/kg/day	
Styrene Monomer	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	during gestation
Styrene Monomer	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2.1 mg/l	during gestation
Limestone	Ingestion	Not toxic to development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Talc	Ingestion	Not toxic to development	Rat	NOAEL 1,600 mg/kg	during organogenesis

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Styrene Monomer	Inhalation	auditory system	Causes damage to organs	Multiple animal species	LOAEL 4.3 mg/l	not available
Styrene Monomer	Inhalation	liver	Causes damage to organs	Mouse	LOAEL 2.1 mg/l	not available
Styrene Monomer	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	occupational exposure
Styrene Monomer	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available	
Styrene Monomer	Inhalation	endocrine system	All data are negative	Rat	NOAEL Not available	not available
Styrene Monomer	Inhalation	kidney and/or bladder	All data are negative	Multiple animal species	NOAEL 2.1 mg/l	not available
Limestone	Inhalation	respiratory system	All data are negative	Rat	NOAEL 0.812 mg/l	90 minutes

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Styrene Monomer	Inhalation	eyes	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Styrene Monomer	Inhalation	auditory system	May cause damage to organs through prolonged or repeated exposure	Multiple animal species	NOAEL 1.3 mg/l	not available
Styrene Monomer	Inhalation	liver	May cause damage to organs through prolonged or repeated exposure	Mouse	LOAEL 0.85 mg/l	13 weeks
Styrene Monomer	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 1.1 mg/l	not available
Styrene Monomer	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.85 mg/l	7 days
Styrene Monomer	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.6 mg/l	10 days
Styrene Monomer	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	LOAEL 0.09 mg/l	not available
Styrene Monomer	Inhalation	heart bone, teeth, nails, and/or hair muscles kidney and/or bladder	All data are negative	Multiple animal species	NOAEL 4.3 mg/l	2 years
Styrene Monomer	Ingestion	nervous system	Some positive data exist, but the	Rat	LOAEL 500	8 weeks

			data are not sufficient for classification		mg/kg/day	
Styrene Monomer	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL Not available	not available
Styrene Monomer	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 677 mg/kg/day	6 months
Styrene Monomer	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 600 mg/kg/day	470 days
Styrene Monomer	Ingestion	heart respiratory system	All data are negative	Rat	NOAEL 35 mg/kg/day	105 weeks
Limestone	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Titanium Dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 18 mg/m3	113 weeks
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact manufacturer for more information

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Styrene Monomer	100-42-5	Trade Secret 10 - 30

15.2. State Regulations

Contact manufacturer for more information

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	None	Carcinogen
Titanium Dioxide	13463-67-7	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact manufacturer for more information

15.4. International Regulations

Contact manufacturer for more information

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 3 Flammability: 3 Instability: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: *3 Flammability: 3 Physical Hazard: 1 Personal Protection: X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use

and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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Product identifier
3M™ Panel Bonding Adhesive PN 08115

ID Number(s):
41-0003-6745-2, 41-0003-8009-1, 41-0003-8082-8, 41-9103-0505-5, 60-9800-3093-0, 60-9800-3246-4, 60-9800-4425-3, FS-9100-3423-0, FS-9100-3424-8, FS-9100-3425-5, FS-9100-5376-8

Recommended use
Automotive, Adhesive

Supplier's details

MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

09-3599-9, 32-4327-6

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3M™ Panel Bonding Adhesive PN 08115 09/24/15

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SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding (90 Minutes) Adhesive Part A (Accelerator) PN 08115, 38315, 58115

Product Identification Numbers

LB-K100-0010-6

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Use with Part B, MSDS 32-4327-6

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 1.

Skin Corrosion/Irritation: Category 1B.

Skin Sensitizer: Category 1B.

Reproductive Toxicity: Category 1B.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Causes severe skin burns and eye damage.
 May cause an allergic skin reaction.
 May damage fertility or the unborn child.

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe dust/fume/gas/mist/vapors/spray.
 Wear protective gloves, protective clothing, and eye/face protection.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF ON SKIN: Wash with plenty of soap and water.
 Immediately call a POISON CENTER or doctor/physician.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

May cause chemical gastrointestinal burns. Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

36% of the mixture consists of ingredients of unknown acute oral toxicity.
 37% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Polymeric Diamide	68911-25-1	15 - 40 Trade Secret *
Fused Silica	60676-86-0	10 - 30 Trade Secret *
Butadiene Acrylonitrile Copolymer	68683-29-4	9 - 30 Trade Secret *

Bis(3-Aminopropyl) Ether of Diethylene Glycol	4246-51-9	7 - 13 Trade Secret *
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	90-72-2	5 - 10 Trade Secret *
Amine Epoxy Curing Agent	288-32-4	1 - 5 Trade Secret *
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	1 - 5 Trade Secret *
Inorganic Salt - NJTSRN 04499600-6317	Trade Secret*	1 - 5 Trade Secret *
Bis[(Dimethylamino)Methyl]Phenol	71074-89-0	0.1 - 1.5 Trade Secret *
N-Aminoethylpiperazine	140-31-8	0.1 - 1.5 Trade Secret *
Toluene	108-88-3	< 0.5 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eye Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:

Rinse mouth. Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide

Carbon dioxide

Condition

During Combustion

During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Do not use in a confined area with minimal air exchange. Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human carcin
Toluene	108-88-3	CMRG	STEL:75 ppm	Skin Notation
Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft.	
Dimethyl Siloxane, Reaction Product with Silica	67762-90-7	CMRG	CEIL:5 mg/m ³	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft.	
Tris(2,4,6-Dimethylaminomethyl)Phen	90-72-2	CMRG	TWA:5 ppm	

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ACGIH : American Conference of Governmental Industrial Hygienists
 AIHA : American Industrial Hygiene Association
 CMRG : Chemical Manufacturer's Recommended Guidelines
 OSHA : United States Department of Labor - Occupational Safety and Health Administration
 TWA: Time-Weighted-Average
 STEL: Short Term Exposure Limit
 CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

- Full Face Shield
- Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

- Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Viscous liquid
Odor, Color, Grade:	Tan liquid, slight amine odor.
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	>=110 °C
Flash Point	110 °C [<i>Test Method: Closed Cup</i>]
Evaporation rate	<=1 [<i>Ref Std: BUOAC=1</i>]

Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	<=200 mmHg [@ 20 °C]
Vapor Density	No Data Available
Density	1.2 g/ml
Specific Gravity	1.2 [Ref Std: WATER=1]
Solubility In Water	No Data Available
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	100,000 - 225,000 centipoise [Test Method: Brookfield]
Hazardous Air Pollutants	0.01 lb HAPS/lb solids [Test Method: Calculated]
Volatile Organic Compounds	4 g/l [Test Method: calculated SCAQMD rule 443.1]
Volatile Organic Compounds	0.4 % weight [Test Method: calculated per CARB title 2]
Percent volatile	0.4 % weight
VOC Less H2O & Exempt Solvents	4 g/l [Test Method: calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

May be harmful in contact with skin.

Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

May be harmful if swallowed.

Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE 2,000 - 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Fused Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fused Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Butadiene Acrylonitrile Copolymer	Dermal	Rabbit	LD50 > 3,000 mg/kg
Butadiene Acrylonitrile Copolymer	Ingestion	Rat	LD50 > 15,300 mg/kg
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Dermal	Rabbit	LD50 2,500 mg/kg
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Ingestion	Rat	LD50 3,160 mg/kg
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	Rat	LD50 1,280 mg/kg
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Ingestion	Rat	LD50 1,000 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl Siloxane, Reaction Product with Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Amine Epoxy Curing Agent	Dermal		LD50 estimated to be 200 - 1,000 mg/kg

Amine Epoxy Curing Agent	Ingestion	Rat	LD50 970 mg/kg
Inorganic Salt - NJTSRN 04499600-6317	Dermal	Rat	LD50 estimated to be > 5,000 mg/kg
Inorganic Salt - NJTSRN 04499600-6317	Ingestion	Rat	LD50 9,285 mg/kg
Bis[(Dimethylamino)Methyl]Phenol	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
N-Aminoethylpiperazine	Dermal	Rabbit	LD50 865 mg/kg
N-Aminoethylpiperazine	Ingestion	Rat	LD50 1,470 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-Vapor (4 hours)	Rat	LC50 30 mg/l
Toluene	Ingestion	Rat	LD50 5,550 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Rabbit	Corrosive
Polymeric Diamide	Rabbit	Irritant
Fused Silica	Rabbit	No significant irritation
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Rabbit	Corrosive
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Bis[(Dimethylamino)Methyl]Phenol	similar compounds	Corrosive
N-Aminoethylpiperazine	Rabbit	Corrosive
Toluene	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	similar health hazards	Corrosive
Polymeric Diamide	similar health hazards	Corrosive
Fused Silica	Rabbit	No significant irritation
Bis(3-Aminopropyl) Ether of Diethylene Glycol	similar health hazards	Corrosive
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product with Silica	Rabbit	No significant irritation
Bis[(Dimethylamino)Methyl]Phenol	similar compounds	Corrosive
N-Aminoethylpiperazine	Rabbit	Corrosive
Toluene	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Overall product	Guinea pig	Sensitizing
Polymeric Diamide	Guinea pig	Sensitizing
Fused Silica	Human and animal	Not sensitizing
Butadiene Acrylonitrile Copolymer	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product with Silica	Human and	Not sensitizing

N-Aminoethylpiperazine	animal Guinea pig	Sensitizing
Toluene	Guinea pig	Not sensitizing

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Fused Silica	In Vitro	Not mutagenic
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	In Vitro	Not mutagenic
Dimethyl Siloxane, Reaction Product with Silica	In Vitro	Not mutagenic
N-Aminoethylpiperazine	In vivo	Not mutagenic
N-Aminoethylpiperazine	In Vitro	Some positive data exist, but the data are not sufficient for classification
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Fused Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product with Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Fused Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product with Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
N-Aminoethylpiperazine	Ingestion	Not toxic to female reproduction	Rat	NOAEL 598 mg/kg/day	prematuring & during gestation
N-Aminoethylpiperazine	Ingestion	Not toxic to male reproduction	Rat	NOAEL 409 mg/kg/day	32 days
N-Aminoethylpiperazine	Ingestion	Not toxic to development	Rat	NOAEL 899 mg/kg/day	prematuring & during gestation
Toluene	Inhalation	Some positive female reproductive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

Toluene	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Bis(3-Aminopropyl) Ether of Diethylene Glycol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
N-Aminoethylpiperazine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Fused Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	skin liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
Tris(2,4,6-Dimethylaminomonomethyl)Phenol	Dermal	auditory system hematopoietic system eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product with Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
N-Aminoethylpiperazine	Ingestion	heart endocrine system hematopoietic system liver nervous system kidney and/or bladder	All data are negative	Rat	NOAEL 598 mg/kg/day	28 days
Toluene	Inhalation	auditory system nervous system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1.1 mg/l	4 weeks

Toluene	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system vascular system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 105 mg/kg/day	4 weeks

Aspiration Hazard

Name	Value
Toluene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Inorganic Salt - NJTSRN 04499600-6317 (NITRATE COMPOUNDS (WATER DISSOCIABLE; REPORTABLE ONLY WHEN IN AQUEOUS SOLUTION))	Trade Secret	1 - 5

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Benzene	71-43-2	Male reproductive toxin
Benzene	71-43-2	Carcinogen
Benzene	71-43-2	Developmental Toxin
Toluene	108-88-3	Female reproductive toxin
Toluene	108-88-3	Developmental Toxin

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 3 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar

emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding Adhesive Part B PNs 08115, 38315, 58115

1.2. Recommended use and restrictions on use

Recommended use

Automotive, Structural Panel Bonding Adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Automotive Aftermarket
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2A.

Skin Sensitizer: Category 1.

Carcinogenicity: Category 2.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Causes serious eye irritation.
 May cause an allergic skin reaction.
 Suspected of causing cancer.

Precautionary Statements

General:

Keep out of reach of children.

Prevention:

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Avoid breathing dust/fume/gas/mist/vapors/spray.
 Wear protective gloves and eye/face protection.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

None.

34% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	25068-38-6	30 - 60 Trade Secret *
Oxide Glass Chemicals	65997-17-3	10 - 30 Trade Secret *
Fused Silica	60676-86-0	7 - 13 Trade Secret *
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	14228-73-0	7 - 13 Trade Secret *
Acrylate Polymer	Trade Secret*	5 - 10 Trade Secret *
Silica	7631-86-9	1 - 5 Trade Secret *
3-(Trimethoxysilyl)propyl Glycidyl Ether	2530-83-8	0.5 - 1.5 Trade Secret *
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	0.5 - 1.5 Trade Secret *
Carbon Black	1333-86-4	< 0.5 Trade Secret *

Epichlorohydrin	106-89-8	< 0.02 Trade Secret *
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*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent

material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from strong bases. Store away from oxidizing agents. Store away from amines.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Epichlorohydrin	106-89-8	ACGIH	TWA:0.5 ppm	A3: Confirmed animal carcin., Skin Notation
Epichlorohydrin	106-89-8	OSHA	TWA:19 mg/m3(5 ppm)	Skin Notation
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon Black	1333-86-4	CMRG	TWA:0.5 mg/m3	
Carbon Black	1333-86-4	OSHA	TWA:3.5 mg/m3	
3-(Trimethoxysilyl)propyl Glycidyl Ether	2530-83-8	CMRG	TWA:5 ppm	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Oxide Glass Chemicals	65997-17-3	Manufacturer determined	TWA(as dust):10 mg/m3	
Dimethyl Siloxane, Reaction Product With Silica	67762-90-7	CMRG	CEIL:5 mg/m3	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Silica	7631-86-9	CMRG	TWA(as respirable dust):3 mg/m3	
SILICA, AMORPHOUS	7631-86-9	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Odor, Color, Grade:	Black, Viscous Liquid.
Odor threshold	No Data Available
pH	No Data Available
Melting point	No Data Available
Boiling Point	>= 95 °F
Flash Point	>= 220 °F [Test Method: Closed Cup]
Evaporation rate	<= 1 Units not avail. or not appl. [Ref Std: BUOAC=1]
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	<= 27 psia
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	10.014 lb/gal
Specific Gravity	1.2 [Ref Std: WATER=1]

Solubility in Water	Negligible
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	100,000 centipoise - 225,000 centipoise [<i>Test Method:</i> Brookfield]
Hazardous Air Pollutants	0.00162 lb HAPS/gal
Volatile Organic Compounds	15 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]
Volatile Organic Compounds	1.6 % weight [<i>Test Method:</i> calculated per CARB title 2]
Percent volatile	1.6 % weight
VOC Less H2O & Exempt Solvents	15 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Sparks and/or flames

10.5. Incompatible materials

Amines
 Strong acids
 Strong bases
 Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
Aldehydes	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Additional Health Effects:

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
Generic: GLASS FILAMENTS	65997-17-3	Anticipated human carcinogen	National Toxicology Program Carcinogens
Carbon Black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Epichlorohydrin	106-89-8	Grp. 2A: Probable human carc.	International Agency for Research on Cancer
Epichlorohydrin	106-89-8	Anticipated human carcinogen	National Toxicology Program Carcinogens

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Inhalation-Dust/Mist(4 hr)		No data available; calculated ATE > 12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Rat	LD50 > 1,600 mg/kg
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
Oxide Glass Chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide Glass Chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Dermal	Rabbit	LD50 2,500 mg/kg
Fused Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Ingestion	Rat	LD50 2,450 mg/kg
Fused Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fused Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Acrylate Polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Acrylate Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
3-(Trimethoxysilyl)propyl Glycidyl Ether	Dermal	Rabbit	LD50 4,000 mg/kg
3-(Trimethoxysilyl)propyl Glycidyl Ether	Inhalation-Dust/Mist	Rat	LC50 > 5.3 mg/l

	(4 hours)		
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Rat	LD50 7,010 mg/kg
Dimethyl Siloxane, Reaction Product With Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Dimethyl Siloxane, Reaction Product With Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg
Epichlorohydrin	Dermal	Rabbit	LD50 755 mg/kg
Epichlorohydrin	Inhalation-Vapor (4 hours)	Rat	LC50 1.7 mg/l
Epichlorohydrin	Ingestion	Rat	LD50 260 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Mild irritant
Oxide Glass Chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Professional judgement	Mild irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Minimal irritation
Silica	Rabbit	No significant irritation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Rabbit	Mild irritant
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Carbon Black	Rabbit	No significant irritation
Epichlorohydrin	Human and animal	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Rabbit	Moderate irritant
Oxide Glass Chemicals	Professional judgement	No significant irritation
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Professional judgement	Mild irritant
Fused Silica	Rabbit	No significant irritation
Acrylate Polymer	Professional judgement	Mild irritant
Silica	Rabbit	No significant irritation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Rabbit	Corrosive
Dimethyl Siloxane, Reaction Product With Silica	Rabbit	No significant irritation
Carbon Black	Rabbit	No significant irritation
Epichlorohydrin	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human and animal	Sensitizing
1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	similar compounds	Sensitizing
Fused Silica	Human and animal	Not sensitizing
Silica	Human and animal	Not sensitizing
3-(Trimethoxysilyl)propyl Glycidyl Ether	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	Human and animal	Not sensitizing
Epichlorohydrin	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In vivo	Not mutagenic
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
Oxide Glass Chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification
Fused Silica	In Vitro	Not mutagenic
Silica	In Vitro	Not mutagenic
3-(Trimethoxysilyl)propyl Glycidyl Ether	In vivo	Not mutagenic
3-(Trimethoxysilyl)propyl Glycidyl Ether	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dimethyl Siloxane, Reaction Product With Silica	In Vitro	Not mutagenic
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not sufficient for classification
Epichlorohydrin	In Vitro	Some positive data exist, but the data are not sufficient for classification
Epichlorohydrin	In vivo	Mutagenic

Carcinogenicity

Name	Route	Species	Value
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Oxide Glass Chemicals	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Fused Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
3-(Trimethoxysilyl)propyl Glycidyl Ether	Dermal	Mouse	Not carcinogenic
Dimethyl Siloxane, Reaction Product With Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic

Carbon Black	Inhalation	Rat	Carcinogenic
Epichlorohydrin	Dermal	Mouse	Not carcinogenic
Epichlorohydrin	Ingestion	Rat	Carcinogenic
Epichlorohydrin	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
Fused Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fused Silica	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fused Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Dimethyl Siloxane, Reaction Product With Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Epichlorohydrin	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.2 mg/l	10 weeks
Epichlorohydrin	Inhalation	Not toxic to development	Multiple animal species	NOAEL 0.09 mg/l	during organogenesis
Epichlorohydrin	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 160 mg/kg/day	during gestation
Epichlorohydrin	Ingestion	Toxic to male reproduction	Rat	LOAEL 6.25 mg/kg/day	23 days
Epichlorohydrin	Inhalation	Toxic to male reproduction	Rat	NOAEL 0.02 mg/l	10 weeks

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Epichlorohydrin	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL not available	occupational exposure
Epichlorohydrin	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Oxide Glass Chemicals	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL not available	occupational exposure
Fused Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
3-(Trimethoxysilyl)propyl Glycidyl Ether	Ingestion	heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
Dimethyl Siloxane, Reaction Product With Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Carbon Black	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure
Epichlorohydrin	Inhalation	liver	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.21 mg/l	19 days
Epichlorohydrin	Inhalation	kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.04 mg/l	136 weeks
Epichlorohydrin	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.377 mg/l	4 weeks
Epichlorohydrin	Inhalation	immune system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.211 mg/l	4 weeks
Epichlorohydrin	Inhalation	heart	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.02 mg/l	98 days
Epichlorohydrin	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.002 mg/l	98 days
Epichlorohydrin	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.02 mg/l	13 weeks

Epichlorohydrin	Inhalation	blood	All data are negative	Rat	NOAEL 0.189 mg/l	90 days
Epichlorohydrin	Ingestion	heart blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 80 mg/kg/day	12 weeks
Epichlorohydrin	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25 mg/kg/day	90 days

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
Epichlorohydrin	106-89-8	Male reproductive toxin
Epichlorohydrin	106-89-8	Carcinogen
Carbon Black	1333-86-4	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	32-4327-6	Version Number:	1.01
Issue Date:	09/23/15	Supersedes Date:	11/24/14

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Document Group:	11-3180-4	Version Number:	14.00
Issue Date:	04/16/15	Supersedes Date:	04/23/10

Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive DP100, Clear

ID Number(s):

62-3575-1430-6, 62-3575-1435-5, 62-3575-3530-1, 62-3575-3830-5

Recommended use

Structural adhesive

Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

10-3337-2, 10-3341-4

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Document Group:	10-3341-4	Version Number:	22.00
Issue Date:	04/16/15	Supersedes Date:	01/06/10

SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive DP100 Clear, Part A

1.2. Recommended use and restrictions on use

Recommended use

Accelerator for 2 part epoxy adhesive, Structural adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2A.

Skin Corrosion/Irritation: Category 2.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms



Hazard Statements

Causes serious eye irritation.
Causes skin irritation.

Precautionary Statements

Prevention:

Wear protective gloves and eye/face protection.
Wash thoroughly after handling.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Mercaptan Polymer (NJTS Reg. No. 04499600-6776)	Trade Secret*	80 - 95 Trade Secret *
2,4,6-tris((Dimethylamino)methyl)phenol	90-72-2	5 - 15 Trade Secret *
bis((Dimethylamino)methyl)phenol	71074-89-0	0.1 - 1.5 Trade Secret *

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Sulfide	During Combustion
Oxides of Nitrogen	During Combustion
Oxides of Sulfur	During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
2,4,6-tris((Dimethylamino)methyl)phenol	90-72-2	CMRG	TWA:5 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls**8.2.1. Engineering controls**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Butyl Rubber

Neoprene

Nitrile Rubber

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

General Physical Form:	Liquid
Specific Physical Form:	Viscous
Odor, Color, Grade:	dark amber, strong mercaptan odor
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>

Melting point	<i>Not Applicable</i>
Boiling Point	≥ 257 °C
Flash Point	257 °C [<i>Test Method:</i> Closed Cup]
Evaporation rate	<i>Not Applicable</i>
Flammability (solid, gas)	<i>Not Applicable</i>
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	Negligible
Vapor Density	<i>Not Applicable</i>
Density	1.15 g/ml
Specific Gravity	1.15 [<i>Ref Std:</i> WATER=1]
Solubility in Water	Negligible
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	8,000 - 15,000 centipoise [@ 73 °F]
Hazardous Air Pollutants	0 % weight [<i>Test Method:</i> Calculated]
VOC Less H2O & Exempt Solvents	0 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1] [<i>Details:</i> when used as intended with Part B]
VOC Less H2O & Exempt Solvents	0 g/l [<i>Test Method:</i> calculated SCAQMD rule 443.1] [<i>Details:</i> as supplied]
VOC Less H2O & Exempt Solvents	0 % [<i>Test Method:</i> calculated SCAQMD rule 443.1] [<i>Details:</i> when used as intended with Part B]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be

reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Eye Contact:

Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion:

May be harmful if swallowed.

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
Mercaptan Polymer (NJTS Reg. No. 04499600-6776)	Dermal	Rabbit	LD50 > 10,200 mg/kg
Mercaptan Polymer (NJTS Reg. No. 04499600-6776)	Ingestion	Rat	LD50 2,600 mg/kg
2,4,6-tris((Dimethylamino)methyl)phenol	Dermal	Rat	LD50 1,280 mg/kg
2,4,6-tris((Dimethylamino)methyl)phenol	Ingestion	Rat	LD50 1,000 mg/kg
bis((Dimethylamino)methyl)phenol	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	In vitro data	Irritant
2,4,6-tris((Dimethylamino)methyl)phenol	Rabbit	Corrosive
bis((Dimethylamino)methyl)phenol	similar compounds	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro data	Severe irritant
2,4,6-tris((Dimethylamino)methyl)phenol	Rabbit	Corrosive
bis((Dimethylamino)methyl)phenol	similar compounds	Corrosive

Skin Sensitization

Name	Species	Value
2,4,6-tris((Dimethylamino)methyl)phenol	Guinea pig	Some positive data exist, but the data are not sufficient for classification

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
2,4,6-tris((Dimethylamino)methyl)phenol	In Vitro	Not mutagenic

Carcinogenicity

For the component/components, either no data are currently available or the data are not sufficient for classification.

Reproductive Toxicity**Reproductive and/or Developmental Effects**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
2,4,6-tris((Dimethylamino)methyl)phenol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
2,4,6-tris((Dimethylamino)methyl)phenol	Dermal	skin liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
2,4,6-tris((Dimethylamino)methyl)phenol	Dermal	auditory system hematopoietic system eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 1 **Instability:** 1 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include

the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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Document Group:	10-3337-2	Version Number:	16.00
Issue Date:	04/16/15	Supersedes Date:	06/16/05

SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive DP100 Clear, Part B

Product Identification Numbers

DP-100

1.2. Recommended use and restrictions on use

Recommended use

Structural adhesive

1.3. Supplier's details

MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms

**Hazard Statements**

Causes eye irritation.
May cause an allergic skin reaction.

Precautionary Statements**Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Epoxy Resin	25068-38-6	100

SECTION 4: First aid measures

4.1. Description of first aid measures**Inhalation:**

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Ketones	During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls**8.2.1. Engineering controls**

No engineering controls required.

8.2.2. Personal protective equipment (PPE)**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

Respiratory protection

None required.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

General Physical Form:	Liquid
Specific Physical Form:	Viscous
Odor, Color, Grade:	light straw colored, epoxy odor
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>Not Applicable</i>
Boiling Point	>=249 °C
Flash Point	249 °C [<i>Test Method: Pensky-Martens Closed Cup</i>]
Evaporation rate	<i>Not Applicable</i>
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	<=0.03 mmHg [<i>@ 70 °C</i>]
Vapor Density	<i>Not Applicable</i>
Density	1.17 g/ml
Specific Gravity	1.17
Solubility in Water	Nil

Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	10,000 - 30,000 centipoise [@ 73.4 °F] [Details: MITS data]
Hazardous Air Pollutants	0 % weight [Test Method: Calculated]
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part A]
VOC Less H2O & Exempt Solvents	0 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: as supplied]
VOC Less H2O & Exempt Solvents	0 % [Test Method: calculated SCAQMD rule 443.1] [Details: when used as intended with Part A]

SECTION 10: Stability and reactivity

10.1. Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

Heat

10.5. Incompatible materials

Strong acids

Strong oxidizing agents

10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

No health effects are expected.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Epoxy Resin	Dermal	Rat	LD50 > 1,600 mg/kg
Epoxy Resin	Ingestion	Rat	LD50 > 1,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Epoxy Resin	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Epoxy Resin	Rabbit	Moderate irritant

Skin Sensitization

Name	Species	Value
Epoxy Resin	Human and animal	Sensitizing

Respiratory Sensitization

Name	Species	Value
Epoxy Resin	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Epoxy Resin	In vivo	Not mutagenic
Epoxy Resin	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Epoxy Resin	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Epoxy Resin	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
Epoxy Resin	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
Epoxy Resin	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

For the component/components, either no data are currently available or the data are not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Epoxy Resin	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
Epoxy Resin	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
Epoxy Resin	Ingestion	auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel

during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 1 Instability: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group:	10-3337-2	Version Number:	16.00
Issue Date:	04/16/15	Supersedes Date:	06/16/05

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Revision Number: 008.0

Issue date: 01/20/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE 404 INSTANT ADHESIVE known as LOCTITE® 404™ INSTANT ADHESIVE	IDH number:	135465
Product use:	Adhesive	Item number:	46551
Company address:	Henkel Corporation 2515 Meadowpine Boulevard Mississauga, Ontario L5N 6C3	Region:	Canada
		Contact information:	Telephone: 905.814.6511 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Physical state:	Liquid	WHMIS hazard class:	B.3, D.2.A, D.2.B
Color:	Clear, Colorless		
Odor:	Sharp, Irritating		

WARNING: BONDS SKIN IN SECONDS.
MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation:	Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and tightness in the chest.
Skin contact:	Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.
Eye contact:	Irritating to eyes. Causes excessive tearing. Eyelids may bond.
Ingestion:	Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Ethyl 2-cyanoacrylate	7085-85-0	60 - 100
Hydroquinone	123-31-9	0.1 - 1

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

Skin contact:	Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.
Ingestion:	Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.
Notes to physician:	Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

5. FIRE FIGHTING MEASURES

Flash point:	80 - 93 °C (176°F - 199.4 °F) Tagliabue closed cup
Autoignition temperature:	485 °C (905°F)
Flammable/Explosive limits - lower:	Not determined
Flammable/Explosive limits - upper:	Not determined
Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode.
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.
Sensitivity to Mechanical Impact:	Not available.
Sensitivity to static discharge:	Not available.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Ventilate area. Do not allow product to enter sewer or waterways.
Clean-up methods:	Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

- Handling:** Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.
- Storage:** Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Canada Customer Service at 800-263-5043.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Ethyl 2-cyanoacrylate	0.2 ppm TWA	None	None	None
Hydroquinone	1 mg/m ³ TWA (Dermal sensitization)	2 mg/m ³ PEL	None	None

- Engineering controls:** Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.
- Respiratory protection:** Use a NIOSH approved supplied air respirator with an organic cartridge if the potential to exceed established exposure limits exists.
- Eye/face protection:** Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.
- Skin protection:** Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state:** Liquid
- Color:** Clear, Colorless
- Odor:** Sharp, Irritating
- Odor threshold:** 1 - 2 ppm
- pH:** Not applicable
- Vapor pressure:** < 0.2 mm hg
- Boiling point/range:** > 149 °C (> 300.2 °F)
- Melting point/ range:** Not determined
- Specific gravity:** 1.09 at 23.9 °C (75.02 °F)
- Vapor density:** 3 Approximately
- Flash point:** 80 - 93 °C (176°F - 199.4 °F) Tagliabue closed cup
- Flammable/Explosive limits - lower:** Not determined
- Flammable/Explosive limits - upper:** Not determined
- Autoignition temperature:** 485 °C (905°F)
- Evaporation rate:** Not available.
- Solubility in water:** Polymerises in presence of water.
- Partition coefficient (n-octanol/water):** Not determined
- VOC content:** < 2 %; < 20 g/l (California SCAQMD Method 316B) (Estimated)

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Hazardous reactions:	Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.
Hazardous decomposition products:	None
Incompatible materials:	Water, amines, alkalis and alcohols.
Conditions to avoid:	Spontaneous polymerization.

11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity:	LD50 (rat) > 5,000 mg/kg (Estimated)
Acute dermal product toxicity:	LD50 (rabbit) > 2,000 mg/kg (Estimated)
Toxicologically synergistic products:	Not available.

Refer to the following for Irritancy of Product, Sensitization to Product, Carcinogenicity, Reproductive Toxicity, Teratogenicity, and Mutagenicity.

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)	ACGIH Carcinogen
Ethyl 2-cyanoacrylate	No	No	No	No
Hydroquinone	No	No	No	Group A3

Hazardous components	LD50s and LC50s	Health Effects/Target Organs
Ethyl 2-cyanoacrylate	None	Irritant, Allergen, Respiratory
Hydroquinone	Oral LD50 (RAT) = 320 mg/kg Oral LD50 (RABBIT) = 540 mg/kg Dermal LD50 (RAT) = > 900 mg/kg	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Immune system, Irritant, Liver, Mutagen, Skin, Thyroid

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

14. TRANSPORT INFORMATION

Canada Transportation of Dangerous Goods - Ground

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

International Air Transportation (ICAO/IATA)

Proper shipping name:	Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
Hazard class or division:	9
Identification number:	UN 3334
Packing group:	III
Exceptions:	(Not more than 500ml) Unrestricted

Water Transportation (IMO/IMDG)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

15. REGULATORY INFORMATION

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: Reviewed MSDS. Reissued with new date.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the MSDS contains all the information required by the CPR.

Prepared by: Catherine Bimler, Regulatory Affairs Specialist

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MATERIAL SAFETY DATA SHEET
470 FEATHERSPRAY

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SLUYTER COMPANY LTD.

375 Steelcase Road East
Markham, Ontario L3R 1G3 Canada
Tel (905) 475-6011 Fax (905) 475-3119

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER-----SLUYTER COMPANY LTD.
375 Steelcase Road East
Markham, Ontario L3R 1G3 Canada
Tel (905) 475-6011
PRODUCT NAME-----470 FEATHERSPRAY.
PRODUCT USES-----Foam adhesive.
CHEMICAL FAMILY-----Solvent based adhesive (Pressurized).

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS / %	CAS / TLV	LD/50, ROUTE, SPECIES	LC/50, ROUTE, SPECIES
ACETONE			
10 - 30	67-64-1 750 ppm	9750 mg/kg Oral (Rat)	16000 ppm 4 hours Inhalation (Rat)
CYCLOHEXANE			
10 - 30	110-82-7 300 ppm	12705 mg/kg Oral (Rat)	50 ppm 1 hour Inhalation (Rat)
HEXANE			
30 - 60	110-54-3 50 ppm	28710 mg/kg Oral (Rat)	120000 mg/m3 Inhalation MUS
ISOBUTANE			
10 - 30	75-28-5 800 ppm	Not Indicated	Not indicated
PROPANE			
10 - 30	74-98-6 1000 ppm	Not indicated	Not Indicated

SECTION 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:-----
SKIN CONTACT-----Can cause moderate skin irritation,
defatting and dermatitis.
SKIN ABSORPTION-----Not available.
INHALATION CHRONIC-----Breathing of high vapour concentrations
could cause dizziness, headache or even
unconsciousness. May be anesthetic which
could result in other central nervous system effects.
INGESTION-----Can cause gastro-intestinal irritation,
nausea, vomiting and diarrhea. Small
amounts of liquid aspirated into
respiratory system could cause severe
health effects (e.g. Bronchopneumonia or Pulmonary Edema).
EYE CONTACT-----Contains materials that are moderately
irritating to the eyes.
EFFECTS OF ACUTE EXPOSURE-----Refer to "ROUTE ENTRY" section.
EFFECTS OF CHRONIC EXPOSURE-----Prolonged or repeated exposure to N-Hexane
may damage peripheral nerve tissue of the
arms and legs, which may result in
muscular weakness or loss of sensation in
the extremities. Prolonged or repeated skin
contact may cause drying or cracking of the skin.

Ref: 0000201E

Preparation Date : May.07.2015

EMERGENCY - CALL CANUTEC (613) 996-6666 (Collect)

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470 FEATHERSPRAY

SECTION 04: FIRST AID MEASURES

EYE CONTACT-----Check for and remove any contact lenses.
Immediately flush with water for a minimum
of 20 minutes and get medical attention.

SKIN CONTACT-----Remove contaminated clothing. Wash
affected area with water and soap. Seek
medical attention if irritation occurs or persists.

INHALATION-----Remove patient to fresh air. If not
breathing, trained personnel should
administer artificial respiration. Get
medical attention.

INGESTION-----Do NOT induce vomiting. Get immediate
medical attention.

ADDITIONAL INFORMATION-----Contact your local poison control centre.

SECTION 05: FIRE FIGHTING MEASURES

FLAMMABILITY-----Flammable.

UNDER WHAT CONDITIONS-----Flammable aerosol. A dangerous fire hazard
when exposed to heat, flames or
sparks. CAUTION: CONTENTS UNDER PRESSURE.
Temperatures above 50°C may cause container to explode.

SPECIAL PROCEDURES-----A self-contained breathing apparatus is
required for fire fighting personnel. Use
water spray to cool fire exposed surfaces
and to protect personnel.

FLASH POINT (METHOD)----- -18°C TAG Closed Cup. Flame projection > 45 cm.

AUTO IGNITION TEMPERATURE-----Not available.

UPPER FLAMMABLE LIMIT (% VOL)-----7.00.

LOWER FLAMMABLE LIMIT (% VOL)-----0.60.

EXTINGUISHING MEDIA-----Alcohol foam, CO2 or dry chemical.

HAZARDOUS COMBUSTION PRODUCTS-----Oxides of Carbon (CO and CO2). Toxic fumes.

SENSITIVITY TO MECHANICAL-----Not available.

IMPACT

SENSITIVITY TO STATIC-----Not available.

DISCHARGE

SECTION 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL-----Ventilate. Remove all sources of ignition,
open flames, sparks and heaters. Wear
protective gear (See SECTION 8). Small
spills can be wiped. Large spills must be
collected for disposal. Use a
non-combustible absorbent inorganic
material. Clean thoroughly with solvent
based cleaner. Prevent run-off into drains,
sewers and other waterways.

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES-----Avoid skin and eye contact. Avoid breathing
vapours. Use adequate ventilation. Keep away
from heat, sparks and open flame.

STORAGE NEEDS-----Store in a cool area, away from all
sources of heat and ignition. Store in a
dry, well ventilated area. Do NOT store

MATERIAL SAFETY DATA SHEET
470 FEATHERSPRAY

above 49°C.

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:-----

EYE/TYPE-----Safety glasses.

RESPIRATORY/TYPE-----If used indoors on a continuous basis or
if the TLV is exceeded, the use of a
cartridge type respirator (NIOSH/MSHA
approved) is recommended.

GLOVES/ TYPE-----Not applicable.

CLOTHING/TYPE-----Wear adequate protective clothing.

FOOTWEAR/TYPE-----Safety boots as specified in workplace regulations.

OTHER/TYPE-----Eye bath and safety shower.

VENTILATION REQUIREMENTS-----Natural or mechanical (Explosion Proof)
ventilation to keep vapour levels well below the TLV.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE-----Aerosol Can.
ODOUR-----Petroleum Solvent Odour.
SPECIFIC GRAVITY-----0.75 - 0.85 (Liquid Contents).
ODOUR THRESHOLD (ppm)-----Not available.
VAPOUR PRESSURE-----90 psig @ 20°C.
VAPOUR DENSITY (AIR=1)----- > 1.00.
EVAPORATION RATE-----Not available.
BOILING POINT (deg C)-----56°C.
pH-----Not applicable.
SOLUBILITY IN WATER (% W/W)-----Negligible.
COEFFICIENT OF WATER\OIL-----Not available.
DISTRIBUTION
FREEZING POINT----- < 0°C.
MELTING POINT (deg C)-----Not applicable.
MOLECULAR WEIGHT-----Not applicable.

SECTION 10: STABILITY AND REACTIVITY

INCOMPATIBILITY-----Strong acids and strong bases. Oxidizing agents.
REACTIVITY CONDITIONS-----Excessive heat, sparks and open flame.
HAZARDOUS PRODUCTS OF-----Oxides of Carbon (CO and CO2). Toxic
DECOMPOSITION fumes. Smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL-----See "HAZARDOUS INGREDIENTS" in SECTION 2.
IRRITANCY OF MATERIAL-----Moderate.
SENSITIZING CAPABILITY OF-----Not available.
MATERIAL
CARCINOGENICITY OF MATERIAL-----No information is available and no adverse
carcinogenic effects are anticipated.
TERATOGENICITY-----No information is available and no adverse
teratogenicity effects are anticipated.
MUTAGENICITY-----No information is available and no adverse
mutagenicity effects are anticipated.
REPRODUCTIVE EFFECTS-----No information is available and no adverse
reproductive effects are anticipated.
SYNERGISTIC MATERIALS-----Not available.

SECTION 12: ECOLOGICAL INFORMATION

MATERIAL SAFETY DATA SHEET
470 FEATHERSPRAY

ENVIRONMENTAL-----Not available. Can be dangerous if allowed to enter drinking water intakes. Product has an unaesthetic appearance and can be a nuisance. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds and rivers.

BIODEGRADABILITY-----Not available. The solvent portion of this product is biodegradable and vaporizes rapidly.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL-----Contents under pressure. Do NOT puncture, incinerate or expose to heat, even when empty. Spilled material and water rinses are classified as chemical waste. To be disposed of in accordance with current Local, Provincial and Federal regulations.

SECTION 14: TRANSPORT INFORMATION

T.D.G. CLASSIFICATION----- SHIPPING NAME - Aerosols
WHMIS - Consumer Commodity
PACKAGING GROUP- Not Applicable
UN NUMBER - 1950
If the shipment exceeds 500 kg in weight - shipped as
CONSUMER COMMODITY - AEROSOLS FLAMMABLE CLASS 2.1.

SECTION 15: REGULATORY INFORMATION

CPR COMPLIANCE-----This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION-----Class A Class B Div.5 Flammable. Aerosol
Class D Div.2 Subdiv.B.

SECTION 16: OTHER INFORMATION

IMPORTANT:-----The information on this Material Safety Data Sheet is furnished without warranty, expressed or implied. All the information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations for the accuracy or sufficiency.

MATERIAL SAFETY DATA SHEET
476 SPRAY ADHESIVE

Page : 1

SLUYTER COMPANY LTD.

375 Steelcase Road East
Markham, Ontario L3R 1G3 Canada
Tel (905) 475-6011 Fax (905) 475-3119

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER-----SLUYTER COMPANY LTD.
375 Steelcase Road East
Markham, Ontario L3R 1G3 Canada
Tel (905) 475-6011
PRODUCT NAME-----476 SPRAY ADHESIVE
PRODUCT USES-----Foam adhesive.
CHEMICAL FAMILY-----Solvent based adhesive (Pressurized).

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS / %	CAS / TLV	LD/50, ROUTE, SPECIES	LC/50, ROUTE, SPECIES
ACETONE 10 - 30	67-64-1 750 ppm	9750 mg/kg Oral (Rat)	16000 ppm 4 hours Inhalation (Rat)
CYCLOHEXANE 10 - 30	110-82-7 300 ppm	12705 mg/kg Oral (Rat)	50 ppm 1 hour Inhalation (Rat)
HEXANE 30 - 60	110-54-3 50 ppm	28710 mg/kg Oral (Rat)	120000 mg/m3 Inhalation MUS
ISOBUTANE 10 - 30	75-28-5 800 ppm	Not Indicated	Not indicated
PROPANE 10 - 30	74-98-6 1000 ppm	Not indicated	Not Indicated

SECTION 03: HAZARDS IDENTIFICATION

ROUTE OF ENTRY:-----
SKIN CONTACT-----Can cause moderate skin irritation,
defatting and dermatitis.
SKIN ABSORPTION-----Not available.
INHALATION CHRONIC-----Breathing of high vapour concentrations
could cause dizziness, headache or even
unconsciousness. May be anesthetic which
could result in other central nervous system effects.
INGESTION-----Can cause gastro-intestinal irritation,
nausea, vomiting and diarrhea. Small
amounts of liquid aspirated into
respiratory system could cause severe
health effects (e.g. Bronchopneumonia or Pulmonary Edema).
EYE CONTACT-----Contains materials that are moderately
irritating to the eyes.
EFFECTS OF ACUTE EXPOSURE-----Refer to "ROUTE ENTRY" section.
EFFECTS OF CHRONIC EXPOSURE-----Prolonged or repeated exposure to N-Hexane
may damage peripheral nerve tissue of the
arms and legs, which may result in
muscular weakness or loss of sensation in
the extremities. Prolonged or repeated skin
contact may cause drying or cracking of the skin.

Ref: 0000202E

Preparation Date : May.07.2015

EMERGENCY - CALL CANUTEC (613) 996-6666 (Collect)

MATERIAL SAFETY DATA SHEET
476 SPRAY ADHESIVE

SECTION 04: FIRST AID MEASURES

EYE CONTACT-----Check for and remove any contact lenses.
Immediately flush with water for a minimum
of 20 minutes and get medical attention.

SKIN CONTACT-----Remove contaminated clothing. Wash
affected area with water and soap. Seek
medical attention if irritation occurs or persists.

INHALATION-----Remove patient to fresh air. If not
breathing, trained personnel should
administer artificial respiration. Get
medical attention.

INGESTION-----Do NOT induce vomiting. Get immediate
medical attention.

ADDITIONAL INFORMATION-----Contact your local poison control centre.

SECTION 05: FIRE FIGHTING MEASURES

FLAMMABILITY-----Flammable.

UNDER WHAT CONDITIONS-----Flammable aerosol. A dangerous fire hazard
when exposed to heat, flames or
sparks. CAUTION: CONTENTS UNDER PRESSURE.
Temperatures above 50°C may cause container to explode.

SPECIAL PROCEDURES-----A self-contained breathing apparatus is
required for fire fighting personnel. Use
water spray to cool fire exposed surfaces
and to protect personnel.

FLASH POINT (METHOD)----- -18°C TAG Closed Cup. Flame projection > 45 cm.

AUTO IGNITION TEMPERATURE-----Not available.

UPPER FLAMMABLE LIMIT (% VOL)-----7.00.

LOWER FLAMMABLE LIMIT (% VOL)-----0.60.

EXTINGUISHING MEDIA-----Alcohol foam, CO2 or dry chemical.

HAZARDOUS COMBUSTION PRODUCTS-----Oxides of Carbon (CO and CO2). Toxic fumes.

SENSITIVITY TO MECHANICAL-----Not available.

IMPACT

SENSITIVITY TO STATIC-----Not available.

DISCHARGE

SECTION 06: ACCIDENTAL RELEASE MEASURES

LEAK/SPILL-----Ventilate. Remove all sources of ignition,
open flames, sparks and heaters. Wear
protective gear (See SECTION 8). Small
spills can be wiped. Large spills must be
collected for disposal. Use a
non-combustible absorbent inorganic
material. Clean thoroughly with solvent
based cleaner. Prevent run-off into drains,
sewers and other waterways.

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES-----Avoid skin and eye contact. Avoid breathing
vapours. Use adequate ventilation. Keep away
from heat, sparks and open flame.

STORAGE NEEDS-----Store in a cool area, away from all
sources of heat and ignition. Store in a
dry, well ventilated area. Do NOT store

MATERIAL SAFETY DATA SHEET
476 SPRAY ADHESIVE

above 49°C.

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

PROTECTIVE EQUIPMENT:-----

EYE/TYPE-----Safety glasses.

RESPIRATORY/TYPE-----If used indoors on a continuous basis or
if the TLV is exceeded, the use of a
cartridge type respirator (NIOSH/MSHA
approved) is recommended.

GLOVES/ TYPE-----Not applicable.

CLOTHING/TYPE-----Wear adequate protective clothing.

FOOTWEAR/TYPE-----Safety boots as specified in workplace regulations.

OTHER/TYPE-----Eye bath and safety shower.

VENTILATION REQUIREMENTS-----Natural or mechanical (Explosion Proof)
ventilation to keep vapour levels well below the TLV.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE-----Aerosol Can.
ODOUR-----Petroleum Solvent Odour.
SPECIFIC GRAVITY-----0.75 - 0.85 (Liquid Contents).
ODOUR THRESHOLD (ppm)-----Not available.
VAPOUR PRESSURE-----90 psig @ 20°C.
VAPOUR DENSITY (AIR=1)----- > 1.00.
EVAPORATION RATE-----Not available.
BOILING POINT (deg C)-----56°C.
pH-----Not applicable.
SOLUBILITY IN WATER (% W/W)-----Negligible.
COEFFICIENT OF WATER\OIL-----Not available.
DISTRIBUTION
FREEZING POINT----- < 0°C.
MELTING POINT (deg C)-----Not applicable.
MOLECULAR WEIGHT-----Not applicable.

SECTION 10: STABILITY AND REACTIVITY

INCOMPATIBILITY-----Strong acids and strong bases. Oxidizing agents.
REACTIVITY CONDITIONS-----Excessive heat, sparks and open flame.
HAZARDOUS PRODUCTS OF-----Oxides of Carbon (CO and CO2). Toxic
DECOMPOSITION fumes. Smoke.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL-----See "HAZARDOUS INGREDIENTS" in SECTION 2.
IRRITANCY OF MATERIAL-----Moderate.
SENSITIZING CAPABILITY OF-----Not available.
MATERIAL
CARCINOGENICITY OF MATERIAL-----No information is available and no adverse
carcinogenic effects are anticipated.
TERATOGENICITY-----No information is available and no adverse
teratogenicity effects are anticipated.
MUTAGENICITY-----No information is available and no adverse
mutagenicity effects are anticipated.
REPRODUCTIVE EFFECTS-----No information is available and no adverse
reproductive effects are anticipated.
SYNERGISTIC MATERIALS-----Not available.

SECTION 12: ECOLOGICAL INFORMATION

MATERIAL SAFETY DATA SHEET
476 SPRAY ADHESIVE

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ENVIRONMENTAL-----Not available. Can be dangerous if allowed to enter drinking water intakes. Product has an unaesthetic appearance and can be a nuisance. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds and rivers.

BIODEGRADABILITY-----Not available. The solvent portion of this product is biodegradable and vaporizes rapidly.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL-----Contents under pressure. Do NOT puncture, incinerate or expose to heat, even when empty. Spilled material and water rinses are classified as chemical waste. To be disposed of in accordance with current Local, Provincial and Federal regulations.

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Safety Data Sheet

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1. Identification of the Product And The Company	
Product Name	: 64001571, 64001573, 64001575, 64001577, 64001579, 64001581, 64001670, 64001671, 64001672, 64001673, 64001680, 64001681, 64001682, 64001683
Manufacturer/Supplier Name: Radnor Products	Product type and use: Welding mild steels with OGW method. Classification: EN 12536 : O I TS 3623 EN 12536 : O I
Address	
Emergency number	
2. Hazards Identification	
<p>The products are not considered to be hazardous by the manufacturer; however they can contain hazardous ingredients. Different kinds of fume and dust occur during the welding and grinding processes. Chromium-VI compounds and nickel oxides might occur <u>if product contains nickel and chromium</u>, which are classified as carcinogenic. In addition irritant substances such as fluorides and manganese oxides as well as fine dusts (mostly iron oxides) occur.</p> <p>Welding electrodes and wires are non-hazardous solids at ambient temperature. Skin contact is normally not hazardous but should be avoided to prevent possible allergic reaction. Avoid eye contact or inhalation of dust or fumes from the product. Occupational exposure limits of components are described in section 8. Actual exposure should be determined by monitoring the fume in the operator's breathing zone.</p> <p>When this product is used in a welding process the most significant hazards are electric shock, fumes, gases, radiation, spatter, slag and heat. Electric shock can kill. Arc rays can damage eyes and burn skin. Spatter and slag can damage eyes. Spatter, slag, melting metal, arc rays and hot welds can cause burn injuries and start fires. When welding arc or torch flame may be a source of ignition of combustible.</p> <p>The primary entry route for welding fumes and gases is by inhalation. Short term overexposure to welding fumes may result in symptoms like dizziness, nausea, dryness or irritation of the nose, throat or eyes and may aggravate pre-existing respiratory problems (e.g. asthma, emphysema). Long term overexposure to welding fumes may affect pulmonary function. Prolonged inhalation of nickel and chromium compounds above safe exposure limits can cause cancer. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, psychological disturbances and spastic gait.</p> <p>Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedure and electrodes used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include ; coatings on the metal being welded (such as paint, plating, or galvanizing), the number of welders and the volume of the work area, the quality and amount of ventilation, the position of the welders head with respect to the fume plume, as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapors from cleaning and degreasing activities). When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 3. Most fume ingredients are present as complex oxides and compounds and not as pure metals. Decomposition products of normal operation include those originating from the volatilization, reaction, or oxidation of the materials shown in Section 3, plus those from the base metal and coating, etc. as noted above.</p> <p>Welding fumes must be considered as carcinogens. The International Agency for Research on Cancer has classified welding fumes as possibly carcinogenic to humans (Group 2B). Hence, before using welding wire and/or electrodes read and understand the manufacturer's instructions, SDSs, and your employer's safety practices. Take necessary precautions and use proper ventilation and absorption system to remove fumes and gases from your breathing zone and the general area. Keep your head out of the fumes. Do not breathe gas and fumes. Besides, wear correct eye, ear, and body protection and do not touch live electrical parts.</p>	

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3. Composition/Information On Ingredients

INGREDIENT	CAS NO	%WEIGHT	Classification according to 67/548/EEC, Dangerous Substances Directive	Classification according to Regulation (EC) No 1272/2008 [CLP]
CARBON	7440-44-0	<0.20	-	-
IRON	7439-89-6	Bal.	-	-
MANGANESE	7439-96-5	<1.0	-	-
SILICON	7440-21-3	<0,5	-	-
COPPER	7440-50-8	<0.3	-	-

*Manganese Dioxide may occur during welding.

4. First Aid Measures

Inhalation: If dust or fumes inhaled, provide fresh air and call physician. If breathing has stopped, perform artificial respiration and obtain medical assistance immediately.

Eye contact: For radiation burns due to arc flash, see physician. To remove dust, fumes or particulates flush with water for at least fifteen minutes. If irritation persists, obtain medical assistance.

Skin contact: The unused welding product does not irritate the skin but wear gloves to prevent possible allergic reactions. For skin burns from arc radiation, promptly flush with cold water. Get medical attention for burns or irritations that persist. To remove dust or particles wash with mild soap and water.

Electric shock: Disconnect and turn off the power. Use a nonconductive material to pull victim away from contact with live parts or wires. If not breathing, begin artificial respiration, preferably mouth-to-mouth. If no detectable pulse, begin Cardio Pulmonary Resuscitation (CPR). Immediately call a physician.

General: Move to fresh air and call for medical aid.

5. Fire-Fighting Measures

Welding consumables applicable to this sheet as shipped are non reactive, non-flammable, non-explosive and essentially nonhazardous until welded. Welding arcs and sparks can ignite combustibles and flammable products. Unused welding consumables may remain hot for a period of time after completion of welding process. Wear self-contained breathing apparatus as fumes or vapours may be harmful. See American National Standard (ANSI) Z49.1 for further general safety information on the use and handling of welding consumables and associated procedures.

6. Accidental Release Measures

Procedure for cleanup of spills or leaks: Not applicable.

Solid objects can be picked up and placed into a container. Do not allow to enter surface, sewers or ground water. Wear proper personal protective equipment while handling.

7. Handling and Storage

Handling:

Handle with care to avoid stings and cuts. Hold the welding wire manually when loosening the wire. Wear gloves when handling welding consumables. Wash hands / shower before breaks and end of work. Avoid exposure to dust. Local exhaust ventilation of the working area. Some individuals can develop an allergic reaction to certain materials. Retain all warning and identity labels.

Storage:

Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.

Avoid humidity and temperature shocks. Store welding consumables inside a room without humidity. Do not store welding consumables directly on the ground or beside a wall. Storage temperature 21°C ± 2°C, Relative humidity max. % 60.

Because of any reason if protective nylon of the packing was torn or pierced and it won't be used, immediately the packing should repacked.

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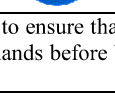
8. Exposure Controls / Personal Protection

INGREDIENT	CAS NO	EINECS NUMBER	EXPOSURE LIMITS (mg/m3)	
			OSHA PEL	ACGIH TLV
CARBON	7440-44-0 (1333-86-4 carbon black)	231-153-3	3,5 (as carbon black)	3,5 (as carbon black)
IRON+ (as iron oxide)	7439-89-6	231-096-4	10	5*
MANGANESE # (compounds and fume as Mn)	7439-96-5	231-105-1	5 ** (Fume) 1,3 STEL***	0.1 mg/m ³ (IHL) (for elemental and inorganic compounds)
SILICON+	7440-21-3	231-130-8	15 (total dust) -5*	-
COPPER	7440-50-8	231-159-6	0.2 (fume) 1 (dust and mists)	0.1 (fume) 1 (dust and mists)

-Respirable Fraction-I-Inhalable Fraction- **-Ceiling Limit ***- Short Term. Exposure Limit
 # Reportable material under Section 313 of SARA ## - Reportable material under SARA 313 only in fibrous form.
 +- As a nuisance particulate covered under " Particulates Not Otherwise Regulated" by OSHA or "Particulates Not Otherwise Classified" by ACGIH.

{A1} -Confirmed Human Carcinogen per ACGIH. {A4} - Not Classifiable as a Human Carcinogen per ACGIH. {A5} -Not Suspected as a Human Carcinogen per ACGIH
 1999 ACGIH listed under Notice of Intended Changes. Limits of 10 mg/m³ (inhalable fraction) and 3 mg/m³ (respirable fraction) for elemental/metal and insoluble compounds and 0.5 mg/m³ (respirable fraction) for soluble compounds are proposed and should be considered as trial limits. A3 - "Confirmed Animal Carcinogen"
 1999 ACGIH listed under Notice of Intended Changes. A2 - "Suspected Human Carcinogen" Limits of 0.05 mg/m³ (respirable fraction) are proposed and should be considered as trial limits.

The exposure limit for welding fume has been established at 5 mg/m³ with OSHA's PEL and ACGIH's TLV. The Individual complex compounds within the fume may have lower exposure limits than the general welding fume PEL/TLV. An Industrial Hygienist, the OSHA permissible exposure Limits For Air Contaminants (29 CFR 1910-1000) and the ACGIH Threshold Limit Values should be consulted to determine the specific fume constituents present and their respective exposure limits.

<p>VENTILATION: Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases below PEL/TLV's in the worker's breathing zone and the general area. Train the welder to keep his head out of the fumes.Keep exposures as low as possible.</p>	
<p>RESPIRATORY PROTECTION: Use NIOSH approved or equivalent fume respirator or air supplied respirator when welding in confined space or where local exhaust or ventilation does not keep exposure below the recommended exposure limit.</p>	
<p>HAND PROTECTION: Wear heat protecting gloves (Non-flammable). For hygiene wash hands before breaks and end of work.</p>	
<p>EYE PROTECTION: Wear helmet or use face shield with filter lens. As a rule of thumb begin with Shade Number 14. Adjust if needed by selecting the next lighter and/or darker shade number. Provide protective screens and flash goggles, if necessary, to shield others.</p>	
<p>PROTECTIVE CLOTHING: Wear hand, head and body protection which help to prevent injury from radiation, sparks and electrical shock. See Z49.1. At a minimum this includes welder's gloves and a protective face shield, and may include arm protectors, aprons, hats, shoulder protection, as well as dark nonsynthetic clothing. Train the welder not to touch live electrical parts and to insulate himself from work and ground.</p>	
<p>SPECIAL PRECAUTIONS (IMPORTANT): Maintain exposure below the PEL/TLV. Use industrial hygiene monitoring to ensure that your use of this material does not create exposures which exceed PEL/TLV. Always use exhaust ventilation. For hygiene wash hands before breaks and end of work. Do not eat, drink or smoke in working areas.</p>	

Safety Data Sheet

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9. Physical and Chemical Properties

Appearance	: Circle, steel wire or rod	Density	: ~7,85 g/cm ³
Color	: Copper's color (because of covering)	Melting point	: 1500°C / >2300°F
Odor	: Odorless	Boiling Point	: N/A
Self-igniting	: Product is not self-igniting.	pH	: N/A
Danger of explosion	: Product does not present an explosion hazard.	Solubility in Water	: Insoluble
Vapor Density(air = 1)	: N/A	Vapor Pressure(mm Hg.)	: N/A

10. Stability and Reactivity

General: These products are only intended for normal welding purposes.

Stability: These products are stable under normal conditions.

Reactivity: Contact with chemical substances like acids or strong bases could cause generation of gas.

When these products are used in a welding process, hazardous fume and gas decomposition products would include those from the volatilization, reaction or oxidation of the materials listed in Section 3 , plus those from the base metal and coating. All of these factors can contribute to the fume and gases generated during welding. The amount of fume varies with the welding parameters. The concentration of a given fume or gas component may decrease or increase by many times the original concentration in the electrode/wire. Also, new compounds not in the electrodes/wire may form. Hence, welding fumes and gases cannot be classified simply.

Reasonably expected constituents of the fume would include: Primarily - iron oxide. Secondary complex oxide of manganese and silicon. Reasonably expected gaseous products would include carbon oxides, nitrogen oxides and ozone. Air contaminants around the welding area can be affected by the welding process and influence the composition and quantity of fumes and gases produced.

Refer to applicable national exposure limits for fume compounds, including those exposure limits for fume compounds found in related section. Manganese also have low exposure limits, in some countries, that may be easily exceeded.

11. Toxicological Information

WELDING FUMES - Welding fumes must be considered as carcinogens. The International Agency for Research on Cancer (IARC) has classified welding fumes as possibly carcinogenic to humans (Group 2B). Acute exposure can result in discomfort such as dizziness, nausea or dryness or irritation of nose, throat or eyes. Chronic exposure can result in respiratory effects such as coughing, wheezing. Excess levels may cause bronchial asthma, lung fibrosis, pneumoconiosis or "siderosis".

IRON, IRON OXIDE FUMES – Acute exposure to the eyes may result in mild conjunctivitis. Overexposure can cause siderosis (deposits of iron in lungs) which some researchers believe may affect pulmonary function. Lungs will clear in time when exposure to iron and its compounds ceases. Iron and magnetite (Fe₃O₄) are not regarded as fibrogenic materials.

MANGANESE – Can cause irritation of the eyes, skin and respiratory tract. Acute overexposure can cause metal fume fever characterized by chills, fever, upset stomach, vomiting, irritation of the throat and aching of body. Recovery is generally complete within 48 hours of the overexposure. Long-term overexposure to manganese compounds may affect the central nervous system. Symptoms may be similar to Parkinson's Disease and can include slowness, changes in handwriting, gait impairment, muscle spasms and cramps and less commonly, tremor and behavioral changes. Employees who are overexposed to manganese compounds should be seen by a physician for early detection of neurologic problems. Overexposure to manganese and manganese compounds above safe exposure limits can cause irreversible damage to the central nervous system, including the brain, symptoms of which may include slurred speech, lethargy, tremor, muscular weakness, psychological disturbances and spastic gait.

SILICON (inert dusts) – Chronic overexposures can cause chronic bronchitis and narrowing airways.

COPPER (dust/mists) – Can cause metal fume fever, irritation of eyes, skin, mucous membranes and respiratory tract. Symptoms include sweating, chills, fever and high temperature. Chronic overexposure can cause anemia, skin abnormalities and hair discoloration.

OZONE and NITROGEN OXIDES - These gases are formed due to interactions of the arc with the surrounding air of the welding arc .Both gases can cause irritation of eyes, nose and respiratory system. And also can produce longer term lung effects such as decreased lung capacity, chronic bronchitis, and emphysema. Of particular concern with both gases is that exposure to high levels can result in acute lung effects such as delayed pulmonary edema. Effects can be delayed.

CARBON MONOXIDE and CARBON DIOXIDE - Carbon monoxide (CO) is a chemical asphyxiant and its toxicity is due to its affinity for oxygen carrying blood hemoglobin causing fatigue, weakness, dizziness and eventual unconsciousness and possible death. Carbon dioxide (CO₂) is mainly an asphyxiant but can exert some toxic properties by increasing pulse and heart rate. These gases are mainly formed through decomposition of some electrodes' components (cellulose and carbonates).

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Date of Issue: 05.15.2015

12. Ecological Information

Welding consumables and materials could degrade/weather into components originating from the consumables or from the materials used in the welding process. Avoid exposure to conditions that could lead to accumulation in soils or groundwater.

The welding electrodes do not meet the criteria for PBT or vPvB in accordance with Annex XIII.

13. Disposal Considerations

WASTE DISPOSAL: Disposal must be made according to official regulations. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with Federal State and local regulations. Use recycling procedures for material if available.

14. Transport Information

No international regulations or restrictions are applicable. No special precautions are necessary.

15. Regulatory Information

Welding electrodes/wires which are mentioned in this SDS do not require labelling under current chemical product classification and labelling regulations. Welding electrodes and wires are non-hazardous solids at ambient temperature.

There is no risk of product phase. It may constitute risk during use!!!

Warning text on label:

ATTENTION!

Please read this label carefully. Protect yourself and others.

Take necessary precautions while welding. Obey working safety rules.

Use proper ventilation and absorption system to remove fumes and gases during welding.

Welding arc and hot welds can cause burn injuries and start fires.

Arc rays may injure your eyes and body. Use protector to eyes, body and ears.

Electrical shock can kill. Don't touch with naked hands to piece having electrical current.

Investigate working safety books relevant with this topic.

Read and understand the manufacturer's instructions and the precautionary label on the product

Observe any federal and local regulations.

16. Other Information

In this publication, reference is made to the (EC) No. 1907/2006 REACH, Annex I of Directive 67/548/EEC and Directive 1999/45/EC, (EC) No. 1272/2008 [CLP] and American National Standard Z49.1, 'Safety in Welding and Cutting' published by the American Welding Society, P.O Box 051040. Miami, FL 33135 and OSHA Publication 2206 (29 CFR 1910) from the U.S. Government Printing Office, Washington, D.C. 2040. Copies are available from the indicated sources. Also, Suppliers' Safety Data Sheets on component is used for as reference.

This Safety Data Sheet has been revised due to new format. Contact Radnor Products if you have questions about this SDS.

Radnor Products believes this data to be accurate and to reflect qualified expert opinion regarding research. However Radnor Products can not make any expressed or implied warranty as to this information.



Accel TB Wipes (US)

SECTION 1. IDENTIFICATION

Product Identifier Accel TB Wipes (US)
Recommended Use Disinfectant Cleaner.
Manufacturer Virox Technologies Inc., 2770 Coventry Rd., Oakville, ON, L6H 6R1, 905-813-0110
Emergency Phone No. Virox Technologies Inc., 1-800-387-7578
SDS No. 000807

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not classified under any GHS hazard classes.

GHS Label Elements

Signal Word: None

Hazard Pictogram: None

Hazard Statement (s): None

Precautionary Statement (s):

Prevention: Wash thoroughly after handling. See section 8 for Individual Protective Measures information.

Response: None

Storage: No other specific measures identified. See section 7 for Handling and Storage information.

Disposal: See section 13 for Waste Disposal information.

Other Hazards

The product contains no substances which at their given concentration are considered to be hazardous to health.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers
Hydrogen peroxide	7722-84-1	0.5	

Notes

Active ingredients are listed above. All ingredients of this product are listed on the US EPA TSCA Inventory.

EPA Registration Number 74559-3

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

No specific first aid measures are required.

Skin Contact

No specific first aid measures are required.

Eye Contact

No specific first aid measures are required.

Ingestion

No specific first aid measures are required.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Product Identifier: Accel TB Wipes (US)
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Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

None known.

Special Protective Equipment and Precautions for Fire-fighters

Wear self-contained breathing apparatus for fire fighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Review federal, provincial and local government requirements prior to disposal.

Methods and Materials for Containment and Cleaning Up

Never flush these wipes into toilets. Discard in solid waste bin.

Towelettes contaminated with blood or body fluids should be disposed of according to federal, provincial, and local regulations for infectious waste disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Use good industrial hygiene practices in handling this material. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

Conditions for Safe Storage

Store in an area that is out of direct sunlight. Avoid storage at elevated temperatures.

KEEP OUT OF REACH OF CHILDREN.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Hydrogen Peroxide	1 ppm		1 ppm			

Appropriate Engineering Controls

No specific ventilation requirements.

Individual Protection Measures

Eye/Face Protection

Not required if product is used as directed.

Skin Protection

Not required if product is used as directed.

Respiratory Protection

Not required if product is used as directed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Odour Threshold	Not available
pH	2.5 - 3.5
Melting Point/Freezing Point	Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	> 93 °C (199 °F)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available

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Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.01 at 20 °C
Solubility	Soluble in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Viscosity	1.122 centistokes at 20 °C (kinematic)
Other Information	
Physical State	Wet wipes
Critical Temperature	Not available
Appearance	Clear, colourless liquid saturated on wipes.
% Volatile	0.0%
Odour	Faint, Characteristic odour

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive.

Chemical Stability

This product is stable.

Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

Conditions to Avoid

High temperatures.

Incompatible Materials

Do not mix with concentrated bleach products.

Hazardous Decomposition Products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

LC50 (Inhalation): > 2.59 mg/L (Rats).

LD50 (oral): > 5000 mg / kg (Rats).

LD50 (Dermal): > 5000 mg/kg (Rabbit)

Skin Corrosion/Irritation

Not classified under GHS criteria.

Serious Eye Damage/Irritation

Not classified under GHS criteria.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Not classified under GHS criteria.

Skin Absorption

Not classified under GHS criteria.

Ingestion

Non-hazardous by GHS criteria. Like any product not designed to be ingested, this product may cause stomach distress if ingested in large quantities.

Aspiration Hazard

Not classified under GHS criteria.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Respiratory and/or Skin Sensitization

Skin Sensitization: not a skin sensitizer.

Respiratory sensitizer. not a respiratory sensitizer.

Carcinogenicity

Not classified under GHS criteria.

Reproductive Toxicity

Development of Offspring

Not classified under GHS criteria.

Sexual Function and Fertility

Not classified under GHS criteria.

Germ Cell Mutagenicity

Not classified under GHS criteria.

Interactive Effects

None known.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by OSHA.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Review the STORAGE and DISPOSAL instructions on product label prior to disposal.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG Regulations. Not regulated under US DOT Regulations.

Special Precautions Not applicable

for User

IMO/IMDG clarification:

Not regulated.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.

Other U.S. Federal Regulations

SARA 302/304/311/312 extremelt hazardous substances: No listed substance.

SARA 302/304 emergency planning and notification: No listed substance.

US Regulations:

EPA Registration No.: 74559-3

This chemical is a pesticide product registered by the US Environmental Protection Agency and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS) and for workplace labels for non-pesticide chemicals. The following is the hazard information as required on the pesticide label: KEEP OUT OF REACH OF CHILDREN.

California Prop. 65: No listed substance.

SECTION 16. OTHER INFORMATION

HMIS Rating **Health - 0 Flammability - 0 Physical Hazard - 0**

SDS Prepared By Virox Technologies Inc.

Phone No. (800) 387-7578

Date of Preparation October 01, 2014

Additional Information For an updated MSDS please contact the supplier/ manufacturer listed on the first page of this document. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since condition of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirement of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and manufacturer/supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document. The contents of this document have been prepared in accordance with the OSHA Hazard Communication Standards (2012) and GHS (Globally Harmonized System of Classification and Labelling of Chemicals).

Product Identifier: Accel TB Wipes (US)

SDS No.: 000807

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Acetylene

1. Product and company identification

Product name	: Acetylene
Synonym	: ethyne; Ethyne (acetylene); Ethine; Methyl cyanide
Material uses	: Various
CAS number	: 74-86-2
Supplier/Manufacturer	: Air Liquide Canada Inc. 1250, René-Lévesque West, Suite 1700 Montreal, QC H3B 5E6 www.airliquide.ca 1-800-817-7697
Prepared by	: IHS
In case of emergency	: (514) 878-1667

2. Hazards identification

Physical state	: Gas.
Color	: Colorless.
Odor	: Mild. Ethereal.
<u>Emergency overview</u>	
Signal word	: DANGER!
Hazard statements	: FLAMMABLE GAS. MAY CAUSE FLASH FIRE. UNSTABLE. SENSITIVE TO HEAT OR SHOCK. MAY BECOME EXPLOSIVE. HIGH PRESSURE GAS. GAS REDUCES OXYGEN AVAILABLE FOR BREATHING. AT VERY HIGH CONCENTRATIONS, CAN DISPLACE THE NORMAL AIR AND CAUSE SUFFOCATION FROM LACK OF OXYGEN. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Precautions	: Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen. Avoid shock and friction. Keep away from heat, sparks and flame. Do not puncture or incinerate container. Do not enter storage areas and confined spaces unless adequately ventilated. Do not breathe gas. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Keep container tightly closed.
Routes of entry	: Dermal contact. Eye contact. Inhalation.
<u>Potential acute health effects</u>	
Inhalation	: At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.
Ingestion	: As this product is a gas, refer to the inhalation section.
Skin	: Contact with rapidly expanding gas may cause burns or frostbite.
Eyes	: Contact with rapidly expanding gas may cause burns or frostbite.
<u>Potential chronic health effects</u>	
Chronic effects	: May cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.

2. Hazards identification

- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : May cause damage to the following organs: lungs, upper respiratory tract, central nervous system (CNS).

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin** : No specific data.
- Eyes** : No specific data.
- Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

Name	CAS number	%
acetylene	74-86-2	100

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : As this product is a gas, refer to the inhalation section.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Antidote information

Product/ingredient name	Antidote information
No antidote information known	

- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : Contains gas under pressure. Flammable gas. Material will produce a vigorous reaction under conditions of shock, pressure or temperature. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from windows. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Do not fight fire when it reaches the material. Withdraw from fire and let it burn.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters' protective clothing will only provide limited protection.

6. Accidental release measures

Personal precautions : Accidental releases pose a serious fire or explosion hazard. Immediately contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8). If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. Never fix a leak while the system is under pressure. If leak is on container or container valve, contact the closest Air Liquide Canada location.


Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Handling :  Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other

7. Handling and storage

ignition source. Use a specifically designed Cap Removal Tool to loosen over tightened or stuck valve protection caps. NEVER insert an object such a wrench, screwdriver, pry bar, etc... into the closed valve protection cap openings. Doing so may inadvertently damage or open the valve resulting in uncontrolled product release with dangerous consequences. If you experience any difficulty using the cylinder package, discontinue its use and contact the supplier. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Valve protection caps must remain in place unless cylinder is secured with valve outlet piped to usage point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow to the cylinder. Do not tamper with (valve) safety device. Close valve after each use and when empty.

Storage

- Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non combustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 52°C/125°F. Cylinders must be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - first out" inventory system to prevent full cylinders being stored for excessive periods of time. Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Protect from sunlight. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use.

8. Exposure controls/personal protection

<u>Occupational exposure limits</u>		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
acetylene	Simple asphyxiant.										[2]

[2]Oxygen Depletion [Asphyxiant]

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

- Engineering measures** : Use only with adequate ventilation. Engineering controls may be required to control the primary or secondary risks associated with this product. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

8. Exposure controls/personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. If operating conditions cause high gas concentrations to be produced or any recommended or statutory exposure limit is exceeded, use an air-fed respirator or self-contained breathing apparatus. The gas can cause asphyxiation without warning by replacing the oxygen in the air. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

- Physical state** : Gas.
- Flash point** : Closed cup: -18.15°C (-0.67°F)
- Auto-ignition temperature** : 305°C (581°F)
- Flammable limits** : Lower: 2.5%
Upper: 100%
- Color** : Colorless.
- Odor** : Mild. Ethereal.
- Molecular weight** : 26.04 g/mole
- Molecular formula** : C₂H₂
- pH** : Not available.
- Boiling/condensation point** : Not available.
- Melting/freezing point** : -81°C (-113.8°F)
- Critical temperature** : 35.25°C (95.4°F)
- Relative density** : 0.9
- Density** : 0.001 g/cm³ [20°C (68°F)]
- Vapor pressure** : 4535 kPa (34015.26 mm Hg) [room temperature]
- Vapor density** : 0.907 [Air = 1]
- Odor threshold** : Not available.
- Evaporation rate** : Not available.
- Viscosity** : Not available.

9. Physical and chemical properties

Solubility	: Not available.
Water solubility (g/l)	: 1.2 g/l
LogK_{ow}	: 0.37

10. Stability and reactivity

Chemical stability	: Unstable (reactive) material. See "Possibility of Hazardous Reactions" for further information.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid shock and friction.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials. Reacts with oxygen. Violent reaction may occur.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	: Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: shock friction high temperature Reactions may include the following: risk of explosion Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Not available.

Chronic toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitizer

Not available.

Carcinogenicity

Classification

Not available.

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

Ecotoxicity : This product shows a low bioaccumulation potential.

Aquatic ecotoxicity

Not available.

Persistence/degradability

Not available.

Partition coefficient: n-octanol/water : 0.37

Bioconcentration factor : Not available.

Mobility : Not available.

Toxicity of the products of biodegradation : Not available.

Other adverse effects : No known significant effects or critical hazards.



13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Empty pressure vessels should be returned to the supplier. Waste packaging should be recycled.


Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	UN1001	ACETYLENE, DISSOLVED	2.1	-		<u>Explosive Limit and Limited Quantity Index</u> 0 <u>Passenger Carrying Ship Index</u> 75 <u>Passenger Carrying Road or Rail Index</u> Forbidden <u>Special provisions</u> 38
IMDG Class	UN1001	ACETYLENE, DISSOLVED	2.1	-		<u>Emergency schedules (EmS)</u> _F-D_, _S-U_

14. Transport information

IATA-DGR Class	UN1001	Acetylene, dissolved	2.1	-		<u>Passenger and Cargo Aircraft</u> Quantity limitation: Forbidden Packaging instructions: Forbidden <u>Cargo Aircraft Only</u> Quantity limitation: 15 kg Packaging instructions: 200 <u>Limited Quantities - Passenger Aircraft</u> Quantity limitation: Forbidden Packaging instructions: Forbidden <u>Special provisions</u> A1
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PG* : Packing group

15. Regulatory information

United States inventory (TSCA 8b) : This material is listed or exempted.

WHMIS (Canada) : Class A: Compressed gas.
Class B-1: Flammable gas.
Class F: Dangerously reactive material.

Canadian lists

Canadian NPRI : This material is listed.

CEPA Toxic substances : This material is not listed.

Canada inventory : This material is listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists :

- Australia inventory (AICS)**: This material is listed or exempted.
- China inventory (IECSC)**: This material is listed or exempted.
- Japan inventory**: This material is listed or exempted.
- Korea inventory**: This material is listed or exempted.
- Malaysia Inventory (EHS Register)**: Not determined.
- New Zealand Inventory of Chemicals (NZIoC)**: This material is listed or exempted.
- Philippines inventory (PICCS)**: This material is listed or exempted.
- Taiwan inventory (CSNN)**: Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule I Chemicals

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals

16. Other information

Label requirements : FLAMMABLE GAS. MAY CAUSE FLASH FIRE. UNSTABLE. SENSITIVE TO HEAT OR SHOCK. MAY BECOME EXPLOSIVE. HIGH PRESSURE GAS. GAS REDUCES OXYGEN AVAILABLE FOR BREATHING. AT VERY HIGH CONCENTRATIONS, CAN DISPLACE THE NORMAL AIR AND CAUSE SUFFOCATION FROM LACK OF OXYGEN. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Hazardous Material Information System (U.S.A.) :

Health	*	0
Flammability		4
Physical hazards		3
Personal protective equipment		G

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Date of issue : 9/4/2015

Date of previous issue : 3/27/2014

Version : 6.01

Indicates information that has changed from previously issued version.

Notice to reader

THE INFORMATION, RECOMMENDATIONS AND DATA CONTAINED IN THIS DOCUMENT ARE INTENDED TO BE USED BY PROPERLY TRAINED AND QUALIFIED PERSONNEL ONLY AND AT THEIR SOLE RISKS AND DISCRETION. THE INFORMATION, RECOMMENDATIONS AND DATA HEREIN CONTAINED ARE DERIVED FROM SOURCES WHICH WE BELIEVE TO BE RELIABLE. HOWEVER, AIR LIQUIDE CANADA INC. MAKES NO REPRESENTATION AND GIVES NO WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THEIR ACCURACY OR COMPLETENESS AND ASSUMES NO LIABILITY FOR DAMAGES OR LOSS ARISING DIRECTLY OR INDIRECTLY FROM THEIR USE, WHETHER PROPER OR IMPROPER.

Section 1. Identification

Product name : Acrysol™ High Performance Body Solvent!
Product code : P60170
Other means of identification : Not available.
Product type : Aerosol.
Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Kent Automotive
8770 W. Bryn Mawr Ave., Suite 900
Chicago, IL 60631-3515

Emergency telephone number of the company : (888) 426-4851

Product Information Telephone Number : (888) 937-5368

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 68.8%

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

Hazard statements	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Harmful if inhaled. Causes serious eye irritation. Causes skin irritation. Suspected of causing cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling.
Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Lt. Aliphatic Hydrocarbon Solvent	56.0	64742-89-8
Xylene	16.1	1330-20-7
Propane	12.8	74-98-6
Butane	12.3	106-97-8
Ethylbenzene	2.9	100-41-4

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical

- : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products

- : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters

- : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters

- : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

- : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

- : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Xylene	ACGIH TLV (United States, 4/2014). TWA: 100 ppm 8 hours. TWA: 434 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m ³ 15 minutes. OSHA PEL (United States, 2/2013). TWA: 100 ppm 8 hours. TWA: 435 mg/m ³ 8 hours.

Section 8. Exposure controls/personal protection

Propane	<p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
Butane	<p>NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 4/2014). STEL: 1000 ppm 15 minutes.</p>
Ethylbenzene	<p>ACGIH TLV (United States, 4/2014). TWA: 20 ppm 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.</p>

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 1.5 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%
Upper: 9.5%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.55 [Air = 1]
- Relative density** : 0.69
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): <0.07 cm²/s (<7 cSt)
Kinematic (40°C (104°F)): <0.07 cm²/s (<7 cSt)

Aerosol product

- Type of aerosol** : Spray
- Heat of combustion** : 0.00004051 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : No specific data.

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LC50 Inhalation Gas. LD50 Oral	Rat Rat	5000 ppm 4300 mg/kg	4 hours -
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Ethylbenzene	LD50 Dermal LD50 Oral	Rabbit Rat	>5000 mg/kg 3500 mg/kg	- -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Ethylbenzene	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
Ethylbenzene	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	6847.2 mg/kg
Inhalation (gases)	9690.9 ppm

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Lt. Aliphatic Hydrocarbon	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Solvent	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
Xylene	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours

Section 12. Ecological information

Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Xylene	-	8.1 to 25.9	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

Date of issue/Date of revision : 3/6/2015. Date of previous issue : No previous validation. Version : 1 11/13

Section 14. Transport information

Additional information	Special provisions LIMITED QUANTITY	Special provisions LIMITED QUANTITY	Special provisions (ERG#126)	Special provisions LIMITED QUANTITY	Emergency schedules (EmS) LIMITED QUANTITY, F-D, S-U
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Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		4
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA).

The customer is responsible for determining the PPE code for this material.

Section 16. Other information

[Notice to reader](#)

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.



SAFETY DATA SHEET

1. Identification

Product identifier	Air Tool Oil
Other means of identification	
Product code	SL2531, SL2533
Recommended use	Lubricant for pneumatic equipment
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufactured or sold by:	
Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency (CHEMTREC)	800-424-9300 (US) 703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use. Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates (petroleum), Hydrotreated Light Naphthenic		64742-53-6	90 - 100
Distillates (petroleum), solvent-refined heavy naphthenic		64741-96-4	3 - 5
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts		68649-42-3	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	Wash off with plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
Eye contact	Rinse immediately with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Drink 1 or 2 glasses of water. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	Cool containers exposed to heat with water spray and remove container, if no risk is involved.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	<p>The product is immiscible with water and will spread on the water surface.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewer, basements or confined areas.</p>
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Wear appropriate personal protective equipment. Avoid prolonged or repeated contact with skin. Avoid prolonged exposure. Use only in well-ventilated areas. When using, do not eat, drink or smoke. Wash contaminated clothing before reuse. Use appropriate container to avoid environmental contamination. For product usage instructions, please see the product label.
Conditions for safe storage, including any incompatibilities	Keep away from heat and sources of ignition. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	PEL	5 mg/m ³	Mist.
		2000 mg/m ³ 500 ppm	
Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)	PEL	5 mg/m ³	Mist.
		2000 mg/m ³ 500 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	TWA	5 mg/m ³	Inhalable fraction.
Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)	TWA	5 mg/m ³	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	Ceiling	1800 mg/m ³	
	STEL	10 mg/m ³	Mist.
Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)	Ceiling	1800 mg/m ³	
	STEL	10 mg/m ³	Mist.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear protective gloves such as: Nitrile. Polyvinyl chloride (PVC).

Other

Wear suitable protective clothing.

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Material name: Air Tool Oil

SL2531, SL2533 Version #: 01 Issue date: 10-23-2015

SDS US

3 / 8

Physical state	Liquid.
Form	Liquid.
Color	Amber.
Odor	Mild petroleum.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	680 °F (360 °C) estimated
Flash point	320 °F (160 °C) Cleveland Open Cup
Evaporation rate	Slow.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	> 1 (air = 1)
Relative density	0.9 - 0.92
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	500 °F (260 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	22.5 - 27.5 mm ² /s (104 °F (40 °C))
Percent volatile	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged or excessive inhalation may cause respiratory tract irritation.
Skin contact	Prolonged skin contact may cause temporary irritation. Repeated exposure may cause skin dryness or cracking.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not available.
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Product	Species	Test Results
Air Tool Oil		
Acute		
Dermal		
LD50	Rabbit	5100 mg/kg estimated
Inhalation		
LC50	Rat	2295 mg/m ³ , 4 hours estimated
Oral		
LD50	Rat	5097 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not available.

US. National Toxicology Program (NTP) Report on Carcinogens

Not available.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Prolonged inhalation may be harmful.
Further information	This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Product	Species	Test Results
Air Tool Oil		
Aquatic		
Crustacea	EC50 Daphnia	99.9848 mg/l, 48 hours estimated
Fish	LC50 Fish	549.3577 mg/l, 96 hours estimated
Components		
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)		
Aquatic		
Crustacea	EC50 Water flea (Daphnia magna)	1 - 5 mg/l, 48 hours
Fish	LC50 Fathead minnow (Pimephales promelas)	1 - 5 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products	This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Empty containers may be recycled. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with all applicable regulations.
Hazardous waste code	Not regulated.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)

CERCLA Hazardous Substance List (40 CFR 302.4)

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3) Listed.

CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Distillates (petroleum), Hydrotreated Light Naphthenic (CAS 64742-53-6)
Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Distillates (petroleum), Hydrotreated Light Naphthenic (CAS 64742-53-6)

Distillates (petroleum), solvent-refined heavy naphthenic (CAS 64741-96-4)

US. New Jersey Worker and Community Right-to-Know Act

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)

US. Rhode Island RTK

Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts (CAS 68649-42-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Volatile organic compounds (VOC) regulations**EPA****VOC content (40 CFR 51.100(s))** Not determined**Consumer products (40 CFR 59, Subpt. C)** Not regulated**State****Consumer products** Not regulated**VOC content (CA)** 0 %**VOC content (OTC)** 0 %**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	10-23-2015
Prepared by	Allison Cho
Version #	01
Further information	Not available.
HMIS® ratings	Health: 1 Flammability: 1 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 1 Flammability: 1 Instability: 0

NFPA ratings**Disclaimer**

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.

SECTION I-MATERIAL IDENTIFICATION AND USE

Material Name/Identifier:	Air Tool Oil	Stock No.	4168/4169/4170
Manufacturer's Name:	Kleen-Flo Tumbler Industries Ltd	Street Address:	75 Advance Blvd.
City:	Brampton	Province:	Ontario
Postal Code:	L6T 4N1	Emergency Phone #:	CANUTEC:- 613-996-6666 (24HR)
Chemical Name:	N.Ap. (mixture)	Chemical Family:	N.Ap. (mixture)
Chemical Formula:	N.Ap. (mixture)	Trade Names & Synonyms:	None
Material Use:	Lubricant	Molecular Weight:	N.Ap. (mixture)

SECTION II-HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	Approximate Concentration, %	C.A.S.	LD50 Species & Route	LC50 Species & Route
Hydrotreated petroleum oil	60-100	64742-58-1	>2000 mg/kg rat-oral	N/Av.
Naphthenic Oil	1 -10	64742-52-5	>2000 mg/kg rat-oral	N/Av.
Hydrocarbon Distillate	1 -10	8052-41-3	> 5 g/kg rat-oral	> 5 g/m3 rat-inh.
Zinc C1-C14 alkyldithiophosphates	<1	68649-42-3	N/Av.	N/Av.

SECTION III-PHYSICAL DATA FOR MATERIAL

Physical State:	Liquid	Odour/Appearance:	Pleasant odour/ Clear, red oil
Specific Gravity:	0.84	Odour Threshold(p.p.m.):	N/E
Boiling Point:	>129°C	Evaporation Rate:	N/E
Freezing Point:	N/E	Solubility in Water:	Insoluble
% Volatile(by volume):	N/Av.	Vapour Pressure(mm)Hg:	N/E
Vapour Density(Air=1):	N/E	Coefficient of Water/Oil Distribut:	N/E
pH:	N/Av.		

SECTION IV-FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability (Yes/No)	Yes	If yes under which conditions: combustible liquid, may form combustible vapours at or above flash point
Auto Ignition Temperature:	N/E	Means of Extinction: Carbon dioxide, dry chemical, foam, water fog
Flash Point, Tag. C.C	69°C	Hazardous Combustion Products: oxides of carbon, sulfur, zinc, phosphorous, calcium. Hydrogen sulfide, alkyl mercaptans.
Upper Flammable Limit (%vol)	15-16	Lower Flammable Limit (% by volume): 1
Explosion Data:	Sensitivity to Mechanical Impact: No.	Sensitivity to Static Discharge: No

SECTION V-REACTIVITY DATA

Chemical Stability Yes/No:	Yes	If NO under r which conditions?
Incompatibility to Other Substances Yes/No:	Yes	If so which ones? Strong oxidizing agents
Reactivity and under what conditions?	Not reactive under normal condition	
Hazardous Decomposition Products:	Oxides of carbon, Sulfur,Phosphorous, Calcium & Zinc.	

N/E: not established

N.Ap.:not applicable

N/Av.: not available

SECTION VI-TOXICOLOGICAL PROPERTIES OF PRODUCT

Route of Entry:	--SKIN CONTACT -x-SKIN ABSORPTION -x-EYE CONTACT -x-INHALATION -x-INGESTION		
Effects of Acute Exposure:	May cause skin, eye irritation, dizziness, headache, vomiting, nausea, cough, pulmonary irritation		
Effects of Chronic Exposure:	Prolong, repeated eye and skin contact can cause severe eye irritation, dermatitis.		
LD 50 of Product:	N/E	LC 50 of Product:	N/E
Irritancy of Product:	Eyes, skin	Exposure Limits of Product:	N/E
Sensitization of Product:	None known	Toxicologically Synergistic Materials:	N/E
--CARCINOGENICITY --REPRODUCTIVE EFFECTS --TERATOGENICITY --MUTAGENICITY			None Known

SECTION VII-PREVENTIVE MEASURES

Personal Protective Equipment to be used:

Gloves(specify):	Nitrile, chemical resistant gloves	Eye (specify):	Safety Glasses
Respiratory(specify):	Not required in normal use	Clothing:	Not required
Respiratory Protection:	If used indoors or on a continuous basis, use of NIOSH approved cartridge type respirator is recommended		
Engineering Controls:	Local or mechanical ventilation		
Leak and Spill Procedure:	Dike and absorb spill with inert absorbant material, keep spill out of sewers.		
Waste Disposal:	Dispose according to federal, state (Provincial) and local regulations		
Storage Requirements:	Keep at room temperature. Keep container closed when not in use.		
Handling Procedures and	Keep away from children. Handle with care. Do not inhale or ingest.		
Equipment:	Keep away from excessive heat, open flame, source of ignition.		
DSL listing:	All components are listed on the inventory.		
TDG Classification:	Not regulated		
WHMIS Classification:	B3, D2B	Complies with CCCR 2001. (non-controlled)	

SECTION VIII-FIRST AID MEASURES

Eye:	Flush immediately with running water for at least 15 minutes. Consult physician immediately.
Skin:	Remove contaminated clothing. Rinse with plenty of soapy. See doctor if irritation persist.
Inhalation	Remove to fresh air. Restore breathing if required. See doctor if discomfort persist.
Ingestion:	DO NOT INDUCE VOMITING. If person conscious, give a glasses of water. See doctor immediately.

SECTION IX-PREPARATION DATE OF M.S.D.S.

Additional Info/Comments:		Sources Used: Handbook of Poisoning By: R.H. Dreisbach
Phone Number:	(905) 793-4311	Prepared By: Quality Control Laboratory
Date Prepared:	Janauary 2, 2015.	Kleen-Flo Tumbler Industries Limited

THIS SHEET SUPERSEDES ANY OTHER M.S.D.S. PREVIOUSLY PREPARED

SAFETY DATA SHEET

ANTI-BORAX No. 1

DATE REVISED: January 1, 2016

Product Name: Anti-Borax No. 1

Manufacturer: Superior Flux & Mfg. Co. 6615 Parkland Blvd. Cleveland OH, 44139

Emergency Phone Number: 1-800-424-9300 (CHEMTREC)

Other Information Calls: (440) 349-3000

To the Purchaser: This MSDS contains important environmental, health, and toxicology information for your employees who have ordered this product. Please be sure this information is given to them. If you resell this product, a copy of the MSDS should be given to the buyer.

H.M.I.S. INFORMATION: HEALTH = 1 FLAMMABILITY = 0 REACTIVITY = 0

SECTION I -- IDENTIFICATION

Common Name: Anti-Borax No. 1

Chemical Family: Cast iron welding flux

CAS Number: NA

Chemical Name: NA

Formula: See Below

SECTION II – HAZARDS IDENTIFICATION

Classification of Substance or Mixture:

Classification (CLP): NA

Label Elements (CLP): NA

Signal Word: Danger



Irritant

Health hazard

Risk Phrases: R62, R25, R36/37/38, R60/61

Safety Phrases: S-26, S-27, S-36/37/39, S-45

See section XVI for full text description of S and R phrases

Other Hazards: None if used properly

SECTION III- COMPOSITION INFORMATION

Components	CAS Number	%	OSHA PEL
Boric Acid	10043-35-3	20-40	10 mg/m ³

None of the materials in this product are listed in NTP, IARC, or OSHA as carcinogens.

SECTION IV – FIRST AID MEASURES

Inhalation: Remove to fresh air
Eyes: Flush with water for fifteen (15) Minutes. Call physician.
Skin: Wash thoroughly with soap and water.
Ingestion: If patient is fully conscious, give large amounts of water. Obtain medical attention immediately.

Most Important Symptoms and effects, both acute and delayed

Primary Routes of Entry into Body: Fume inhalation, ingestion, skin, and eyes.

Symptoms of Overexposure: Salivation, coughing, choking, chills, may cause weight loss, brittle bones, anemia, and stiff joints.

Medical Conditions Generally Aggravated by Exposure: Any weakness of the lungs, kidneys or liver will be aggravated.

Chemical Listed as Carcinogen or Potential Carcinogen: None

OSHA Permissible Exposure Limit (PEL): 10 mg/m³

ACGIH Threshold Limit Value (TLV): 10 mg/m³

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flash Point: None

Flammable Limits: Lower-NA upper-NA

Extinguishing Media: Not needed

Auto Ignition Temperature: None

Special Fire Fighting Procedures: Normal caution when dealing with chemicals

Unusual Fire and Explosion Hazards: Boric oxide fumes

SECTION VI - ACCIDENTAL RELEASE MEASURES

Steps to be taken in Case Material is spilled: Clean up powder and flush remaining material with lots of water

SECTION VII - HANDLING AND STORAGE

Storage Requirements: Store in plastic containers in cool area. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

Handling Precautions: Keep containers away for excessive heat.

SECTION VIII - CONTROL MEASURES

Respiratory Protection (TYPE): NIOSH approved respirator.

Ventilation: Yes

Mechanical (General): Yes

Local Exhaust: Yes

Protective Gloves: Recommended, NIOSH approved

Eye Protection: Safety glasses

Other Protective Clothing or Equipment: Rubber apron

SECTION IX - PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: NA
Specific Gravity (Water = 1): NA
Vapor Pressure (mm Hg): NA
Percent Volatile by Volume: 0%
Vapor Density (Air = 1): NA
Evaporation Rate (Butyl Acetate = 1): NA
Melting Point: 700°C/1292°F
Solubility in Water: Soluble
Reactivity in Water: None
Appearance and odor: Red granular powder

SECTION X - STABILITY AND REACTIVITY

Stability: Product is stable
(Conditions to Avoid): Excessive heat
Incompatibility: None
Hazardous Decomposition Products: Boric oxide fumes.
Hazardous Polymerization: Will not occur
(Conditions to Avoid): Excessive heat

SECTION XI - TOXICOLOGICAL INFORMATION

Acute Toxicity Data

- 1) **Oral:** LD-50 (rat): Not available
- 2) **Inhalation:** LC-50 (rat): Not available
- 3) **Dermal:** LD-50 (rabbit): Not available
- 4) **Skin Irritation:** (rabbit): Not available

Chronic Toxicity Data

- 1) **Repeated Skin Application:** (rat): Not available
 - 2) **Eye Irritation:** (rabbit): Not available
-

SECTION XII - ECOLOGICAL INFORMATION

This material has not been tested for environmental effects.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in accordance with EPA regulations

SECTION XIV- TRANSPORTATION

D.O.T. Proper Shipping Name: Non-Hazardous
Hazard Class: NA
Identification Number: NA
Packing Group: NA
Type D.O.T Label Required Information: NA

SECTION XV - REGULATORY INFORMATION

OSHA Hazardous Chemical According to 29 CFR 1910.1200: None

Carcinogenicity Classification (Components Present at 0.1% or More): Non-carcinogenic

International Agency for Research on Cancer (IARC): Not listed

American Conference of Governmental Industrial Hygienists (ACGIH): Not listed

National Toxicology Program (NTP): Not listed

Occupational Safety and Health Administration (OSHA): Not listed

None of the components of this product are listed on the U.S. toxic substances control act inventory or otherwise comply with TSCA pre-manufacture notification requirements.

SECTION XVI - OTHER INFORMATION

The labeling of this product is indicated in Section II. The full text of all abbreviations indicated by codes in the MSDS are as follows:

R25	Toxic if swallowed
R36	Irritating to eyes
R37	Irritating to respiratory system
R38	Irritating to skin
R60/61	May cause infertility/May cause harm to unborn child
R62	Possible risk of impaired fertility
S-26	In case of eye contact, rinse thoroughly and get medical attention
S-27	Take off immediately contaminated clothing
S-36/37/39	Wear suitable protective clothing, gloves, and eye/face protection
S-45	In case of accident or if feel unwell call medical advice immediately
H361f	Suspected of damaging fertility

Further information:

Judgments as to the suitability of information herein or the purchaser's purposes are necessarily the purchaser's responsibility. Reasonable care has been taken in the preparation of this material, but there are NO WARRANTIES, NO REPRESENTATIONS AND NO RESPONSIBILITY AS TO THE ACCURACY OR THE SUITABILITY OF THIS INFORMATION FOR ANY PURCHASER'S USE OR FOR ANY CONSEQUENCE TO USE.

Material Safety Data Sheet



Argon (Gas)

1. Product and company identification

Product name	: Argon (Gas)
Synonym	: Argon.
Material uses	: Various
CAS number	: 7440-37-1
Supplier/Manufacturer	: Air Liquide Canada Inc. 1250, René-Lévesque West, Suite 1700 Montreal, QC H3B 5E6 www.airliquide.ca 1-800-817-7697
Prepared by	: IHS
In case of emergency	: (514) 878-1667

2. Hazards identification

Physical state	: Gas.
Color	: Colorless.
Odor	: Odorless.
Emergency overview	
Signal word	: CAUTION!
Hazard statements	: HIGH PRESSURE GAS. GAS REDUCES OXYGEN AVAILABLE FOR BREATHING. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Precautions	: Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode. At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen. Do not puncture or incinerate container. Do not enter storage areas and confined spaces unless adequately ventilated. Avoid breathing gas. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.
Routes of entry	: Dermal contact. Eye contact. Inhalation.
Potential acute health effects	
Inhalation	: At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.
Ingestion	: As this product is a gas, refer to the inhalation section.
Skin	: Contact with rapidly expanding gas may cause burns or frostbite.
Eyes	: Contact with rapidly expanding gas may cause burns or frostbite.
Potential chronic health effects	
Chronic effects	: May cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.

2. Hazards identification

- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : May cause damage to the following organs: lungs.

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : No specific data.
- Skin** : No specific data.
- Eyes** : No specific data.
- Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

Name	CAS number	%
argon	7440-37-1	100

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : As this product is a gas, refer to the inhalation section.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Antidote information

Product/ingredient name	Antidote information
No antidote information known	

- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products : No specific data.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8). If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. Never fix a leak while the system is under pressure. If leak is on container or container valve, contact the closest Air Liquide Canada location.

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Valve protection caps must remain in place unless cylinder is secured with valve outlet piped to usage point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow to the cylinder. Do not tamper with (valve) safety device. Close valve after each use and when empty.

7. Handling and storage

- Storage** : Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non combustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 52°C/125°F. Cylinders must be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - first out" inventory system to prevent full cylinders being stored for excessive periods of time. Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Protect from sunlight. Keep container tightly closed and sealed until ready for use.

8. Exposure controls/personal protection

<u>Occupational exposure limits</u>		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
argon	Simple asphyxiant.										[2]

[2]Oxygen Depletion [Asphyxiant]

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. If operating conditions cause high gas concentrations to be produced or any recommended or statutory exposure limit is exceeded, use an air-fed respirator or self-contained breathing apparatus. The gas can cause asphyxiation without warning by replacing the oxygen in the air. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

8. Exposure controls/personal protection

- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

- Physical state** : Gas.
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Flammable limits** : Not available.
- Color** : Colorless.
- Odor** : Odorless.
- Molecular weight** : 39.95 g/mole
- Molecular formula** : Ar
- pH** : Not available.
- Boiling/condensation point** : -185.7°C (-302.3°F)
- Melting/freezing point** : -189.2°C (-308.6°F)
- Critical temperature** : -122.4°C (-188.3°F)
- Density** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : 1.38 [Air = 1]
- Odor threshold** : Not available.
- Evaporation rate** : Not available.
- Viscosity** : Not available.
- Solubility** : Not available.
- Water solubility (g/l)** : 0.055 g/l
- LogK_{ow}** : 0.74

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Not available.

Chronic toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitizer

Not available.

Carcinogenicity

Classification

Not available.

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

Ecotoxicity : This product shows a low bioaccumulation potential.

Aquatic ecotoxicity

Not available.

Persistence/degradability

Not available.

Partition coefficient: n-octanol/water : 0.74

Bioconcentration factor : Not available.

Mobility : Not available.

Toxicity of the products of biodegradation : Not available.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Empty pressure vessels should be returned to the supplier. Waste packaging should be recycled.




Disposal should be in accordance with applicable regional, national and local laws and regulations.

Argon (Gas)

13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	UN1006	ARGON, COMPRESSED	2.2	-		Explosive Limit and Limited Quantity Index 0.125 Passenger Carrying Road or Rail Index 75
IMDG Class	UN1006	ARGON, COMPRESSED	2.2	-		Emergency schedules (EmS) F-C, S-V
IATA-DGR Class	UN1006	Argon, compressed	2.2	-		Passenger and Cargo Aircraft Quantity limitation: 75 kg Packaging instructions: 200 Cargo Aircraft Only Quantity limitation: 150 kg Packaging instructions: 200 Limited Quantities - Passenger Aircraft Quantity limitation: Forbidden Packaging instructions: Forbidden Special provisions A69

PG* : Packing group

15. Regulatory information

United States inventory (TSCA 8b) : This material is listed or exempted.

WHMIS (Canada) : Class A: Compressed gas.

Canadian lists

Canadian NPRI : This material is not listed.

CEPA Toxic substances : This material is not listed.

Canada inventory : This material is listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

[International regulations](#)

15. Regulatory information

International lists : **Australia inventory (AICS)**: This material is listed or exempted.
China inventory (IECSC): This material is listed or exempted.
Japan inventory: Not determined.
Korea inventory: This material is listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
Philippines inventory (PICCS): This material is listed or exempted.
Taiwan inventory (CSNN): This material is listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : HIGH PRESSURE GAS. GAS REDUCES OXYGEN AVAILABLE FOR BREATHING. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Hazardous Material Information System (U.S.A.) :

Health	*	0
Flammability		0
Physical hazards		2
Personal protective equipment		G

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Date of issue : 5/1/2014.

Date of previous issue : 5/15/2011.

Version : 6

Indicates information that has changed from previously issued version.

Notice to reader

THE INFORMATION, RECOMMENDATIONS AND DATA CONTAINED IN THIS DOCUMENT ARE INTENDED TO BE USED BY PROPERLY TRAINED AND QUALIFIED PERSONNEL ONLY AND AT THEIR SOLE RISKS AND DISCRETION. THE INFORMATION, RECOMMENDATIONS AND DATA HEREIN CONTAINED ARE DERIVED FROM SOURCES WHICH WE BELIEVE TO BE RELIABLE. HOWEVER, AIR LIQUIDE CANADA INC. MAKES NO REPRESENTATION AND GIVES NO WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THEIR ACCURACY OR COMPLETENESS AND ASSUMES NO LIABILITY FOR DAMAGES OR LOSS ARISING DIRECTLY OR INDIRECTLY FROM THEIR USE, WHETHER PROPER OR IMPROPER.



SAFETY DATA SHEET

122000013012

Bactine Original First Aid Liquid

Version 1.0

Revision Date 05/29/2015

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**Product information****Product Name:** Bactine Original First Aid Liquid

SDS Number: 122000013012

Use : Medicinal products**Company**

BAYER HEALTHCARE LLC

Consumer Care

100 Bayer Boulevard PO Box 915

Whippany, NJ 07981-0915

USA

(800) 743-5423

In case of emergency: (800) 331-4536

Chemtec: (800) 424-9300

BAYER INFORMATION PHONE:(800) 331-4536 OR (800) 743-5423

2. HAZARDS IDENTIFICATION**Emergency Overview****Colour:** clear, cloudy, colourless **Form:** liquid **Odour:** characteristic.

GHS Classification:

Not a dangerous substance / mixture according to GHS.

GHS Label element:This material is not subject to the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Weight percent	Components	CAS-No.
2.49%	Lidocaine Hydrochloride	73-78-9

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Label Ingredients: Benzakonium Chloride; Lidocaine hydrochloride; Edetate Disodium; Nonoxynol 9; 1,2-Propanediol; Water;

Other Ingredients

Weight percent	Components	CAS-No.
5 - 10%	Propane-1,2-diol	57-55-6

4. FIRST AID MEASURES

General advice: Take off all contaminated clothing immediately.

If inhaled: Remove to fresh air. Call a physician immediately.

In case of skin contact: If skin reactions occur, contact a physician.

In case of eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

If swallowed: If swallowed, seek medical advice immediately and show this container or label.

Contact Number: Use the Bayer Emergency Number in Section 1

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media: High volume water jet

Specific hazards during firefighting: Fire may cause evolution of: Carbon monoxide (CO)
Carbon dioxide (CO₂)

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment.

Methods for cleaning up: Cover spilled product with liquid-binding material (sand, silica gel, acid binder, universal binder, hybilat). Take up mechanically and fill into labeled, closable containers.

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Additional advice: No special precautions required.

Further Accidental Release Notes No special precautions required.

7. HANDLING AND STORAGE

Handling:

Keep this and all drugs out of the reach of children. Avoid contact with eyes. Store in a dry place away from excessive heat. Reseal containers immediately after use. Use normal precautions for storage of a drug.

Keep away from open flames, hot surfaces and sources of ignition.

Storage:

Storage temperature: 59 - 77 °F (15 - 25 °C)

Do not use after expiration date.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Propane-1,2-diol (57-55-6)

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides
Time Weighted Average (TWA): 10 mg/m³ (Aerosol.)

Propane-1,2-diol (57-55-6)

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides
Time Weighted Average (TWA): 10 mg/m³ (Aerosol.)

Respiratory protection:

Recommended Filter type: Organic vapor with prefilter

None required for consumer use of this product.

Hand protection:

Chemically resistant gloves.

None required for consumer use of this product.

Eye protection:

Safety glasses

None required for consumer use of this product.

Hygiene measures:

Cleanliness Guidelines (GMP) for manufacturing of drugs must be observed!

Other protective measures:

Wear suitable protective equipment.

Please consult label for end-user requirements.

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Version 1.0

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9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	liquid
Colour:	clear, cloudy, colourless
Odour:	characteristic
Odour Threshold:	No applicable information is available
Melting point:	No applicable information is available
Boiling point/boiling range:	No applicable information is available
Density:	No applicable information is available
Bulk density:	No applicable information is available
Vapour pressure:	No applicable information is available
Viscosity, dynamic:	No applicable information is available
Viscosity, kinematic:	No applicable information is available
Flow time:	No applicable information is available
Surface tension:	No applicable information is available
Miscibility with water:	No applicable information is available
Water solubility:	completely soluble
pH:	6 - 6.8
Relative density:	No applicable information is available
Partition coefficient:	No applicable information is available
Solubility(ies):	No applicable information is available
Flash point:	No applicable information is available
Flammability (solid, gas):	No applicable information is available
Ignition temperature:	No applicable information is available
Explosion limits:	No applicable information is available

10. STABILITY AND REACTIVITY

Conditions to avoid: No data available

Materials to avoid: Oxidizing agents

Hazardous reactions: None known.

Thermal decomposition:

No data available

Hazardous decomposition products:

Carbon monoxide (CO), Carbon dioxide (CO₂)

Oxidizing properties:

No statements available.

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Impact sensitivity:

No data available

11. TOXICOLOGICAL INFORMATION

Other information on toxicity:

No data is available on the product itself.

Acute oral toxicity:

Acute toxicity estimate (ATE) > 2,000 mg/kg

The substance or mixture has no acute oral toxicity

Method: Calculation method

Calculated for GHS Classification and Labelling.

Acute inhalation toxicity:

Propane-1,2-diol

LC50 Rabbit: > 317 mg/l, 2 h

The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity:

Propane-1,2-diol

LD50 Rabbit: > 5,000 mg/kg

The substance or mixture has no acute dermal toxicity

Acute toxicity (other routes of administration):

Lidocaine Hydrochloride

TDL0 intravenous human: 7.1 mg/kg

LD50 intraperitoneal Rat: 122 mg/kg

LD50 subcutaneous Rat: 570 mg/kg

LD50 intravenous Rat: 21 mg/kg

LDL0 intravenous Dog: 65.7 mg/kg

LD50 intravenous Rabbit: 25.6 mg/kg

LD50 intravenous Mouse: 22 mg/kg

LD50 intraperitoneal Mouse: 119 mg/kg

LD50 intramuscular Mouse: 260 mg/kg

Skin irritation:

Propane-1,2-diol

Rabbit

Result: No skin irritation

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Lidocaine Hydrochloride

Rabbit

Result: Moderate skin irritation

Method: Draize Test

According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Eye irritation:

Propane-1,2-diol

Rabbit

Result: No eye irritation

Lidocaine Hydrochloride

Rabbit

Result: Moderate eye irritation

Method: Draize Test

No eye irritation

Sensitisation:

Propane-1,2-diol

Human experience

Result: Does not cause skin sensitisation.

guinea pig

Result: Does not cause skin sensitisation.

Method: OECD 406

Subacute, subchronic and prolonged toxicity:

Propane-1,2-diol

NOEL 50,000 mg/kg, Rat Oral, Exposure time 24 month

NOEL 1 mg/l, Rat Inhalation, Exposure time 3 month

Number of exposures: once daily

Genotoxicity in vitro:

Propane-1,2-diol

Ames test Bacteria

Dose: yes

Result: negative

Method: OECD 471

Mammalian cells

Result: negative

Method: OECD 476

Lidocaine Hydrochloride

Ames test Salmonella typhimurium

Result: negative

Hamster ovary-cells

Result: negative

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Genotoxicity in vivo:

Propane-1,2-diol

Result: negative
Method: OECD 478

Carcinogenicity:

Propane-1,2-diol

Rat:

Exposure time: 2 a
Number of exposures: once daily
Result: negative

Reproductive toxicity:

Propane-1,2-diol

Application Route: Oral

Rat, female: Test period: 18 d

NOAEL: 1600 mg/kg

Result: Animal testing did not show any effects on fertility.

Teratogenicity:

Propane-1,2-diol

Rat, male: Number of exposures: once daily

Test period: 15 d

NOAEL: 1600 mg/l

Result: No indication of teratogenic effects.

Lidocaine Hydrochloride

Application Route: subcutaneous

Rat: NOAEL: 30 mg/kg 72 mg/kg/day

Result: Did not show teratogenic effects in animal experiments.

Application Route: intraperitoneal

Rat: NOAEL: 56 mg/kg/day

Result: Did not show teratogenic effects in animal experiments.

Pharmaceutic effects:

Analgesic Antiseptic

Carcinogenicity:

No Carcinogenic substances as defined by IARC, NTP and/or OSHA

STOT - single exposure:

No data available

STOT - repeated exposure:

No data available

12. ECOLOGICAL INFORMATION

General advice:

Do not allow to enter surface waters or groundwater. No data is available on the product itself.

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Toxicity to fish:

Propane-1,2-diol

Acute Fish toxicity: LC50 40,613 mg/l

Test species: Pimephales promelas (fathead minnow) Duration of test: 96 h

Toxicity to daphnia and other aquatic invertebrates:

Propane-1,2-diol

LC50 18,340 mg/l

Test species: Ceriodaphnia dubia (water flea) Duration of test: 48 h

Toxicity to algae:

Propane-1,2-diol

IC50 19,100 mg/l

tested on: Pseudokirchneriella subcapitata (green algae)

Toxicity to bacteria:

Propane-1,2-diol

NOEC 20,000 mg/l

tested on: Pseudomonas putida

Duration of test: 18 h

Biodegradability:

Propane-1,2-diol

87 - 92 %, 28 d rapidly biodegradable

Method: OECD 301 C

Bioaccumulation:

Propane-1,2-diol

Bioconcentration factor (BCF)

0.09

13. DISPOSAL CONSIDERATIONS

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

14. TRANSPORT INFORMATION

Land transport (CFR)

non-regulated

US Sea transport (IMDG)

non-regulated

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US Air transport (ICAO / IATA cargo aircraft only)
non-regulated

US Air transport (ICAO / IATA passenger and cargo aircraft)
non-regulated

International IATA **non-regulated**
IMDG non-regulated

15. REGULATORY INFORMATION

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components

None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components

None

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components

None

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists

Weight percent	Components	CAS-No.
5 - 10%	Propane-1,2-diol	57-55-6

California Prop. 65

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

OSHA Hazcom Standard Rating Not subject to OSHA

16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

BD1108

Section 1. Identification

Product name : BD7-77 PLUS Penetrant
Product code : BD1108
Other means of identification : Not available.
Product type : Aerosol.
Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Class C Solutions Group
a business of MSC Industrial Supply Co.
75 Maxess Road
Melville, NY 11747-3151

Emergency telephone number of the company : (303) 623-5716

Product Information Telephone Number : (866) 438-6767

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 57%

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes serious eye irritation.
Causes skin irritation.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling.

Response : Get medical attention if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Med. Aliphatic Hydrocarbon Solvent	49.3	64742-88-7
Kerosine, petroleum	15.0	8008-20-6
2-Butoxyethanol	10.5	111-76-2
Heavy Paraffinic Oil	8.0	64742-65-0
Propane	7.7	74-98-6
Butane	7.3	106-97-8
Calcium Dinonylnaphthalene Sulfonate	1.0	57855-77-3

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Section 4. First aid measures

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :

Section 6. Accidental release measures

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not breathe vapor or mist. Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Med. Aliphatic Hydrocarbon Solvent	OSHA PEL (United States, 2/2013). TWA: 100 ppm 8 hours. TWA: 400 mg/m ³ 8 hours.
Kerosine, petroleum	NIOSH REL (United States, 10/2013). TWA: 100 mg/m ³ 10 hours. ACGIH TLV (United States, 4/2014). Absorbed through skin. TWA: 200 mg/m ³ , (as total hydrocarbon vapor) 8 hours.

Section 8. Exposure controls/personal protection

2-Butoxyethanol	<p>ACGIH TLV (United States, 4/2014). TWA: 20 ppm 8 hours.</p> <p>NIOSH REL (United States, 10/2013). Absorbed through skin. TWA: 5 ppm 10 hours. TWA: 24 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). Absorbed through skin. TWA: 50 ppm 8 hours. TWA: 240 mg/m³ 8 hours.</p>
Heavy Paraffinic Oil	<p>ACGIH TLV (United States, 4/2014). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction</p> <p>NIOSH REL (United States, 10/2013). TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist</p> <p>OSHA PEL (United States, 2/2013). TWA: 5 mg/m³ 8 hours.</p>
Propane	<p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 4/2014). STEL: 1000 ppm 15 minutes.</p>
Butane	

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 1 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.7%
Upper: 10.6%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.55 [Air = 1]
- Relative density** : 0.74
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): <0.07 cm²/s (<7 cSt)
Kinematic (40°C (104°F)): <0.07 cm²/s (<7 cSt)

Aerosol product

- Type of aerosol** : Spray
- Heat of combustion** : 0.00003961 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).

Section 10. Stability and reactivity

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Kerosine, petroleum 2-Butoxyethanol	LD50 Oral	Rat	15 g/kg	-
	LCLo Inhalation Vapor	Guinea pig	>3.1 mg/l	1 hours
Heavy Paraffinic Oil	LD50 Dermal	Guinea pig	>2000 mg/kg	-
	LD50 Oral	Rat	1300 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Butane	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Calcium Dinonylnaphthalene Sulfonate	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Kerosine, petroleum	Skin - Moderate irritant	Rabbit	-	0.5 Milliliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 Percent	-
2-Butoxyethanol	Skin - Severe irritant	Rabbit	-	500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
Calcium Dinonylnaphthalene Sulfonate	Skin - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	0.5 Milliliters	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Kerosine, petroleum	-	3	-
2-Butoxyethanol	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Kerosine, petroleum	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Butoxyethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Heavy Paraffinic Oil	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Kerosine, petroleum	Category 2	Not determined	Not determined
2-Butoxyethanol	Category 2	Not determined	Not determined
Heavy Paraffinic Oil	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	5330 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-Butoxyethanol	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 800000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Menidia beryllina	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2-Butoxyethanol	-	-	Readily

Section 12. Ecological information

Bioaccumulative potential

Not available.

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	Special provisions LIMITED QUANTITY	Special provisions LIMITED QUANTITY	Special provisions (ERG#126)	Special provisions LIMITED QUANTITY	Emergency schedules (EmS) LIMITED QUANTITY, F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :
[State regulations](#)

[California Prop. 65](#)

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

[Hazardous Material Information System \(U.S.A.\)](#)

Health	2
Flammability	4
Physical hazards	0

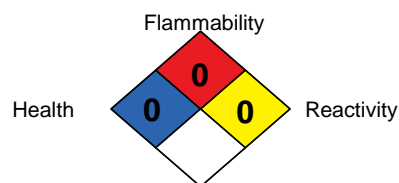
Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

[Notice to reader](#)

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

Section 16. Other information



0 = Minimum 1 = Light 2 = Moderate 3 = Serious 4 = Extreme

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	BIO-RUST
Product Identifier	53-G 241 (1,5L), 53-G 247 (20L), 53-G 248 (208L), 53-G 249 (1000L)
MSDS No.	L-134E
Product Family	Cleaning and Degreasing
Manufacturer / Supplier	Walter Surface Technologies Inc., 5977 Trans-Canada Highway, Pointe-Claire, Qc, H9R 1C1, 1-888-592-5837, www.walter.com
Emergency Contact	CANUTEC (Canadian Transport Emergency Centre), (613) 996-6666, 24 hours / 7 days
Information Use	Non-corrosive rust remover

2. HAZARDS IDENTIFICATION

WHMIS Classification	Not a WHMIS controlled product.
Potential Health Effects	
Route of Exposure	Skin contact; eye contact; ingestion
Skin Contact	Not irritating
Eye Contact	May cause slight eye irritation.
Ingestion	May cause slight nausea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Contains no hazardous ingredients.

4. FIRST AID MEASURES

First Aid Procedures

Eye Contact	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. If irritation or pain persists, see a doctor.
Ingestion	Have victim rinse mouth with water. Give plenty of water to drink. DO NOT INDUCE VOMITING. Call a Poison Centre or doctor if the victim feels unwell.

5. FIRE FIGHTING MEASURES

Flammable Properties	Does not burn.
Suitable Extinguishing Media	Carbon dioxide, dry chemical powder or appropriate foam.
Unsuitable Extinguishing Media	None known
Specific Hazards Arising from the Chemical	This product presents no unusual hazards in a fire situation.
Protective Equipment and Precautions for Firefighters	No special precautions are necessary. Review Section 6 (Accidental Release Measures) for important information on responding to leaks/spills.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Slippery after spillage or leakage.
Environmental Precautions	No special precautions are necessary.
Methods for Containment and Clean-up	Contain and soak up spill with absorbent that does not react with spilled product. Flush spill area. Review Section 13 (Disposal Considerations) of this MSDS.

7. HANDLING AND STORAGE

Handling	No special handling precautions are necessary.
Storage	Protect from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	Provide eyewash in work area, if contact or splash hazard exists.
Personal Protective Equipment (PPE)	
Eye/Face Protection	Wear chemical safety goggles or face shield when contact is possible.
Skin Protection	Wear chemical protective gloves for long lasting skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear yellow liquid
Odour	Mild
Boiling Point	< 93 °C (199 °F)
Freezing Point	0 °C (32 °F)
Relative Density (water = 1)	1
Specific gravity	1.1 - 1.2
Solubility in Water	Soluble
pH	~ 5,2
Evaporation Rate	> 1 (diethyl ether = 1)
Flash Point	Not applicable
Lower Flammable/Explosive Limit	Not applicable
Upper Flammable/Explosive Limit	Not applicable
Auto-ignition Temperature	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability	Normally stable
Conditions to Avoid	High temperatures
Incompatible Materials	Strong oxidizing agents (e.g. perchloric acid). And other reactive materials.
Hazardous Decomposition Products	Carbon oxide.

11. TOXICOLOGICAL INFORMATION

Eye Irritation / Corrosion	Slight irritation of eyes possible.
Effects of Short-Term (Acute) Exposure	
Ingestion	May cause slight nausea.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Studies were not located.
Persistence and Degradability	No information was located.
Bioaccumulation / Accumulation	No information was located.

Mobility Studies are not available.

13. DISPOSAL CONSIDERATIONS

Eliminate while respecting municipal, provincial and federal regulations.

14. TRANSPORT INFORMATION

Shipping Information Not regulated under Canadian TDG Regulations. Not regulated under US DOT Regulations.

Other Transport Information

Special Shipping Information Please note: Protect from freezing.

15. REGULATORY INFORMATION

Canada

Domestic Substances List (DSL) All ingredients are listed on the DSL.

CEPA - National Pollutant Release Inventory (NPRI) Not specifically listed.

USA

US OSHA Regulatory Status While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Additional USA Regulatory Lists

CERCLA: RQ: None
SARA Title III - Section 302: None
SARA Title III - Section 311/312: None
SARA Title III - Section 313: None
New Jersey Right To Know: None
Section 112: Hazardous Air Pollutants (HAPS): None

16. OTHER INFORMATION

MSDS Prepared By Project Manager, Environmental Solutions and MRO
Phone No. 1-888-592-5837
Date of Preparation February 2015

Section 1. Chemical Product and Company Identification

Product name Blueshield	Classification CSA: LA 6010; E41010/ E4310; LA ULTRA 11; E41011/ E4311; LA 6013; E41013/ E4313; LA 6013P; E41013/ E4313; LA 7014; E48014/ E4914; LA 7024; E48024/ E4924; LA 24-HD; E48024/ E4924;	Classification AWS: E6010; E6011; E6013; E6013; E7014; E7024; E7024;	Generic Code : AL-J-001-0 Date of issue : 01/13/2014
Description	: SMAW - Mild-Steel Electrode.		
In case of emergency	: 1-514-878-1667		
Supplier	: Air Liquide Canada Inc., 1250, René-Lévesque Ouest, Suite 1700, Montréal, QC H3B 5E6		

Section 2. Hazards Identification

Physical state and Appearance	: Solid.
Emergency overview	: These hazards relate to welding fumes (electrodes in use) and not to the electrodes as sold. WARNING! ELECTRIC SHOCK can kill. FUMES AND GASES can be dangerous to your health. ARC RAYS can injure eyes and burn skin. MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Use personal protective equipment as required. Wash thoroughly after handling.
Routes of entry	: Dermal contact. Eye contact. Inhalation.
Potential acute health effects	
Eyes	: Very hazardous by the following route of exposure: of eye contact (irritant). Inflammation of the eye is characterized by redness, watering and itching.
Skin	: Hazardous by the following route of exposure: of skin contact (corrosive, irritant, sensitizer). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.
Inhalation	: Hazardous by the following route of exposure: of inhalation (lung irritant).
Ingestion	: Since the product (welding fumes) is a gas and that it is mostly probable that it will be inhaled more than ingested, please consider first to look at the preventive measures in case of inhalation.
Potential chronic health effects	:

Carcinogenicity

Product/ingredient name	ACGIH	OSHA	IARC	NTP	EU
Titanium dioxide	A4	-	2B	-	Carc. 2, H351
Sodium fluoride	A4	-	3	-	-
Talc	A1	-	1	-	Carc. 1A, H350

Mutagenic effects Not available.

Teratogenic effects: Not available.

Medical conditions aggravated by over-exposure : Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

(* See Abbreviations (section 16).

Section 3. Composition, Information on Ingredients

Name	CAS #	% by weight	UN number
Iron	7439-89-6	40 - 85	Not available.
Calcium carbonate	471-34-1	0.01 - 35	Not available.
Titanium dioxide	13463-67-7	0.1 - 13	Not available.
Mica-group minerals	12001-26-2	1 - 7	Not available.
Sodium fluoride	7681-49-4	0.01 - 4	UN1690
Manganese	7439-96-5	0.5 - 3	Not available.
Bentonite	1302-78-9	0.01 - 1	Not available.
Kaolin	1332-58-7	0.01 - 0.5	Not available.

The fumes emitted by the electrodes, in use, are hazardous. This MSDS is written for workers using these electrodes.

Section 4. First Aid Measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

- Flammability of the product** : Non-flammable. Emits toxic fumes when heated.
- Explosibility** : Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts.
- Fire-fighting media and instructions** : Use an extinguishing agent suitable for the surrounding fire.

Section 6. Accidental Release Measures

- Small/Large Spill and Leak** : Use appropriate tools to transfer the spilled solid to a convenient waste disposal container.

Section 7. Handling and Storage

- Handling** : Avoid contact with eyes. Avoid breathing dust. Avoid prolonged or repeated contact with skin. Do not get on skin or clothing. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.
- Storage** : All filler metals in their original, unopened containers should be kept in a relatively dry storage area at temperatures between 15°C (60°F) and 30°C (80°F) and 50% maximum relative humidity.

Section 8. Exposure Controls, Personal Protection

- Engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Personal protection**
- Eyes** : Safety glasses with side shields. Face shield with radiation shielding.
 - Body** : Full suit. Fire resistant.
 - Respiratory** : Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear a canister breathing apparatus (respirator) or a supplied-air respirator, when required, to weld in a confined space or when room exhaust or ventilation does not keep exposure below the acceptable values.
 - Hands** : Gloves. Fire resistant.
 - Feet** : Metal cap, safety boots.

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
Titanium dioxide	US ACGIH 6/2013	-	10	-	-	-	-	-	-	-	
	AB 4/2009	-	10	-	-	-	-	-	-	-	
	BC 7/2013	-	3	-	-	-	-	-	-	-	[a]
	ON 1/2013	-	10	-	-	-	-	-	-	-	[b]
	QC 12/2012	-	10	-	-	-	-	-	-	-	[c]
Mica-group minerals	US ACGIH 6/2013	-	3	-	-	-	-	-	-	-	[d]
	AB 4/2009	-	3	-	-	-	-	-	-	-	[e]
	BC 7/2013	-	3	-	-	-	-	-	-	-	[f]
	ON 1/2013	-	3	-	-	-	-	-	-	-	[g]
	QC 12/2012	-	3	-	-	-	-	-	-	-	[g]
Sodium fluoride, as F	US ACGIH 6/2013	-	2.5	-	-	-	-	-	-	-	
	AB 4/2009	-	2.5	-	-	-	-	-	-	-	
	BC 7/2013	-	2.5	-	-	-	-	-	-	-	
	ON 1/2013	-	2.5	-	-	-	-	-	-	-	
	QC 12/2012	-	2.5	-	-	-	-	-	-	-	
Manganese, as Mn	US ACGIH 6/2013	-	0.1	-	-	-	-	-	-	-	[h]
	US ACGIH 6/2013	-	0.2	-	-	-	-	-	-	-	[e]
	AB 4/2009	-	0.2	-	-	-	-	-	-	-	
	BC 7/2013	-	0.2	-	-	-	-	-	-	-	
	ON 1/2013	-	0.2	-	-	-	-	-	-	-	
Kaolin	QC 12/2012	-	1	-	-	3	-	-	-	-	[i]
	US ACGIH 6/2013	-	2	-	-	-	-	-	-	-	[e]
	AB 4/2009	-	2	-	-	-	-	-	-	-	[f]
	BC 7/2013	-	2	-	-	-	-	-	-	-	[f]

	ON 1/2013	-	2	-	-	-	-	-	-	-	[e]
	QC 12/2012	-	5	-	-	-	-	-	-	-	[g]
Iron	US ACGIH	-	10	-	-	-	-	-	-	-	[j]
Calcium carbonate	AB 4/2009	-	10	-	-	-	-	-	-	-	[3]
		-	10	-	-	-	-	-	-	-	[d]

[3]Skin sensitization

Form: [a]Respirable dust [b]Total dust [c]total dust [d]Total dust. [e]Respirable fraction [f]Respirable [g]Respirable dust. [h]Inhalable fraction [i]fume [j] Inhalable particle.

Section 9. Physical and Chemical Properties

Physical state and Appearance : Solid.

Color : Reddish-brown. Grayish-white.

Odor : Odorless.

Melting/freezing point : 1540 to 2030°C (2804 to 3686°F)

Specific gravity : Not available.

Solubility : Insoluble in the following materials: cold water and hot water.

Section 10. Stability and Reactivity

Stability and reactivity : The product is stable.

Hazardous decomposition products : Metallic oxides. carbon oxides (CO, CO₂) Arc radiation can support the production of ozone and nitrogen oxides.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological Information

Product/ingredient name	Result	Species	Dose	Exposure
Calcium carbonate	LD50 Oral	Rat	6450 mg/kg	-
Sodium fluoride	LD50 Oral	Rat	31 mg/kg	-
Manganese	LD50 Oral	Rat	9 g/kg	-

Chronic effects and other toxic effects on humans : **CARCINOGENIC EFFECTS:** Classified + (Proven.) by NIOSH [Titanium dioxide]. Classified 2B (Possible for humans.) by IARC, 3 (Possible for humans.) by European Union [Titanium dioxide]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Titanium dioxide]. Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [Sodium fluoride]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Manganese]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Aluminium oxide]. Classified A4 (Not classifiable for humans or animals.) by ACGIH, 3 (Not classifiable for humans.) by IARC [Calcium fluoride]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Zirconium]. Classified A4 (Not classifiable for humans or animals.) by ACGIH [Kaolin]. Classified A1 (Confirmed for humans.) by ACGIH, 1 (Proven for humans.) by IARC, 1 (Proven for humans.) by European Union [Talc].
Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, heart, bladder, upper respiratory tract, skin, bones, central nervous system (CNS), eye, lens or cornea, teeth.

Very hazardous by the following route of exposure: of eye contact (irritant).

Hazardous by the following route of exposure: of skin contact (corrosive, irritant, sensitizer), of inhalation (lung irritant).

Section 12. Ecological Information

Ecotoxicity data

Product/ingredient name	Result	Species	Exposure
Iron	Acute EC50 3700 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 33000 to 100000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 6.48 µg/l Marine water	Fish - Periophthalmus waltoni - Adult	96 hours
Calcium carbonate	Chronic NOEC 100 mg/l Marine water	Algae - Glenodinium halli	72 hours
	Acute LC50 56000 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Chronic NOEC 61 mg/g Fresh water	Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	28 days
Titanium dioxide	Acute EC50 5.83 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 3 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 5.5 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 1000 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Sodium fluoride	Chronic NOEC 0.984 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 181000 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 850000 µg/l Fresh water	Algae - Scenedesmus subspicatus - Exponential growth phase	72 hours
	Acute EC50 179.4 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute EC50 98000 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 51000 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 14000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 3.1 mg/l Fresh water	Fish - Acipenser baerii - Juvenile (Fledgling, Hatchling, Weanling)	90 days

Manganese	Acute EC50 31000 µg/l Fresh water Acute LC50 29000 µg/l	Aquatic plants - Lemna minor Daphnia - Daphnia magna	4 days 48 hours
Bentonite	Acute LC50 28 mg/l Fresh water Acute LC50 19000000 µg/l Fresh water	Fish - Pimephales promelas Fish - Oncorhynchus mykiss	96 hours 96 hours

Products of degradation : Not applicable.

Section 13. Disposal Considerations

Waste information : Waste must be disposed of in accordance with federal, state and local environmental control regulations. Recycle, if possible.
Consult your local or regional authorities.

Section 14. Transport Information

No transport class is found applicable to this product.

Section 15. Regulatory Information

HCS Classification : These hazards relate to welding fumes (electrodes in use) and not to the electrodes as sold.

Irritating material
Sensitizing material
Carcinogen
Target organ effects

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

United States inventory (TSCA 8b): Not determined.

Commerce control list precursor: Sodium fluoride

SARA 302/304: No products were found.

SARA 311/312 Hazards identification: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 311: Sodium fluoride

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Manganese	7439-96-5	0.5 - 3
Supplier notification	Manganese	7439-96-5	0.5 - 3

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : **Massachusetts** : The following components are listed: TITANIUM DIOXIDE; MICA DUST; SODIUM FLUORIDE; MANGANESE

New York : The following components are listed: Sodium fluoride

New Jersey : The following components are listed: TITANIUM DIOXIDE; TITANIUM OXIDE (TiO₂); MICA; SODIUM FLUORIDE; MANGANESE; KAOLIN; SOAPSTONE

Pennsylvania : The following components are listed: TITANIUM OXIDE (TiO₂); SODIUM FLUORIDE (NAF); MANGANESE; KAOLIN; SOAPSTONE DUST

WARNING: This product contains a chemical known to the State of California to cause cancer.

WHMIS (Canada) : These hazards relate to welding fumes (electrodes in use) and not to the electrodes as sold.

Class D-2A: Material causing other toxic effects (Very toxic).

Class D-2B: Material causing other toxic effects (Toxic).

CEPA Toxic substances: The following components are listed: Inorganic fluorides

Canadian ARET: None of the components are listed.

Canadian NPRI: The following components are listed: Sodium fluoride; Manganese (and its compounds)

Alberta Designated Substances: None of the components are listed.

Ontario Designated Substances: None of the components are listed.

Quebec Designated Substances: None of the components are listed.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16. Other Information

Label requirements : See Section 2.

Hazardous Material Information System (U.S.A.) : Health: 2* Fire: 0 Reactivity: 0

National Fire Protection Association (U.S.A.) : Health: 2 Fire: 0 Reactivity: 0 Other: None

References : - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005. - CRC Handbook of chemistry and physics, 67th edition. CRC Press inc., Boca Raton, Florida. - Manufacturer's Material Safety Data Sheet. ANSI Z400.1, MSDS Standard, 2004. ANSI Z49.1 Safety in Welding and Cutting, The American Welding Society, P.O. Box 351040, Miami, FL 33135. Canadian Standard Association, CSA W117.2, Code for Safety in Welding and Cutting, 2003.

Abbreviations and acronyms : **ACGIH: American Conference of Governmental Industrial Hygiene.**
ACGIH-A1-Confirmed Human Carcinogen.
ACGIH-A2-Suspected Human Carcinogen.
ACGIH-A3-Animal Carcinogen.
ACGIH-A4-Not Classifiable as a Human Carcinogen.
ACGIH-A5-Not suspected as a Human Carcinogen.
IARC: International Agency for Research on Cancer.
IARC 1: Proven.
IARC 2A: Probable for human.
IARC 2B: Possible for human.
IARC 3: Not classifiable for human.
NIOSH: National Institute of Occupational Safety and Health.
NIOSH +: Proven.
NIOSH: None.
EU: European Union
Carc. 1A : May cause cancer (Known)
Carc. 1B : May cause cancer (Presumed)
Carc. 2 : Suspected of causing cancer
NTP: National Toxicology program.
NTP 1: Known to be human carcinogens.
NTP 2: Reasonably Anticipated to be human carcinogens.

Responsible name : IHS
Date of previous issue : 01/15/2011
Version : 5

Notice to reader

THE INFORMATION, RECOMMENDATIONS AND DATA CONTAINED IN THIS DOCUMENT ARE INTENDED TO BE USED BY PROPERLY TRAINED AND QUALIFIED PERSONNEL ONLY AND AT THEIR SOLE RISKS AND DISCRETION. THE INFORMATION, RECOMMENDATIONS AND DATA HEREIN CONTAINED ARE DERIVED FROM SOURCES WHICH WE BELIEVE TO BE RELIABLE. HOWEVER, AIR LIQUIDE CANADA INC. MAKES NO REPRESENTATION AND GIVES NO WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THEIR ACCURACY OR COMPLETENESS AND ASSUMES NO LIABILITY FOR DAMAGES OR LOSS ARISING DIRECTLY OR INDIRECTLY FROM THEIR USE, WHETHER PROPER OR IMPROPER.

Section 1. Chemical Product and Company Identification

Product name Blueshield EXCELARC 18; LA 7018; LA 18 LMP; LA 18 PLUS; LA 18 PLUS LMP; NUCLEARC LA 7018; LA 7028; LA 18 PLUS COMPLETE;	Classification CSA: E48018/ E4918; E48018-1/ E4918-1-H4; E48018-1/ E4918-1-H4; E48018-1/ E4918-1-H4; E48018-1/ E4918-1-H4; E48018-1/ E4918-1-H4; E48028/ E4928; E48018-1/ E4918-1-H4; Description : SMAW - Low-Hydrogen Electrodes. In case of emergency : 1-514-878-1667 Supplier : Air Liquide Canada Inc., 1250, René-Lévesque Ouest, Suite 1700, Montréal, QC H3B 5E6	Classification AWS: E7018; E7018-1-H4; E7018-1-H4; E7018-1-H4; E7018-1-H4; E7018-1-H4; E7018-1-H4; E7028; E7018-1-H4R; Generic Code : AL-J-002-0 Date of issue : 01/13/2014
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Section 2. Hazards Identification

Physical state and Appearance : Solid. Emergency overview : These hazards relate to welding fumes (electrodes in use) and not to the electrodes as sold. WARNING! ELECTRIC SHOCK can kill. FUMES AND GASES can be dangerous to your health. ARC RAYS can injure eyes and burn skin. MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Use personal protective equipment as required. Wash thoroughly after handling.	Routes of entry : Dermal contact. Eye contact. Inhalation. Potential acute health effects Eyes : Very hazardous by the following route of exposure: of eye contact (irritant). Inflammation of the eye is characterized by redness, watering and itching. Skin : Hazardous by the following route of exposure: of skin contact (corrosive, irritant, sensitizer). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering. Inhalation : Hazardous by the following route of exposure: of inhalation (lung irritant). Ingestion : Since the product (welding fumes) is a gas and that it is mostly probable that it will be inhaled more than ingested, please consider first to look at the preventive measures in case of inhalation.
Potential chronic health effects :	

Carcinogenicity

Product/ingredient name	ACGIH	OSHA	IARC	NTP	EU
Titanium dioxide	A4	-	2B	-	Carc. 2, H351
Calcium fluoride	A4	-	3	-	-
Crystalline silica respirable	A2	-	1	Known to be a human carcinogen.	Carc. 1A, H350
nickel	A5	-	2B	Reasonably anticipated to be a human carcinogen.	Carc. 2, H351

Mutagenic effects Not available.

Teratogenic effects: Not available.

Medical conditions aggravated by over-exposure : Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

(* See Abbreviations (section 16).

Section 3. Composition, Information on Ingredients

Name	CAS #	% by weight	UN number
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Iron	7439-89-6	45 - 70	Not available.
Titanium dioxide	13463-67-7	0.1 - 15	Not available.
Calcium carbonate	471-34-1	0.01 - 15	Not available.
Calcium fluoride	7789-75-5	0.01 - 10	Not available.
Zirconium	7440-67-7	0.01 - 6	Not available.
Manganese	7439-96-5	0.01 - 4	Not available.
Ferrosilicon	8049-17-0	0.01 - 2.5	UN1408
Aluminium oxide	1344-28-1	0.01 - 2	Not available.
Crystalline silica respirable	14808-60-7	0.1 - 1	Not available.
Nickel	7440-02-0	0.01 - 0.5	Not available.

The fumes emitted by the electrodes, in use, are hazardous. This MSDS is written for workers using these electrodes.

See Section 8 for Exposure Limits of the oxides found in the welding fumes.

Section 4. First Aid Measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Section 5. Fire Fighting Measures

- Flammability of the product** : Non-flammable. Emits toxic fumes when heated.
- Explosibility** : Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts.
- Fire-fighting media and instructions** : Use an extinguishing agent suitable for the surrounding fire.

Section 6. Accidental Release Measures

- Small/Large Spill and Leak** : Use appropriate tools to transfer the spilled solid to a convenient waste disposal container.

Section 7. Handling and Storage

- Handling** : Avoid contact with eyes. Avoid breathing dust. Avoid prolonged or repeated contact with skin. Do not get on skin or clothing. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact of spilled material and runoff with soil and surface waterways.
- Storage** : All filler metals in their original, unopened containers should be kept in a relatively dry storage area at temperatures between 15°C (60°F) and 30°C (80°F) and 50% maximum relative humidity.

Section 8. Exposure Controls, Personal Protection

- Engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Personal protection**
- Eyes** : Safety glasses with side shields. Face shield with radiation shielding.
- Body** : Full suit. Fire resistant.
- Respiratory** : Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear a canister breathing apparatus (respirator) or a supplied-air respirator, when required, to weld in a confined space or when room exhaust or ventilation does not keep exposure below the acceptable values.
- Hands** : Gloves. Fire resistant.
- Feet** : Metal cap, safety boots.

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
Titanium dioxide	US ACGIH 6/2013	-	10	-	-	-	-	-	-	-	
	AB 4/2009	-	10	-	-	-	-	-	-	-	
	BC 7/2013	-	3	-	-	-	-	-	-	-	[a]
		-	10	-	-	-	-	-	-	-	[b]
	ON 1/2013	-	10	-	-	-	-	-	-	-	[c]
Aluminium oxide	QC 12/2012	-	10	-	-	-	-	-	-	-	[d]
	US ACGIH 6/2013	-	1	-	-	-	-	-	-	-	[e]
	AB 4/2009	-	10	-	-	-	-	-	-	-	
	BC 7/2013	-	1	-	-	-	-	-	-	-	[f]
	ON 1/2013	-	1	-	-	-	-	-	-	-	[e]
Aluminium oxide, as Al	QC 12/2012	-	10	-	-	-	-	-	-	-	[d]
	Manganese, as Mn	US ACGIH 6/2013	-	0.1	-	-	-	-	-	-	[g]
		US ACGIH 6/2013	-	0.2	-	-	-	-	-	-	-

Section 12. Ecological Information

Ecotoxicity data

Product/ingredient name	Result	Species	Exposure
Iron	Acute EC50 3700 µg/l Fresh water Acute LC50 33000 to 100000 µg/l Marine water	Aquatic plants - Lemna minor Crustaceans - Crangon crangon	4 days 48 hours
Titanium dioxide	Acute LC50 6.48 µg/l Marine water Chronic NOEC 100 mg/l Marine water Acute EC50 5.83 mg/l Fresh water	Fish - Periophthalmus waltoni - Adult Algae - Glenodinium halli Algae - Pseudokirchneriella subcapitata - Exponential growth phase	96 hours 72 hours 72 hours
	Acute LC50 3 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 5.5 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 1000 mg/l Fresh water Acute LC50 >1000000 µg/l Marine water Chronic NOEC 0.984 mg/l Fresh water	Fish - Pimephales promelas Fish - Fundulus heteroclitus Algae - Pseudokirchneriella subcapitata - Exponential growth phase	96 hours 96 hours 72 hours
Calcium carbonate	Acute LC50 56000 ppm Fresh water Chronic NOEC 61 mg/g Fresh water	Fish - Gambusia affinis - Adult Fish - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling)	96 hours 28 days
Manganese	Acute EC50 31000 µg/l Fresh water Acute LC50 29000 µg/l Acute LC50 28 mg/l Fresh water	Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Pimephales promelas	4 days 48 hours 96 hours
Nickel	Acute EC50 2 ppm Marine water Acute EC50 450 µg/l Fresh water Acute EC50 1000 µg/l Marine water Acute IC50 0.31 mg/l Marine water	Algae - Macrocyctis pyrifera - Young Aquatic plants - Lemna minor Daphnia - Daphnia magna Crustaceans - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling)	4 days 4 days 48 hours 48 hours
	Acute LC50 47.5 ng/L Fresh water Chronic NOEC 100 mg/l Marine water Chronic NOEC 3.5 µg/l Fresh water	Fish - Heteropneustes fossilis Algae - Glenodinium halli Fish - Cyprinus carpio	96 hours 72 hours 4 weeks

Products of degradation : Not applicable.

Section 13. Disposal Considerations

Waste information : Waste must be disposed of in accordance with federal, state and local environmental control regulations. Recycle, if possible.

Consult your local or regional authorities.

Section 14. Transport Information

No transport class is found applicable to this product.

Section 15. Regulatory Information

HCS Classification : These hazards relate to welding fumes (electrodes in use) and not to the electrodes as sold.

Irritating material
Sensitizing material
Carcinogen
Target organ effects

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

United States inventory (TSCA 8b): Not determined.

SARA 302/304: No products were found.

SARA 311/312 Hazards identification: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: Copper; Nickel

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Manganese	7439-96-5	0.01 - 4
	Aluminium oxide	1344-28-1	0.01 - 2
	Nickel	7440-02-0	0.01 - 0.5
Supplier notification	Manganese	7439-96-5	0.01 - 4
	Aluminium oxide	1344-28-1	0.01 - 2
	Nickel	7440-02-0	0.01 - 0.5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : **Massachusetts** : The following components are listed: TITANIUM DIOXIDE; ALUMINUM OXIDE; MANGANESE; ZIRCONIUM

New York : The following components are listed: Nickel

New Jersey : The following components are listed: TITANIUM DIOXIDE; TITANIUM OXIDE (TiO₂); ALUMINUM OXIDE; alpha-ALUMINA; FERROSILICON; FERROCERUM; MANGANESE; ZIRCONIUM; FLUORIDES; SILICA, QUARTZ; QUARTZ (SiO₂); NICKEL

Pennsylvania : The following components are listed: TITANIUM OXIDE (TiO₂); ALUMINUM OXIDE (Al₂O₃); MANGANESE; ZIRCONIUM; QUARTZ (SiO₂); NICKEL

WARNING: This product contains a chemical known to the State of California to cause cancer.

WHMIS (Canada)

: These hazards relate to welding fumes (electrodes in use) and not to the electrodes as sold.

Class D-2A: Material causing other toxic effects (Very toxic).

Class D-2B: Material causing other toxic effects (Toxic).

CEPA Toxic substances: The following components are listed: Inorganic fluorides

Canadian ARET: None of the components are listed.

Canadian NPRI: The following components are listed: Aluminum oxide (fibrous forms only); Manganese (and its compounds); Calcium fluoride

Alberta Designated Substances: None of the components are listed.

Ontario Designated Substances: None of the components are listed.

Quebec Designated Substances: None of the components are listed.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16. Other Information

Label requirements : See Section 2.

Hazardous Material Information System (U.S.A.) : Health: 2* Fire: 0 Reactivity: 0

National Fire Protection Association (U.S.A.) : Health: 2 Fire: 0 Reactivity: 0 Other: None

References : - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005. - CRC Handbook of chemistry and physics, 67th edition. CRC Press inc., Boca Raton, Florida. - Manufacturer's Material Safety Data Sheet. ANSI Z400.1, MSDS Standard, 2004. ANSI Z49.1 Safety in Welding and Cutting, The American Welding Society, P.O. Box 351040, Miami, FL 33135. Canadian Standard Association, CSA W117.2, Code for Safety in Welding and Cutting, 2003.

Abbreviations and acronyms : **ACGIH: American Conference of Governmental Industrial Hygiene.**

ACGIH-A1-Confirmed Human Carcinogen.

ACGIH-A2-Suspected Human Carcinogen.

ACGIH-A3-Animal Carcinogen.

ACGIH-A4-Not Classifiable as a Human Carcinogen.

ACGIH-A5-Not suspected as a Human Carcinogen.

IARC: International Agency for Research on Cancer.

IARC 1: Proven.

IARC 2A: Probable for human.

IARC 2B: Possible for human.

IARC 3: Not classifiable for human.

NIOSH: National Institute of Occupational Safety and Health.

NIOSH +: Proven.

NIOSH: None.

EU: European Union

Carc. 1A : May cause cancer (Known)

Carc. 1B : May cause cancer (Presumed)

Carc. 2 : Suspected of causing cancer

NTP: National Toxicology program.

NTP 1: Known to be human carcinogens.

NTP 2: Reasonably Anticipated to be human carcinogens.

Responsible name : IHS

Date of previous issue : 01/15/2011

Version : 5

Notice to reader

THE INFORMATION, RECOMMENDATIONS AND DATA CONTAINED IN THIS DOCUMENT ARE INTENDED TO BE USED BY PROPERLY TRAINED AND QUALIFIED PERSONNEL ONLY AND AT THEIR SOLE RISKS AND DISCRETION. THE INFORMATION, RECOMMENDATIONS AND DATA HEREIN CONTAINED ARE DERIVED FROM SOURCES WHICH WE BELIEVE TO BE RELIABLE. HOWEVER, AIR LIQUIDE CANADA INC. MAKES NO REPRESENTATION AND GIVES NO WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THEIR ACCURACY OR COMPLETENESS AND ASSUMES NO LIABILITY FOR DAMAGES OR LOSS ARISING DIRECTLY OR INDIRECTLY FROM THEIR USE, WHETHER PROPER OR IMPROPER.

Material Safety Data Sheet

according to ANSI Z400.1- 2004 and 29 CFR 1910.1200



BON AMI® POWER FOAM GLASS CLEANER

Version 2.0

Print Date 11/17/2015

Revision Date 09/29/2015

MSDS Number 350000021130

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Trade name : BON AMI® POWER FOAM GLASS CLEANER

Use of the Substance/Mixture : Hard Surface Cleaner

Company : S.C. Johnson and Son, Limited
1 Webster Street
Brantford ON N3T 5R1

Emergency telephone number : 24 Hour Transport & Medical Emergency Phone (866) 231-5406
24 Hour International Emergency Phone (952) 852-4647
24 Hour Canadian Transport Emergency Phone (CANUTEC) (613) 996-6666

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance / Odor : translucent / aerosol Compressed gas / characteristic

Immediate Concerns

: Caution
Avoid contact with skin, eyes and clothing.
Keep away from heat, sparks and flame.
Do not puncture or incinerate.
Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.
Contents under pressure.

Potential Health Effects

Exposure routes : Eye, Skin, Inhalation, Ingestion.

Eyes : May cause:
Mild eye irritation

Skin : Prolonged or repeated contact may dry skin and cause irritation.

Inhalation : No adverse effects expected when used as directed.

Ingestion : May cause irritation to mouth, throat and stomach.
May cause abdominal discomfort.

Aggravated Medical Condition : Persons with pre-existing skin disorders may be more susceptible to irritating effects.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous chemicals present at or above reportable levels as defined by OSHA 29 CFR 1910.1200 or the Canadian Controlled Products Regulations are listed in this table:

Chemical Name	CAS-No.	Weight percent
Isobutane	75-28-5	1.00 - 5.00
Propylene glycol monobutyl ether	5131-66-8	1.00 - 5.00

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

- Eye contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.
- Skin contact : Rinse with plenty of water. Get medical attention if irritation develops and persists.
- Inhalation : Remove to fresh air. If breathing is affected, get medical attention.
- Ingestion : Rinse mouth with water.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during firefighting : Aerosol Product - Containers may rocket or explode in heat of fire.
- Further information : Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.
- Flash point : < -7 C
< 19.4 °F
Method: Tag Closed Cup (TCC)
Note: Propellant
- Lower explosion limit : Note: No data available

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Upper explosion limit : Note: No data available

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Remove all sources of ignition.
Wear personal protective equipment.
- Environmental precautions : Outside of normal use, avoid release to the environment.
- Methods for cleaning up : If damage occurs to aerosol can:
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Use only non-sparking equipment.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

- Advice on safe handling : Do not puncture or incinerate.
Avoid breathing vapours, mist or gas.
Do not spray toward face.
Do not use in areas without adequate ventilation.
Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.

- Advice on protection against fire and explosion : Keep away from heat and sources of ignition.

Storage

- Requirements for storage areas and containers : Do not store at temperatures above 120 Deg. F (50 Deg C), as container may burst.
Keep container closed when not in use.
Keep in a dry, cool and well-ventilated place.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Isobutane	75-28-5	-	1,000 ppm	-	ACGIH STEL

Personal protective equipment

- Respiratory protection** : No personal respiratory protective equipment normally required.
- Hand protection** : No special requirements.
- Eye protection** : No special requirements.
- Skin and body protection** : No special requirements.
- Hygiene measures** : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form : aerosol
Compressed gas
- Color : translucent
- Odor : characteristic
- pH : 11
at 25 C(undiluted)
- Melting point : No data available
- Boiling point : No data available
- Freezing point : No data available
- Flash point : < -7 C
< 19.4 °F
Method: Tag Closed Cup (TCC)
Propellant

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Evaporation rate	:	No data available
Flammability (solid, gas)	:	Does not sustain combustion.
Auto-ignition temperature	:	not auto-flammable
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Vapour pressure	:	No data available
Density	:	8.327 lb/gal at 20 C
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Relative vapour density	:	No data available
Volatile Organic Compounds Total VOC (wt. %)*	:	6.9 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations

10. STABILITY AND REACTIVITY

Conditions to avoid	:	Heat, flames and sparks.
Materials to avoid	:	Strong acids
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.
Thermal decomposition	:	Note: No data available
Hazardous reactions	:	Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50 Measured > 5,000 mg/kg
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Acute inhalation toxicity : LC50
Measured
> 5.59 mg/l

Acute dermal toxicity : LD50
Measured
> 5,000 mg/kg

Chronic effects

Carcinogenicity : No data available

Mutagenicity : No data available

Reproductive effects : No data available

Teratogenicity : No data available

Sensitisation : Did not cause sensitisation on laboratory animals.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects : No data available

13. DISPOSAL CONSIDERATIONS

Observe all applicable Federal, Provincial and State regulations and Local/Municipal ordinances regarding disposal.
Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Land transport

- **U.S. DOT and Canadian TDG Surface Transportation:**
Proper shipping name AEROSOLS, Flammable, 2.1

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Class: 2.1
UN number: 1950
Packaging group: None.
Note: Limited quantities derogation may be applicable to this product, please check transport documents.

Sea transport

▪ *IMDG:*
Proper shipping name: AEROSOLS, Flammable, 2.1
Class: 2
UN number: 1950
Packaging group: None.
EmS: F-D, S-U
Note: Limited quantities derogation may be applicable to this product, please check transport documents.

Air transport

▪ *ICAO/IATA:*
Proper shipping name: AEROSOLS, Flammable, 2.1
Class: 2.1
UN/ID No.: UN 1950
Packaging group: None.
Note: SC Johnson typically does not ship products via air. Refer to IATA/ICAO Dangerous Goods Regulations for detailed instructions when shipping this item by air.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.

Canada Regulations : This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

HMIS Ratings

Health

1

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Flammability	4
Reactivity	0

NFPA Ratings

Health	1
Fire	4
Reactivity	0
Special	-

This information is being provided in accordance with Occupational Safety and Health Administration (OSHA) and Canada's Workplace Hazard Material Information System (WHMIS) regulations. The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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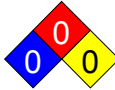

Printing date 07/01/2015

Reviewed on 07/01/2015

1 Identification

- **Product identifier**
- **Trade name: Bronze**
- **Other Product Identifiers:** Silicon Bronze, Leaded Bronze, Aluminum Bronze
- **Recommended use and restriction on use**
- **Recommended use:** Raw materials.
- **Restrictions on use:** Contact manufacturer.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Castle Metals
1420 Kensington Road Suite 220
Oak Brook IL 60523
(847) 349-3000
- **Emergency telephone number:** (847)-349-3000

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified as hazardous according to the Globally Harmonized System (GHS).
- **Additional information:**
There are no other hazards not otherwise classified that have been identified.
0 percent of the mixture consists of ingredient(s) of unknown toxicity.
Not hazardous as delivered. Long term inhalation of product dusts formed during use is harmful.
- **Label elements**
- **GHS label elements**
The product is not classified as hazardous according to OSHA GHS regulations within the United States.
- **Hazard pictograms** Not Regulated
- **Signal word** Not Regulated
- **Hazard-determining components of labeling:** None.
- **Hazard statements** Not Regulated
- **Precautionary statements** Not Regulated
- **Hazard description:**
- **WHMIS-symbols:** Not hazardous under WHMIS.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**
 Health = 0
Fire = 0
Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**
 HEALTH 0 Health = 0
FIRE 0 Fire = 0
REACTIVITY 0 Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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Trade name: Bronze

 · **vPvB:** Not applicable.

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7440-50-8	copper	70-99%
7440-02-0	nickel ⚠ Carc. 2, H351; STOT RE 1, H372 ⚠ Skin Sens. 1, H317	0-14%
7429-90-5	aluminum	0-14%
7439-89-6	iron	<5%
7440-21-3	silicon ⚠ Flam. Sol. 2, H228	<4%
7439-96-5	manganese, powdered ⚠ Flam. Sol. 1, H228	<4%
7440-48-4	cobalt ⚠ Resp. Sens. 1, H334; Carc. 2, H351 ⚠ Skin Sens. 1, H317	<2%
7440-66-6	zinc powder -zinc dust (pyrophoric) ⚠ Pyr. Sol. 1, H250; Water-react. 1, H260	<1%
7440-31-5	tin	<1%
7439-92-1	lead ⚠ Carc. 2, H351; Repr. 1A, H360; STOT RE 1, H372	<1%

- **Additional information:**

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
 Brush off loose particles from skin.
 Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
 Remove contact lenses if worn, if possible.
 Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
 Rinse out mouth and then drink plenty of water.
 Do not induce vomiting; immediately call for medical help.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
 No further relevant information available.

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- **Danger** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Special powder for metal fires. Do not use water.
Dry sand
Graphite powder.
Copper Powder.
Dry sodium chloride
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information** No further relevant information available.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Do not breathe dust.
Avoid formation of dust.
Use personal protective equipment as required.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Pick up mechanically.
Dispose of the collected material according to regulations.
Send for recovery or disposal in suitable receptacles.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Use only in well ventilated areas.
Prevent formation of dust.
Any deposit of dust which cannot be avoided must be regularly removed.

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Trade name: Bronze

(Contd. of page 3)

- Use proper precautions around molten material.
- **Information about protection against explosions and fires:**
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with acids.
Do not store together with alkalis (caustic solutions).
Store away from oxidizing agents.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· Components with limit values that require monitoring at the workplace:

7440-50-8 copper

PEL (USA)	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
TLV (USA)	Long-term value: 1* 0.2** mg/m ³ *dusts and mists; **fume; as Cu
EL (Canada)	Long-term value: 1* 0.2** mg/m ³ *dusts and mists; **fume, as Cu
EV (Canada)	Long-term value: 0.2* 1** mg/m ³ as copper, *fume;**dust and mists
LMPE (Mexico)	Long-term value: 0.2* 1** mg/m ³ *humo (como Cu);**polvo y niebla (como Cu)

7440-02-0 nickel

PEL (USA)	Long-term value: 1 mg/m ³
REL (USA)	Long-term value: 0.015 mg/m ³ as Ni; See Pocket Guide App. A
TLV (USA)	Long-term value: 1.5* mg/m ³ elemental, *inhalable fraction
EL (Canada)	Long-term value: 0.05 mg/m ³ ACGIH A1, IARC 2B
EV (Canada)	Long-term value: 1 mg/m ³ Inhalable fraction
LMPE (Mexico)	Long-term value: 1.5* mg/m ³ *elemental:A5, fracción inhalable

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Trade name: Bronze

(Contd. of page 4)

7429-90-5 aluminum

PEL (USA)	Long-term value: 15*; 15** mg/m ³ *Total dust; ** Respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV (USA)	Long-term value: 1* mg/m ³ as Al; *as respirable fraction
EL (Canada)	Long-term value: 1.0 mg/m ³ respirable, as Al
EV (Canada)	Long-term value: 5 mg/m ³ aluminium-containing (as aluminium)
LMPE (Mexico)	Long-term value: 1* mg/m ³ A4, *fracción respirable

7439-89-6 iron

EV (Canada)	Long-term value: 1* 5** mg/m ³ as iron;*salts, water-soluble;**welding fume
LMPE (Mexico)	Long-term value: 1 mg/m ³

7440-21-3 silicon

PEL (USA)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	TLV withdrawn
EL (Canada)	Long-term value: 10* 3** mg/m ³ *total dust;**respirable fraction
EV (Canada)	Long-term value: 10 mg/m ³ total dust
LMPE (Mexico)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³ (e)

7439-96-5 manganese, powdered

PEL (USA)	Ceiling limit value: 5 mg/m ³ as Mn
REL (USA)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ fume, as Mn
TLV (USA)	Long-term value: 0.02* 0.1* mg/m ³ as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0.2 mg/m ³ as Mn; R
EV (Canada)	Long-term value: 0.2 mg/m ³ as manganese
LMPE (Mexico)	Long-term value: 0.2 mg/m ³ como Mn

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Trade name: Bronze

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7440-48-4 cobalt

PEL (USA)	Long-term value: 0.1* mg/m ³ as Co; *for metal dust and fume
REL (USA)	Long-term value: 0.05 mg/m ³ as Co; metal dust & fume
TLV (USA)	Long-term value: 0.02; NIC - 0.02* mg/m ³ BEI; *hard metals:thoracic ;NIC-A2,RSEN;as W
EL (Canada)	Long-term value: 0.02 mg/m ³ as Co; IARC 2B
EV (Canada)	Long-term value: 0.1 mg/m ³
LMPE (Mexico)	Long-term value: 0.02 mg/m ³ A3, IBE

7439-92-1 lead

PEL (USA)	Long-term value: 0.05* mg/m ³ *see 29 CFR 1910.1025
REL (USA)	Long-term value: 0.05* mg/m ³ *8-hr TWA,excl. lead arsenate;See PocketGuideApp.C
TLV (USA)	Long-term value: 0.05* mg/m ³ *and inorganic compounds, as Pb; BEI
EL (Canada)	Long-term value: 0.05 mg/m ³ R; IARC 2B
EV (Canada)	Long-term value: 0.05 mg/m ³ as Pb, Skin (organic compounds)
LMPE (Mexico)	Long-term value: 0.05 mg/m ³ A3, IBE

7440-31-5 tin

PEL (USA)	Long-term value: 2 mg/m ³ metal
REL (USA)	Long-term value: 2 mg/m ³
TLV (USA)	Long-term value: 2 mg/m ³ metal
EL (Canada)	Long-term value: 2 mg/m ³ metal
EV (Canada)	Long-term value: 2* 0.1** mg/m ³ *metal, oxide, inorg. compds.;**org. compds.: Skin
LMPE (Mexico)	Long-term value: 2* mg/m ³ *metal

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Trade name: Bronze

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Ingredients with biological limit values:
7440-48-4 cobalt

BEI (USA)	15 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Cobalt (background)
	1 µg/L Medium: blood Time: end of shift at end of workweek Parameter: Cobalt (background, semi-quantitative)

7439-92-1 lead

BEI (USA)	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead
	10 µg/100 ml Medium: blood Time: not critical Parameter: Lead (women of child bearing potential)

· **Additional information:** No further relevant information available.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- The usual precautionary measures for handling chemicals should be followed.
- Keep away from foodstuffs, beverages and feed.
- Store protective clothing separately.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes.
- Avoid close or long term contact with the skin.

· **Engineering controls:** No further relevant information available.

· **Breathing equipment:**

- Particulate mask should filter at least 99% of airborne particles.
- Use respiratory protection when grinding or cutting material.

· **Protection of hands:**

- Wear gloves for the protection against mechanical hazards according to OSHA and NIOSH rules.

· **Eye protection:**



Safety glasses

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment** Avoid release to the environment.

· **Risk management measures** See Section 7 for additional information.

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Trade name: Bronze

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9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Solid material
Color:	Bronze colored
· Odor:	Odorless
· Odor threshold:	Not determined.

- pH-value: Not applicable.

- **Change in condition**

Melting point/Melting range:	927 °C (1701 °F)
Boiling point/Boiling range:	Undetermined.

- Flash point: Not applicable.

- Flammability (solid, gaseous): Not determined.

- Auto-ignition temperature: Not determined.

- Decomposition temperature: Not determined.

- Auto igniting: Product is not self-igniting.

- Danger of explosion: Product does not present an explosion hazard.

- **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

- Vapor pressure: Not applicable.

- Density at 20 °C (68 °F): >7 g/cm³ (>58.415 lbs/gal)

- Relative density: Not determined.

- Vapour density: Not applicable.

- Evaporation rate: Not applicable.

- **Solubility in / Miscibility with**

Water:	Insoluble.
--------	------------

- Partition coefficient (n-octanol/water): Not determined.

- **Viscosity:**

Dynamic:	Not applicable.
Kinematic:	Not applicable.

- Other information: No further relevant information available.

10 Stability and reactivity

- **Reactivity**

- **Chemical stability**

- **Thermal decomposition / conditions to be avoided:** Heating may cause release of toxic fumes.

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- **Possibility of hazardous reactions**
 Reacts with strong acids and alkali.
 Reacts with strong oxidizing agents.
 Reacts with halogenated compounds.
 As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion.
- **Conditions to avoid** Avoid acids.
- **Incompatible materials:** Oxidizers, strong bases, strong acids
- **Hazardous decomposition products:**
 Possible in traces:
 Toxic metal oxide smoke
 Leadoxide vapor

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

7439-96-5 manganese, powdered

Oral	LD50	9000 mg/kg (rat)
------	------	------------------

7440-48-4 cobalt

Oral	LD50	6170 mg/kg (rat)
------	------	------------------

7439-92-1 lead

Oral	LD50	>2000 mg/kg (rat)
------	------	-------------------

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 The product is not subject to classification according to internally approved calculation methods for preparations.
 When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

- **NTP (National Toxicology Program)**

7440-02-0	nickel	
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		R
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- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

- **Probable Routes of Exposure**

Eye contact.
 Skin contact.

- **Repeated Dose Toxicity:**

May cause metal fume disease.
 Repeated or long-term inhalation of product dusts may cause pulmonary disease.

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- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** May be accumulated in organism
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Contact manufacturer for recycling information.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Not Regulated
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Not Regulated
- **Transport hazard class(es)**
- **DOT, ADR, IMDG, IATA**
- **Class** Not Regulated
- **Label** -
- **ADN/R Class:** Not Regulated

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Trade name: Bronze

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- **Packing group**
- **DOT, ADR, IMDG, IATA** Not Regulated
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

7440-50-8	copper
-----------	--------

7440-02-0	nickel
-----------	--------

7429-90-5	aluminum
-----------	----------

7439-96-5	manganese, powdered
-----------	---------------------

7440-48-4	cobalt
-----------	--------

- **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

- **Proposition 65 (California)**

- **Chemicals known to cause cancer:**

7440-02-0	nickel
-----------	--------

7440-48-4	cobalt
-----------	--------

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

7440-50-8	copper	D
-----------	--------	---

7439-96-5	manganese, powdered	D
-----------	---------------------	---

1314-13-2	zinc oxide	D, I, II
-----------	------------	----------

- **IARC (International Agency for Research on Cancer)**

7440-02-0	nickel	1
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Trade name: Bronze

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7440-48-4	cobalt	2B
· TLV (Threshold Limit Value established by ACGIH)		
7440-02-0	nickel	A5
7429-90-5	aluminum	A4
7440-48-4	cobalt	A3
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
7440-02-0	nickel	
· State Right to Know Listings		
None of the ingredients is listed.		
· Canadian substance listings:		
· Canadian Domestic Substances List (DSL)		
All ingredients are listed.		
· Canadian Ingredient Disclosure list (limit 0.1%)		
7440-02-0	nickel	
7440-48-4	cobalt	
· Canadian Ingredient Disclosure list (limit 1%)		
7440-50-8	copper	
7429-90-5	aluminum	
7439-96-5	manganese, powdered	

- **Other regulations, limitations and prohibitive regulations**
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** 07/01/2015 / -
- **Abbreviations and acronyms:**
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMS: Hazardous Materials Identification System (USA)
 WHMIS: Workplace Hazardous Materials Information System (Canada)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Flam. Sol. 1: Flammable solids, Hazard Category 1
 Flam. Sol. 2: Flammable solids, Hazard Category 2

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Trade name: Bronze

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Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1

Water-react. 1: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 1

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

Repr. 1A: Reproductive toxicity, Hazard Category 1A

STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1

Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com



Material Safety Data Sheet

Revision Date 15-Mar-2016

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code CW1533
Product name Carbon Arc Electrodes - 1/4"
Recommended Use Welding Rod

Supplier Cronatron, A Lawson Brand
Lawson Products, Inc.
8770 W. Bryn Mawr Ave. - Suite 900
Chicago, IL 60631
1-866-529-7664
(888) 426-4851

Emergency telephone number (888) 426-4851

2. HAZARDS IDENTIFICATION

Emergency Overview

Hazardous fumes are generated by welding, soldering or brazing. Exposure to welding related processes, materials, fumes or gases might be linked to certain neurological and physical disorders and cancer. Protect yourself and others at all times. A NIOSH approved, proper fitting and well-maintained respirator should be worn at all times while using this product. Keep your head out of the fumes and gases. Use adequate ventilation and/or exhaust to keep fumes and gases from your breathing zone and the general area. Keep others without proper respiratory protection away from the fumes and gases and your work zone while using this product.

Aggravated Medical Conditions

Pre-existing respiratory conditions may be aggravated by exposure to welding fumes. Pre-existing kidney and/or liver disorders may be aggravated by exposure to this product.

Principal Routes of Exposure

Eyes. Skin. Inhalation of welding fumes.

General Welding Statement

Fumes and gases can be dangerous to your health. Arc Rays can injure eyes and burn skin. Electric shock can kill. For electric shock, disconnect and turn off the power. The ACGIH and OSHA have set the exposure level for welding fumes at 5 mg/m³. Train the welder not to touch live electrical parts and to insulate himself from work and ground. Welding fumes must be considered as possible carcinogens under OSHA 29 CFR 1910.1200.

Potential health effects

Eyes May cause the following effects: Causes burns. Irritation.

Skin Skin burns.

Inhalation Short term (acute) overexposure to welding fumes may result in the following effects. Inhalation of copper oxide fumes can cause metal fume fever. Initial symptoms of metal fume fever can include sweating, shivering, headache, fever, chills, thirstiness, muscle aches, nausea, vomiting, weakness, and tiredness. Individuals with Wilson's Disease are more susceptible to copper poisoning. Prolonged or repeated breathing of graphite dust can result in pneumoconiosis.

Ingestion Not likely to occur.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Graphite	7782-42-5	10-90
Carbon	7440-44-0	10-90
Copper	7440-50-8	10-30

4. FIRST AID MEASURES

General advice If no detectable pulse, begin Cardio Pulmonary Resuscitation (CPR). Employ First Aid techniques recommended by the Red Cross.

Eye contact Flush eyes with plenty of water. Seek medical attention if irritation persists.

Skin contact Wash off immediately with plenty of water. Seek medical attention if irritation persists.

Ingestion No specific treatment is necessary since this material is not likely to be hazardous by ingestion.

Inhalation If breathing is difficult, give oxygen. Administer artificial respiration if not breathing. Call a physician immediately.

5. FIRE FIGHTING MEASURES

Flash point °C Not Applicable
Flash point °F Not Applicable
Method Not Applicable

Autoignition temperature °C No data available

Product code **CW1533**

Product name **Carbon Arc
Electrodes - 1/4"**

Autoignition temperature °F No data available

Flammability Limits (% in Air)

Upper No data available

Lower No data available

Suitable extinguishing media

Water. Carbon dioxide (CO2). Dry chemical powder.

Extinguishing media which must NOT be used for safety reasons

None.

Special protective equipment for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Fire and Explosion Hazards

Product is nonflammable and nonexplosive under normal conditions of use. Welding arcs and sparks can ignite combustibles. Refer to American National Standard Z49.1 for fire prevention during welding.

Sensitivity to shock

No information available.

Sensitivity to static discharge

No information available.

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up

Collect and contain for disposal.

7. HANDLING AND STORAGE

Handling

Use normal safe handling procedures. Refer to American National Standard Z49.1 for fire prevention during welding.

Storage

No information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Carbon	-	-	-	-
Graphite	15 mg/m ³ 5 mg/m ³	-	2 mg/m ³	-
Copper	0.1 mg/m ³ 1 mg/m ³	-	0.2 mg/m ³ 1 mg/m ³	-

Ventilation and Environmental Controls

Use enough ventilation, local exhaust at the work area, general, or both, to keep below the TLV's in the worker's breathing zone and the general area.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

Respiratory protection

Use respirable fume respirator (P100) or supplied air when welding in confined spaces, or where local exhaust does not keep the exposure below TLV. Follow OSHA respirator regulations (29 CFR 1910.134) and if necessary, wear a MSHA/NIOSH approved respirator. Train welder to keep head out of fumes.

Hand Protection

Welder's gloves. Leather gloves.

Eye protection

Wear helmet or face shield with filter lens. As a rule of thumb, start with a shade which is too dark to see the work area. Then go to the next lighter shade which gives sufficient view of the work area. Provide protective screens and flash goggles, if necessary, to shield others.

Hearing Protection

Ear plugs should be worn

Skin and body protection

Sufficient to provide protection from radiation, heat, sparks and electrical shock. May include arm and shoulder protectors, aprons and dark substantial clothing. See ANSI Z49.1.

Other Protective Equipment

Wear head, hand and body protection which help prevent injury from radiation, sparks, heat, and electrical shock. See ANSI Z49.1.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Solid
Color	Black / Copper
Odor	None
Odor Threshold	No information available
pH	No data available
Specific Gravity	1.9-2.3
Vapor pressure	Not Applicable
Vapor density	Not Applicable
Evaporation Rate	Not Applicable
Water solubility	Insoluble
Partition Coefficient (n-octanol/water)	No data available
Boiling point/range °C	2300
Boiling point/range °F	4172
Melting point/range °C	1803
Melting point/range °F	3277
Flash point °C	Not Applicable
Flash point °F	Not Applicable

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
None known.

Incompatibility
None known.

Hazardous Decomposition Products

Welding fumes cannot be classified simply. Their composition and quantity are dependent upon the metal being welded, the process, procedures and electrodes being used. Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: Coatings on the metal being welded (such as paint, plating, or galvanizing), number of welders and volume of work area. Contaminants in the atmosphere such as chlorinated hydrocarbon vapors from cleaning and degreasing operations. The amount and type of ventilation, the position of the welder's head with respect to the fume plume. When the electrode is consumed, the fume and gas decomposition products are different in percent and form from the ingredients listed in Section 3.

Decomposition products include those originating from the volatilization, reaction or oxidation of the wire or rod plus those from the base metal and coating. Reasonably expected decomposition products from normal use of these products include the oxides of the material listed in the ingredients section, as well as carbon monoxide, carbon dioxide, ozone and nitrogen oxides. The concentration of a given fume or gas component may decrease or increase by many times the original concentration in the electrode. One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample inside the welder's helmet, if worn, or in the worker's breathing zone. See ANSI/AWS F1.1.

Polymerization

Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION**Component Information**

Chemical Name	LD50 (oral, rat)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat)
Carbon 7440-44-0	10000 mg/kg	-	-
Graphite 7782-42-5	10000 mg/kg	-	-
Copper 7440-50-8	-	-	-

Synergistic Products None known.

Specific Hazards Copper dust and fume affect the respiratory system, lungs, skin, liver and eyes.

Potential health effects

Sensitization May cause sensitization of susceptible persons.

Chronic toxicity See Section 2.

Mutagenic effects None known.

Teratogenic effects None known.

Reproductive toxicity None known.

Target Organ Effects None Known.

Carcinogenic effects See table below.

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
Graphite	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Carbon	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Copper	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION**Copper****Water Flea Data**

0.03: 48 h Daphnia magna mg/L EC50 Static

13. DISPOSAL CONSIDERATIONS

Product code **CW1533** Product name **Carbon Arc
Electrodes - 1/4"**

Waste from residues / unused products

Can be landfilled or incinerated, when in compliance with local regulations. Dispose of all product, residues and clean-up materials in accordance with local, state, and federal regulations.

14. TRANSPORTATION INFORMATION

DOT

Not Regulated

TDG

Not Regulated

15. REGULATORY INFORMATION

US EPA SARA 313

Chemical Name	US EPA SARA 313 Emission Reporting
Copper	Listed

State Regulations

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
Graphite	Not Listed	Listed	Not Listed
Carbon	Not Listed	Not Listed	Not Listed
Copper	Not Listed	Listed	Not Listed

International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA	Graphite
X	X	-	X	Carbon	X
X	-	X	Copper	X	X
-	X				

CPR

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by the Controlled Product Regulations.

16. OTHER INFORMATION

Prepared By V. Shargorodsky, Regulatory
 Affairs Engineer

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Material Safety Data Sheet



Carbon Dioxide (Liquefied gas)

1. Product and company identification

Product name	: Carbon Dioxide (Liquefied gas)
Synonym	: Dry ice; Carbonic acid gas; Carbon dioxide in coal mines; Carbon dioxide.
Trade name	: ALIGAL™ 2
Material uses	: Various/Special atmospheres for food.
CAS number	: 124-38-9
Supplier/Manufacturer	: Air Liquide Canada Inc. 1250, René-Lévesque West, Suite 1700 Montreal, QC H3B 5E6 www.airliquide.ca 1-800-817-7697
Prepared by	: IHS
In case of emergency	: (514) 878-1667

2. Hazards identification

Physical state	: Gas. [Liquefied gas]
Color	: Colorless.
Odor	: Odorless.
Emergency overview	
Signal word	: CAUTION!
Hazard statements	: GAS REDUCES OXYGEN AVAILABLE FOR BREATHING. AT VERY HIGH CONCENTRATIONS, CAN DISPLACE THE NORMAL AIR AND CAUSE SUFFOCATION FROM LACK OF OXYGEN. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Precautions	: At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen. Do not enter storage areas and confined spaces unless adequately ventilated. Do not breathe gas. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.
Routes of entry	: Dermal contact. Eye contact. Inhalation.
Potential acute health effects	
Inhalation	: At very high concentrations, can displace the normal air and cause suffocation from lack of oxygen.
Ingestion	: Ingestion of liquid can cause burns similar to frostbite.
Skin	: Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
Eyes	: Liquid can cause burns similar to frostbite.
Potential chronic health effects	
Chronic effects	: May cause target organ damage, based on animal data.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.

2. Hazards identification

- Fertility effects** : No known significant effects or critical hazards.
- Target organs** : May cause damage to the following organs: lungs, cardiovascular system, upper respiratory tract, central nervous system (CNS).

Over-exposure signs/symptoms

- Inhalation** : No specific data.
- Ingestion** : Adverse symptoms may include the following:
frostbite
- Skin** : Adverse symptoms may include the following:
frostbite
- Eyes** : Adverse symptoms may include the following:
frostbite
- Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

Name	CAS number	%
Carbon dioxide	124-38-9	>99.5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact with liquid, warm frozen tissues slowly with lukewarm water. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : As this product rapidly becomes a gas when released, refer to the inhalation section.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Antidote information

Product/ingredient name	Antidote information
No antidote information known	

- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Flammability of the product** : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
 - Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

6. Accidental release measures

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8). If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. Never fix a leak while the system is under pressure. If leak is on container or container valve, contact the closest Air Liquide Canada location.
- Environmental precautions** : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
- Methods for cleaning up**
- Small spill** : Immediately contact emergency personnel. Stop leak if without risk.
 - Large spill** : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Valve protection caps must remain in place unless cylinder is secured with valve outlet piped to usage point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow to the cylinder. Do not tamper with (valve) safety

7. Handling and storage

device. Close valve after each use and when empty.

- Storage** : Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non combustible construction away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 52°C/125°F. Cylinders must be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in - first out" inventory system to prevent full cylinders being stored for excessive periods of time. Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Protect from sunlight. Keep container tightly closed and sealed until ready for use.

8. Exposure controls/personal protection

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
Carbon dioxide	US ACGIH 6/2013	5000	9000	-	30000	54000	-	-	-	-	[2]
	AB 4/2009	5000	9000	-	30000	54000	-	-	-	-	
	BC 7/2013	5000	-	-	15000	-	-	-	-	-	
	ON 1/2013	5000	9000	-	30000	54000	-	-	-	-	
	QC 12/2012	5000	9000	-	30000	54000	-	-	-	-	

[2]Oxygen Depletion [Asphyxiant]

Consult local authorities for acceptable exposure limits.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. If operating conditions cause high gas concentrations to be produced or any recommended or statutory exposure limit is exceeded, use an air-fed respirator or self-contained breathing apparatus. The gas can cause asphyxiation without warning by replacing the oxygen in the air. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

8. Exposure controls/personal protection

- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

- Physical state** : Gas. [Liquefied gas]
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Flammable limits** : Not available.
- Color** : Colorless.
- Odor** : Odorless.
- Molecular weight** : 44.01 g/mole
- Molecular formula** : C-O₂
- pH** : Not available.
- Boiling/condensation point** : -78.55°C (-109.4°F)
- Melting/freezing point** : Sublimation temperature: -78.5°C (-109.3°F)
- Critical temperature** : 30.9°C (87.6°F)
- Relative density** : 1.56
- Density** : Not available.
- Vapor pressure** : 5720 kPa (42903.49 mm Hg) [room temperature]
- Vapor density** : 1.53 [Air = 1]
- Odor threshold** : Not available.
- Evaporation rate** : Not available.
- Viscosity** : Not available.
- Solubility** : Partially soluble in the following materials: cold water.
- Water solubility (g/l)** : 1.64 g/l
- LogK_{ow}** : 0.83

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Not available.

Chronic toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitizer

Not available.

Carcinogenicity

Classification

Not available.

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12. Ecological information

- Ecotoxicity** : This product shows a low bioaccumulation potential.

Aquatic ecotoxicity

Not available.

Persistence/degradability

Not available.

- Partition coefficient: n-octanol/water** : 0.83

- Bioconcentration factor** : Not available.

- Mobility** : Not available.

12. Ecological information

Toxicity of the products of biodegradation : Not available.

Other adverse effects : No known significant effects or critical hazards.




13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Empty pressure vessels should be returned to the supplier. Waste packaging should be recycled.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	UN2187	CARBON DIOXIDE, REFRIGERATED LIQUID	2.2	-		Explosive Limit and Limited Quantity Index 0.12 Passenger Carrying Road or Rail Index 50
IMDG Class	UN2187	CARBON DIOXIDE, REFRIGERATED LIQUID	2.2	-		Emergency schedules (EmS) F-C, S-V
IATA-DGR Class	UN2187	Carbon dioxide, refrigerated liquid	2.2	-		Passenger and Cargo Aircraft Quantity limitation: 50 kg Packaging instructions: 202 Cargo Aircraft Only Quantity limitation: 500 kg Packaging instructions: 202 Limited Quantities - Passenger Aircraft Quantity limitation: Forbidden Packaging instructions: Forbidden

PG* : Packing group

15. Regulatory information

United States inventory (TSCA 8b) : This material is listed or exempted.

WHMIS (Canada) : Class A: Compressed gas.

Canadian lists

Canadian NPRI : This material is not listed.

CEPA Toxic substances : This material is listed.

Canada inventory : This material is listed or exempted.

15. Regulatory information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

- International lists** :
- Australia inventory (AICS)**: This material is listed or exempted.
 - China inventory (IECSC)**: This material is listed or exempted.
 - Japan inventory**: This material is listed or exempted.
 - Korea inventory**: This material is listed or exempted.
 - Malaysia Inventory (EHS Register)**: Not determined.
 - New Zealand Inventory of Chemicals (NZIoC)**: This material is listed or exempted.
 - Philippines inventory (PICCS)**: This material is listed or exempted.
 - Taiwan inventory (CSNN)**: This material is listed or exempted.

Chemical Weapons : Not listed

Convention List Schedule I Chemicals

Chemical Weapons : Not listed

Convention List Schedule II Chemicals

Chemical Weapons : Not listed

Convention List Schedule III Chemicals

16. Other information

Label requirements : GAS REDUCES OXYGEN AVAILABLE FOR BREATHING. AT VERY HIGH CONCENTRATIONS, CAN DISPLACE THE NORMAL AIR AND CAUSE SUFFOCATION FROM LACK OF OXYGEN. MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Hazardous Material Information System (U.S.A.) :

Health	*	0
Flammability		0
Physical hazards		2
Personal protective equipment		X

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Date of issue : 6/1/2014.

Date of previous issue : 6/15/2011.

Version : 6

Indicates information that has changed from previously issued version.

[Notice to reader](#)

16. Other information

THE INFORMATION, RECOMMENDATIONS AND DATA CONTAINED IN THIS DOCUMENT ARE INTENDED TO BE USED BY PROPERLY TRAINED AND QUALIFIED PERSONNEL ONLY AND AT THEIR SOLE RISKS AND DISCRETION. THE INFORMATION, RECOMMENDATIONS AND DATA HEREIN CONTAINED ARE DERIVED FROM SOURCES WHICH WE BELIEVE TO BE RELIABLE. HOWEVER, AIR LIQUIDE CANADA INC. MAKES NO REPRESENTATION AND GIVES NO WARRANTY OF ANY KIND WHATSOEVER WITH RESPECT TO THEIR ACCURACY OR COMPLETENESS AND ASSUMES NO LIABILITY FOR DAMAGES OR LOSS ARISING DIRECTLY OR INDIRECTLY FROM THEIR USE, WHETHER PROPER OR IMPROPER.

Notes

ALIGAL™ : Trademark of L'Air Liquide S.A.

CAVITY PROTECTION SPRAY 50 ML

Product: 126.061

Revision Date: 2014/03/28



- Section 1: PRODUCT INFORMATION
- Section 2: HAZARDOUS INGREDIENTS
- Section 3: PHYSICAL DATA
- Section 4: FIRE & EXPLOSION DATA
- Section 5: REACTIVITY DATA
- Section 6: TOXICOLOGICAL PROPERTIES
- Section 7: PREVENTATIVE MEASURES
- Section 8: FIRST AID MEASURES
- Section 9: ADDITIONAL INFORMATION

Section 1: PRODUCT INFORMATION

Product name: Cavity Protection Spray 50 ml

Manufacturer: CarWorx Distribution Inc.
165, Graveline
St-Laurent, Quebec
H4T 1R3

Manufacturer emergency phone number: Canutec 613-996-6666

Supplier: Same as manufacturer

Chemical family: Mixture

Product uses: Chemical

TDG classification: AEROSOLS
UN1950
Class 2.1

WHMIS classification: A, B5, D2B

DSL status: The substance(s) listed in section 2 appear on the Domestic Substances List

Revision details: Updated MSDS

Supplier MSDS date: 2014/03/28

Information phone number: 514-745-5959 (1-877-745-5959)

Section 2: HAZARDOUS INGREDIENTS

C.A.S.	CONCENTRATION %	Ingredient Name	T.L.V.	LD/50	LC/50
106-97-8	30	N-BUTANE	1000 PPM	NOT AVAILABLE	658,000 MG/M3/4H RAT INHALATION 680,000 MG/M3/2H MOUSE INHALATION
64742-82-1	25	WHITE SPIRIT 150/190	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
	10		NOT AVAILABLE		NOT AVAILABLE

64742-89-8		SOLVENT NAPHTHA, LIGHT ALIPHATIC		NOT AVAILABLE	
74-98-6	5	PROPANE	1000 PPM	NOT AVAILABLE	> 800000 PPM/15MIN RAT INHALATION
8008-20-6	9	KEROSENE	200 MG/M3 (SKIN)	2835 MG/KG RABBIT ORAL 15000 MG/KG RAT ORAL	NOT AVAILABLE

Section 3: PHYSICAL DATA

Physical state: Liquid (aerosol)
Appearance & odor: Spirit/thinner odor
 Light yellow
Odor threshold (ppm): Not available
pH: Not available
Specific gravity @ 20 °C: Not available
Boiling point (°C): Not available
Vapour pressure (mmHg): Not available
Vapour density (air=1): Not available
Freezing point (°C): Not available
Evaporation rate (butyl acetate = 1): Not available
By volume: Not available
Solubility in water (%): Not available
Coefficient of water\oil dist.: Not available
VOC: Not available

Section 4: FIRE & EXPLOSION DATA

Flammability: Flammable aerosol
Conditions of flammability: Heat, sparks and open flames
Extinguishing media: Foam
 Carbon dioxide
 Powder
Special procedures: Firefighters should wear the usual protective gear
 Wear a self contained breathing apparatus
Flash point (°C), method: Not available
Auto-ignition temperature (°C): Not available
Upper flammability limit (% vol): Not available
Lower flammability limit (% vol): Not available
Hazardous combustion products: None known
Sensitivity to static discharge: Not available
Sensitivity to mechanical impact: Contents under pressure
Rate of burning: Not available
Explosive power: Aerosol containers are extremely flammable. Containers may rupture if exposed to heat or fire

Section 5: REACTIVITY DATA

Chemical stability: Product is stable
Conditions of instability: None known
Hazardous polymerization: Not available
Incompatible substances: Not available
Hazardous decomposition products: None known

Section 6: TOXICOLOGICAL PROPERTIES

Route of entry: Skin contact, eye contact, inhalation and ingestion
Eye contact: Irritant
Skin contact: Irritant
Inhalation: May cause headache and nausea
Harmful if inhaled
Ingestion: May be harmful if swallowed
Effects of chronic exposure: See effects of acute exposure
LD50 of product, species & route: Not available for mixture, see the ingredients section
LC50 of product, species & route: Not available for mixture, see the ingredients section
Exposure limit of material: Not available for mixture, see the ingredients section
Sensitization to product: Not available
Carcinogenic effects: Not available
Reproductive effects: Not available
Teratogenicity: Not available
Mutagenicity: Not available
Synergistic materials: Not available

Section 7: PREVENTATIVE MEASURES

Gloves/Type: Wear appropriate gloves
Respiratory/Type: NIOSH approved respirator, if necessary
Eye/Type: Safety glasses or goggles
Footwear/Type: Safety shoes per local regulations
Clothing/Type: As required to prevent skin contact
Other/Type: Eye wash facility should be in close proximity
Emergency shower should be in close proximity
Ventilation requirements: Ventilate adequately
Leak/Spill: Eliminate all sources of ignition
Absorb with inert material
Prevent entry into drains, sewers, and other waterways
Wear appropriate protective equipment
Place in appropriate container
Waste disposal: In accordance with municipal, provincial and federal regulations
Handling procedures and equipment: Protect against physical damage
Keep away from heat, sparks, and open flame
Use adequate ventilation
Wear personal protective equipment appropriate to task
Wash clothing before re-use
Wash thoroughly after handling

Keep out of reach of children
Avoid breathing vapor and spray
Avoid contact with skin, eyes and clothing

Storage requirements: Store in a cool and well ventilated area
Keep away from ignition sources
Keep containers tightly closed
Store away from food, drink and animal feed

Special shipping information: See transportation information

Section 8: FIRST AID MEASURES

Skin contact: Remove contaminated clothing
Wash with mild soap and water
Consult a physician if irritation persists

Eye contact: Flush with water for at least 15 minutes
Get medical attention

Inhalation: Remove victim to fresh air. If not breathing, qualified personnel should administer artificial respiration. Get medical attention

Ingestion: Get medical attention immediately

Additional information: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any inaccuracies

Section 9: ADDITIONAL INFORMATION

General note: This material safety data sheet was prepared from information obtained from various sources, including product suppliers and the Canadian Center for Occupational Health and Safety

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24 hr. 1-866-628-7522 support@netmsds.com

Safety Data Sheet (SDS)

Preparation Date 2013/02/05

Revision Date 2014/04/24

Section 1 – CHEMICALS AND COMPANY IDENTIFICATION

Chemical Identifier ZL-W01
 Product Code ZL-W010001
 Company Name Pentel of America, LTD.
 Address 2715 Columbia Street, Torrance Ca. 90503
 Company Contact Michael Storie, TQC Manager 909.975.2238
 Phone Number 800.421.1419 EXT. 2238
 Fax Number 909.975.2291
 Mail Address 4000 East Airport Drive, Suite C Ontario California 91761
 Emergency Phone Number 800-421-1972
 Recommended Use and Restriction on Use Correction fluids

XEZL31-W, ZL31-WK, XEZL1-W, ZL1-WK, XZL6-W, XEZL61-W, XEZL21-W, XZL7F1C, XZL7F1AD

Section 2 – HAZARDS IDENTIFICATION

GHS Classification

Physicochemical Hazards Flammable liquids Category 2
 Health Hazards Acute toxicity – inhalation (vapour) Category 4
 Serious eye damage/eye irritation Category 2B
 Carcinogenicity Category 2
 Specific target organ toxicity (single exposure) Category 3(narcotic effect)
 Environmental Hazards Hazard to the aquatic environment (acute hazard) Category 2
 Hazard to the aquatic environment (long-term hazard) Category 2
 Other hazards than mentioned above are Not applicable or No data available.

GHS Label Elements

Symbols



Signal Word Danger
 Hazard Statements H225 Highly flammable liquid and vapour
 H320 Causes eye irritation
 H332 Harmful if inhaled
 H336 May cause drowsiness and dizziness
 H351 Suspected of causing cancer
 H411 Toxic to aquatic life with long lasting effects
 Precautionary Statements Prevention
 Precautionary Statements Keep container tightly closed.(P233)

Avoid breathing mist, vapours and spray.(P261)
 Wear protective gloves, eye protection and face protection.(P280)

Protection of Fire Fighter

In fire fighting, wear respiratory protection and chemical protective clothing.

Section 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions,
Protective Equipment and
Emergency Procedures

Wear appropriate personal protective equipment (Refer to "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION") and avoid inhalation or contact with eyes and skin.

Environmental
Precautions
Methods and Equipment
for Containment and
Cleaning up
Prevention Measures for
Secondary Accidents

Pay attention not to cause the influence on the environment by discharging into rivers.
Allow material to solidify, and scrape up.

Prevent flowing into drain, sewage, basement, and closed area.

Section 7 – HANDLING AND STORAGE

Handling

Technical Measures

Provide ventilation system and use necessary personal protective equipment as described in "Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION".

Precautions for Safe
Handling

Prohibit use of heat, sparks, and fire in the surrounding area.

Avoid contact with eyes and skin.

Avoid swallowing.

Wash hand thoroughly after handling.

Handle at a well-ventilated place.

Prevents Handling of
Incompatible
Substances or
Mixtures

Refer to "Section 10 – STABILITY AND REACTIVITY".

Storage Precautionary
Statements

Technical Measures

The storage facility should be provided with necessary lighting, lighting equipment, and ventilator to store and handle dangerous goods. Refer to "Section 10 – STABILITY AND REACTIVITY".

Store in a well-ventilated and cool place keeping container tightly closed.

Store locked up.

Material Used in
Packaging/Container

Keep only in original container.

Section 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Good general ventilation should be sufficient to control airborne levels.

Personal Protective
Equipment

Respiratory
Protection

Use personal respiratory equipment as required.

Hand Protection
Eye Protection

Use personal gloves as required.

Protection glasses (ordinary glasses, ordinary glasses with side shields, and goggles).

Use personal eye protection as required.

Skin and Body
Protection

Use personal protective clothing and face protection as required.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State

liquid

Form

liquid

Colour

white

Odour

characteristic

Odour threshold	No data available
pH	No data available
Melting Point/Freezing Point	No data available
Initial Boiling Point and Boiling Ranges	No data available
Flash Point	-4.4°C (Tag Closed Cup)
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Flammability or Explosive Limits	No data available
	Lower Limit
	Upper Limit
Vapour Pressure	No data available
Vapour Density	No data available
Specific Gravity (Density)	No data available
Partition Coefficient : n-Octanol/Water	No data available
Auto-Ignition	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Kinematic viscosity	No data available
Flammability or Explosive Limits	No data available
Section 10 – STABILITY AND REACTIVITY	
Reactivity	No data available
Chemical stability	No data available
Possibility of Hazardous Reaction	No data available
Conditions to Avoid	No data available
Incompatible Substances or Mixtures	No data available
Hazardous Decomposition Products	No data available
Section 11 – TOXICOLOGICAL INFORMATION	
Acute Toxicity	No information available
Skin Corrosion/Irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or Skin Sensitization	No data available
Germ Cell Mutagenicity	No data available
Carcinogenicity	No data available
Reproductive Toxicity	No data available
Specific target organ toxicity (single exposure)	No data available
Specific target organ toxicity (repeated exposure)	No data available
Aspiration Hazard	No data available
Section 12 – ECOLOGICAL INFORMATION	
Hazard to the aquatic environment (acute)	No data available
Hazard to the aquatic environment (long-term hazard)	No data available
Hazard to the ozone layer	No data available

Section 13 – DISPOSAL CONSIDERATIONS

Residual Waste

Disposal should be in accordance with applicable regulations and standards by the respective local governments.

Commission a waste disposal company, or a local public body who are licensed by local or regional government, to dispose of the material.

Contaminated Container and Packaging

Recycle containers after cleansing, or carry out the disposal under the related laws and regulations and the standards of the local governments.

Section 14 – TRANSPORT INFORMATION

International Regulations

Regulatory Information by Sea

Conform to the provisions of IMO.

UN No. 1263

Proper Shipping Class PAINT

3

Packing Group II

Marine Pollutant Not applicable

Transport in bulk Not applicable

according to

MARPOL

73/78,Annex II ,and

the IBC code

Regulatory

Conform to the provisions of ICAO/IATA.

Information by Air

UN No. 1263

Proper Shipping Class PAINT

3

Packing Group II

Regulations in Japan

Regulatory Information by Road

Not applicable

or Rail

Regulatory

Conform to the provisions of the Ship Safety Law.

Information by Sea

UN No. 1263

Proper Shipping Name. PAINT

Class 3

Packing Group II

Marine Pollutant Not applicable

Transport in bulk Not applicable

according to

MARPOL

73/78,Annex II ,and

the IBC code

Regulatory

Conform to the provisions of the Ship Safety Law.

Information by Air

UN No. 1263

Proper Shipping Name. PAINT

Class 3

Packing Group II

Emergency Response

128

Guide Number

Section 15 – REGULATORY INFORMATION

Regulatory information with regard to this product in your country or in your region should be

examined by your own responsibility.

Section 16 – OTHER INFORMATION

Information Contact

Other Property

No information available

This information is furnished without warranty
express or implied.

This information is believed to be accurate to the
best knowledge of PENTEL Co., Ltd. but not
assumes leagal responsibility for use of or reliance
upon this information.

MATERIAL SAFETY DATA SHEET

Date Revised: 07/11/2013

Cream Hardener

Page: 1

MSDS Number: 120001

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Cream Hardener
Product Numbers: Red- 100358,
Blue- 100354, 100359, 100360, 100361,
101474 and 101475, 196185, 196174
White- 100340, and 101607
Product Use: Polymerization initiator

Company

ITW Evercoat
a Division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, Ohio USA 45242
Phone: 513-489-7600

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666

Prepared By: Safety Department

Packaged By:

Rocket Plastics Co.
P.O. Box 429514
Montgomery, Ohio USA 45242

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	EINECS Number	% (by weight)
Benzoyl Peroxide	94-36-0	202-327-6	48 – 51
Plasticizer, non-phthalate	Proprietary	Proprietary	25 – 30
Water	7732-18-5	231-791-2	15 – 20
Silica, amorphous	7631-86-9	231-545-4	0 – 2
Calcium Carbonate	1317-65-3	215-279-6	0 – 2
Pigments	Various	Various	0 – 2

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! CAUSES EYE AND SKIN IRRITATION. HARMFUL IF SWALLOWED. OXIDIZER.

Potential Health Effects

Acute Effects (Short Term):

Eye: Contact with paste may result in irritation, redness, tearing, blurred vision, and/or swelling. .

MATERIAL SAFETY DATA SHEET

Date Revised: 07/11/2013
Cream Hardener

Page: 2
MSDS Number: 120001

Skin: May cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include minor itching, redness, burning, drying and cracking of skin, and skin burns. May be readily absorbed through the skin.

Swallowing: Ingestion of this material may cause gastro-intestinal irritation, nausea, diarrhea, and vomiting.

Inhalation: Inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache possible unconsciousness, and/or asphyxiation. Aspiration of this material into the lungs due to vomiting may produce chemical pneumonitis which can be fatal. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs.

Chronic Effects of Overexposure (Long Term):

Benzoyl Peroxide: Repeated or prolonged contact may cause skin sensitization. Overexposure to this material has been known to cause the following effects in lab animals: skin damage. Benzoyl Peroxide has caused tumorigenic effects in laboratory animals.

Cancer Information: This product does not contain any substance, which is listed as a carcinogen by NTP, IARC or OSHA in quantities greater than 0.1%.

Primary Route(s) of Entry: Inhalation, Skin contact, Eye contact, Ingestion, skin absorption.

SECTION 4. FIRST AID MEASURES

Eyes: Flush eyes gently with water for at least 15 minutes. Seek medical attention.

Skin: Immediately remove contaminated clothing. Wash exposed area with soap and water. Seek medical attention. Launder clothing before reuse.

Swallowing: Consult a physician or poison control center immediately. DO NOT INDUCE VOMITING. Give victim a glass of water. If individual is drowsy or unconscious, Do Not give anything by mouth; place individual on the left side with the head down. If possible, do not leave individual unattended.

MATERIAL SAFETY DATA SHEET

Date Revised: 07/11/2013

Page: 3

Cream Hardener

MSDS Number: 120001

Inhalation: If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm, but not hot and keep quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: 184 °F (84 °C)

Explosive Limit: Lower: N/D Upper: N/D

Autoignition Temperature: Not Determined

OSHA Flammability Class: Combustible Liquid – Class IIIA

Hazardous Products of Combustion: May form toxic and corrosive gases: carbon dioxide, carbon monoxide, benzoic acid and various hydrocarbons.

Fire and Explosion Hazards: Fire hazard increases when material becomes dry. Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point.

Extinguishing Media: Regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions: Fight fire like a fuel oil fire. Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus NIOSH approved with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment.

NFPA Rating: Health - 2, Flammability - 2, Reactivity - 2

SECTION 6. ACCIDENTAL RELEASE MEASURES

In Case of Spill: Spill, Leak or Release: Eliminate all sources of ignition such as flares, flames (including pilot lights), and electrical sparks. Ventilate the area. Wear proper protective equipment (Section 8). Avoid breathing vapors. Collect with an inert absorbant and dispose of properly.

SECTION 7. HANDLING AND STORAGE

Handling: All hazard precautions given in the data sheet must be observed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only with adequate ventilation. Do not breathe vapors or spray mist. Do not take internally. Close container after each use. **Keep out of reach of children.**

MATERIAL SAFETY DATA SHEET

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Cream Hardener

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Storage: Store material in a cool, well-ventilated area. For maximum product quality, do not store product above 100°F/38°C. Do not flame, cut, braze, weld or melt empty containers. Keep product away from heat, open flame, and other sources of ignition. Do not use or store near heat, sparks, or open flame. Keep container tightly closed. Avoid contact with incompatible materials such as strong acids, alkalis and oxidizers.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Chemical splash goggles in compliance with OSHA regulations are recommended.

Skin Protection: Protective gloves and proper clothing should be worn to prevent skin contact. Gloves should be made of neoprene or natural rubber. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protection: Use a NIOSH approved respirator designed to remove particulate matter and organic solvent vapors.

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below acceptable limits. Explosion-proof ventilation system is acceptable.

Exposure Guidelines:

Hazardous Ingredients	CAS Number	OSHA PEL/TWA	ACGIH TLV
Benzoyl Peroxide	94-36-0	5 mg/m ³	5 mg/m ³
Calcium Carbonate	1317-65-3	15 mg/m ³	10 mg/m ³
Silica, amorphous	7631-86-9	20 mppcf	N/E

Mppcf- millions of particles per cubic foot of air

N/E-Not Established

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	Decomposes explosively	Vapor Density:	(Air=1) >1
Specific Gravity / Density:	1.2 / 10.0 lbs/gal	Percent Volatiles by weight:	10-20%
Evaporation Rate:	Slower than ethyl ether.	Physical State:	Paste
Melting Point:	217 °F / 103 °C (decomposes)	pH:	Neutral
Odor:	Slight ester odor.	Solubility:	Insoluble
Vapor Pressure:	(mmHg): N/E	Appearance:	Red, White, or Blue Paste

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Octanol/Water Partition Coefficient:	Unknown	VOC* (as packaged-less exempts and water):	0 lbs/gal or 0 g/L
VHAP Content by weight – as packaged:	0%		

*NOTE: This material is used as a catalyst with a variety of products. Refer to the other MSDS for additional VOC information for the mixture.

SECTION 10. STABILITY AND REACTIVITY

Hazardous Polymerization: Product will not undergo polymerization under normal conditions of use.

Hazardous Decomposition: May form toxic and corrosive gases: carbon dioxide, carbon monoxide, benzoic acid and various hydrocarbons.

Chemical Stability: Stable under normal handling conditions.

Incompatibility: Avoid contact in uncontrolled conditions with: organic materials, inorganic acids, strong oxidizing agents, accelerators, reducing materials, alcohols, amines and strong bases.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Data:

Ingredient	CAS #	LD₅₀ Oral-Rat	LC₅₀ Inhalation-Rat
Benzoyl Peroxide	94-36-0	7,710 mg/kg	N/E
Calcium Carbonate	1317-65-3	6,450 mg/kg	N/E

Carcinogenicity: See Cancer Information, Section 3.

Mutagenicity: No significant evidence found.

Teratogenicity: No significant evidence found.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: The ecological toxicity of this product is not known.

SECTION 13. DISPOSAL CONSIDERATION

RCRA Hazardous Waste: This material as supplied, if discarded, would be regulated as a hazardous waste under RCRA (40 CFR 261). Dispose of in accordance with applicable federal, state, and local regulations. Incineration is the preferred method for disposal. DO NOT incinerate in closed containers.

RCRA Hazard Class: This material would be regulated as EPA Hazardous

MATERIAL SAFETY DATA SHEET

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Cream Hardener

MSDS Number: 120001

Waste Number D001 based on the characteristic of ignitability (oxidizer).

SECTION 14. TRANSPORT INFORMATION

DOT Description: The DOT Classification for shipping is dependant on quantity, type of packaging (a kit may include other components), or method of shipment.

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (USA) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4(a)

None

SARA Title III: Section 302- Extremely Hazardous Substances

None

SARA Title III: Section 313- Toxic Chemical List

<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
Benzoyl Peroxide	94-36-0	45-50%

EPA Hazardous Air Pollutants (HAPS) 40 CFR 63

None

International Regulations

EINECS (Europe) The intentional ingredients of this product are listed.

DSL (Canada) The intentional ingredients of this product are listed.

WHMIS Classification

Health Hazard: D2B, C, F (Toxic Effects, Oxidizer, Dangerously Reactive Materials)

Physical Hazard: B3 (Combustible)

State and Local Regulations

California Proposition 65:

This product contains the following chemical(s) known to the state of California to cause cancer. NONE

This product contains the following chemical(s) known to the state of California to cause birth defects or reproductive harm. NONE

SECTION 16. OTHER INFORMATION

HMIS Rating: Health – 2, Flammability - 2, Reactivity - 2
Key- 0=Least, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme, *=Chronic Effects

Other Precautions for Use: DO NOT return unused material to the original container. DO NOT contaminate product with foreign materials, it may cause hazardous decomposition. DO NOT add to hot material. This product must be mixed with other components prior to use. Please refer to the Material Safety Data Sheet for all components before using.

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Additional Information may be obtained by calling the Evercoat MSDS Hotline at 1-800-729-7600.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances.



Safety Data Sheet (SDS)

4.

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

1.) Identification of the Mixture and of the Company

Product identifier: **Crown General Purpose Silicone Lubricant - Bulk**

Product name:

8034 General Purpose Silicone Lubricant

Relevant identified uses of the substance: May be used on wood, nylon, metal, rubber, canvas, leather, and chrome. Ideal for windows, doors, hinges, locks, weather stripping, seals, zippers, etc.

Uses advised against: Avoid materials with strong oxidizing agents, and strong acids or bases. May adversely affect certain plastics.

CAS No:	Not Applicable (mixture)
EC No:	Not Applicable (mixture)
Index No:	Not Applicable (mixture)
Manufacturer/Supplier:	AerVOE Industries Incorporated
Street address/P.O. Box:	1100 Mark Circle
Country ID/Postcode/Place:	Gardnerville, Nevada 89410
Telephone number:	001 (0) 1-775-782-0100
e-mail:	mailbox@aerVOE.com
National contact:	AerVOE industries Incorporated
For Product Information:	001 (0) 1-800-227-0196
Emergency telephone number:	001 (0) 1-800-424-9300 (CHEMTREC – 24 hrs) English Language Service

2. Hazards identification

Classifications

Physical Hazards: Flammable liquid- Category 1

Health Hazards:

Asp. Tox. 1
Carc. 1B
Muta. 1B

Environmental Hazards: N/AV

Labeling

Signal Word: Danger

Hazard Statements:

H224 – Extremely flammable liquid and vapour.
H304 – May be fatal if swallowed and enters airways
H340 – May cause genetic defects
H350 – May cause cancer



Safety Data Sheet (SDS)

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- Precautionary Statements:
- P101 - If medical advice is needed, have product container or label at hand
 - P102 - Keep out of reach of children
 - P103 - Read label before use
 - P210 - Keep away from heat/sparks/open flames/hot surfaces - no smoking
 - P211 - Do not spray on an open flame or other ignition source
 - P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
 - P262 - Do not get in eyes, on skin, or on clothing
 - P264 - Wash ... thoroughly after handling
 - P280 - Wear protective gloves/eye protection/face protection

 - P303+P361+P353 - If on skin or hair, remove/takeoff immediately all contaminated clothing. Rinse skin with water/shower.
 - P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F
 - P501 - Dispose of contents/container in accordance with local/regional/national/international regulation



Symbols/Pictograms:

3. Composition / Information on Ingredients

Composition

Chemical	Synonyms	CAS Number	EINECS Number	Weight Percent	Hazard Category	H-Code
Aliphatic Petroleum Distillates	Solvent Naphtha	64742-89-8	265-192-2	60-100%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
Dimethylsiloxane	N/AV	63148-62-9	270-705-8	3-7%	N/AV	N/AV

Other Product Information

Chemical Identity: Mixture

4.) First Aid Measures

General Advice: If symptoms persist, always call a doctor.



Safety Data Sheet (SDS)

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Inhalation First Aid:	Remove victim to fresh air and provide oxygen if breathing is difficult. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention immediately.
Skin Contact First Aid:	Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.
Eye Contact First Aid:	If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids open. Get medical attention immediately.
Ingestion First Aid:	If swallowed, wash out mouth with water provided the person is conscious. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Most Important Symptoms/Effects:	Exposure may cause slight irritation to the skin, eyes, and respiratory tract. Excessive exposure may cause central nervous system effects.

5. Fire Fighting Measures

Flammable Properties:	Flammable liquid
Auto Ignition Temperature:	Not Available
Suitable extinguishing media:	Carbon dioxide, dry chemical, water spray.
Unsuitable extinguishing media:	None known
Special hazards arising from the substance or mixture:	None known
Hazardous combustion products:	Carbon dioxide, Carbon monoxide
Fire & Explosion Hazards:	Closed Containers may rupture due to the buildup of pressure from extreme temperatures.
Precautions for fire-fighters:	Use water spray to cool containers exposed to heat or fire to prevent pressure build up. In the event of a fire, wear full protective clothing and NIOSH- approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

PERSONAL PRECAUTIONARY MEASURES:

- 1) Follow personal protective equipment recommendations found in section 8.
- 2) Maintain adequate ventilation.

SPILL CLEAN-UP PROCEDURES:

- 1.) Evacuate unprotected personnel from the area.
- 2.) Remove sources of ignition if safe to do so.
- 3.) Pickup spilled materials using non-sparking tools and place in an appropriate container for disposal.
- 4.) Contain spill to prevent material from entering sewage or ground water systems.
- 5.) Always dispose of waste materials in accordance with all EU, National and Local Regulations.



Safety Data Sheet (SDS)

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7. Handling and Storage

Handling:

Flammable liquid, use in a well ventilated area.
Do not use near sources of ignition.
Do not to eat, drink and smoke while working with this material.
Wash hands after use.

Conditions for safe storage, including any incompatibilities:

Store out of direct sunlight.
Storage Temperature: 32° to 120°F (0° to 49°C).
No known incompatibilities.

8. Exposure Controls / Personal Protection

Appropriate engineering controls:

Ensure adequate ventilation. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.
Keep away from sources of ignition.
Take precautionary measures against static discharge.

Personal Protection:

Eye & face protection devices such as safety glasses, safety goggles or face shield are recommended.

Skin protection

Wear the appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection:

Use only in an adequately ventilated area. For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA).

Hazardous Ingredient	CAS Number	ACGIH TLV (TWA)	ACGIH TLV (STEL)	OSHA PEL (TWA)	OSHA PEL (STEL)
Aliphatic Petroleum Distillates	64742-89-8	N/AV	N/AV	N/AV	N/AV
Dimethylsiloxane	63148-62-9	N/AV	N/AV	N/AV	N/AV

*Values are based on the 2014 Guide to Occupational Exposure Values by ACGIH

9. Information on Basic Physical and Chemical Properties



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Appearance: Clear	Odor: Hydrocarbon Odor
Odor Threshold: N/AV	pH: Not Applicable (solvent Base)
Melting Point: N/AV	Freezing Point: N/AV
Initial Boiling Point: N/AV	Boiling Point Range: N/AV
Flash Point: 53° F (12° C)	Evaporation Rate: Faster than n-Butyl Acetate
Flammability Solid/Gas: Flammable liquid	Upper LEL: 1.1% Lower LEL: 9.5%
Vapor Pressure: N/AV	Vapor Density: Heavier Than Air
Relative Density: N/AV	Solubility: Negligible
Partition Coefficient: n-octanol/ water: N/AV	Auto-ignition Temperature: N/AV
Decomposition Temperature: N/AV	Viscosity: N/AV
Explosive Properties: N/AV	Oxidizing Properties: N/AV

10. Stability & Reactivity

Possibility of hazardous reactions: Hazardous polymerization will not occur under normal conditions
Chemical stability: Stable under normal conditions
Conditions to avoid: Heat and ignition sources
Incompatible materials: Strong Oxidizing Agents
Hazardous decomposition products: Will not occur

11. Toxicological Information

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood

Routes of exposure: Eyes, skin, ingestion, and/or inhalation

Acute toxicological data: N/AV

Eye irritation data: N/AV

Skin irritation/sensitization/absorption data: N/AV

Reproductive toxicity data: N/AV

Mutagenicity data: N/AV

Symptoms associated with physical contact: N/AV

Acute/chronic effects from short/long term exposure: Irritating to skin. Prolonged/repeated contact may



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cause defatting of the skin which can lead to dermatitis. Not expected to be a skin sensitizer.

Known reportable carcinogens via the following agencies:

NTP:	N/AV
IARC:	N/AV
OSHA:	N/AV

* Petroleum distillates may contain chemical carcinogens in limited quantities (< 0.01%). These quantities are determined by the supplier/fraction/purity of the distillate during the manufacturing process. Chemicals that may be present within distillates are listed on California's prop 65 list such as ETHYLBENZENE, BENZENE, and TOLUENE.

12. Ecological Information

Ecotoxicity: **No Data Available**
 Persistence and degradability: **No Data Available**
 Bioaccumulative potential: **No Data Available**
 Mobility in soil: **No Data Available**
 Results of PBT and vPvB assessment: **No Data Available**
 Other adverse effects: **No Data Available**

13. Disposal Considerations

Waste Disposal: Dispose of material in accordance with EU, national and local requirements. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.

Product / Packaging disposal: Dispose of packaging in accordance with federal, state and local requirements, regulations and/or laws governing your location.

14. Transportation Information

US DOT

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1993	FLAMMABLE LIQUID, N.O.S. (LIGHT ALIPHATIC PETROLEUM NAPHTHA)	3	PGII	Not Applicable	Reference 49 CFR 172.101

IMDG



Safety Data Sheet (SDS)

Date Prepared/Revised: 9/10/2014 Version no.: 01 Supersedes: (-)

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1993	FLAMMABLE LIQUID, N.O.S. (LIGHT ALIPHATIC PETROLEUM NAPHTHA)	3	PGII	Not Applicable	Reference IMDG code part 3

IATA:

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1993	FLAMMABLE LIQUID, N.O.S. (LIGHT ALIPHATIC PETROLEUM NAPHTHA)	3	PGII	Not Applicable	Reference IATA Dangerous Goods Regulation

15. Regulatory Information

Workplace classification:

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200). The Occupational Safety and Health Administration's interpretation of the product's hazard to workers.

SARA Title 3:

Section 311/312 Categorizations (40 CFR 372): This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard. Superfund Amendment and Reauthorization Act (SARA) category. SARA requires reporting any spill of any hazardous substance.

TSCA status: All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the (M)SDS contains all of the information required by the CPR.

PROP 65 (CA): WARNING: This product may contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

This SDS has been completed in accordance with GHS Rev04 (2011): U.S OSHA, CMA, ANSI, Canadian WHMIS standards, and European Directives.

Date of Preparation/Revision: 9/10/2014

Supersedes: (-)

To the best of our knowledge, the information contained herein is believed to be accurate. However, the above data does not imply any guarantee or warranty of any kind, expressed or implied. The final determination of the suitability of any material is the sole responsibility of the user. All materials made



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present un-known hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards existing.

MATERIAL SAFETY DATA SHEET

DA1600
12 00

DATE OF PREPARATION
Jul 11, 2015

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

DA1600

PRODUCT NAME

DUPLI-COLOR® Acrylic Enamel Aerosol Paint, Gloss Black (OSHA)

MANUFACTURER'S NAME

Dupli-Color Products Company
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 247-3270 www.dupli-color.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
15	74-98-6	Propane	ACGIH TLV	1000 PPM
			OSHA PEL	1000 PPM
14	106-97-8	Butane	ACGIH TLV	1000 PPM
			OSHA PEL	800 PPM
20	108-88-3	Toluene	ACGIH TLV	20 PPM
			OSHA PEL	100 ppm (Skin)
			OSHA PEL	150 ppm (Skin) STEL
31	67-64-1	Acetone	ACGIH TLV	500 PPM
			ACGIH TLV	750 PPM STEL
			OSHA PEL	1000 PPM
3	763-69-9	Ethyl 3-Ethoxypropionate	ACGIH TLV	Not Available
			OSHA PEL	Not Available
0.8	1333-86-4	Carbon Black	ACGIH TLV	3.5 MG/M3
			OSHA PEL	3.5 MG/M3

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

HMIS Codes	
Health	2*
Flammability	3
Reactivity	0

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists. Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES**FLASH POINT**

Propellant < 0 °F

LEL

1.0

UEL

12.8

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE**STORAGE CATEGORY**

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.14 lb/gal	735 g/l
SPECIFIC GRAVITY	0.74	
BOILING POINT	<0 - 342 °F	<-18 - 172 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	90%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)	Volatile Weight 53.31% Less Water and Federally Exempt Solvents	

SECTION 10 — STABILITY AND REACTIVITY**STABILITY — Stable****CONDITIONS TO AVOID**

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION**CHRONIC HEALTH HAZARDS**

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.

TOXICOLOGY DATA

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
67-64-1	Acetone	LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
763-69-9	Ethyl 3-Ethoxypropionate	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
1333-86-4	Carbon Black	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION**

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, EmS F-D, S-U

IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	20	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

DE1615

Section 1. Identification

Product name : DUPLI-COLOR™ Engine Enamel with Ceramic Aluminum
Product code : DE1615
Other means of identification : Not available.
Product type : Aerosol.
Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Dupli-Color Products Company
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3270

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
TOXIC TO REPRODUCTION (Unborn child) - Category 1B
TOXIC TO REPRODUCTION (Fertility) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 11.6%

GHS label elements

Hazard pictograms :



Signal word : Danger

Date of issue/Date of revision

: 5/28/2016

Date of previous issue

: 3/27/2016

Version : 2.01

1/16

Section 2. Hazards identification

Hazard statements	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. Causes skin irritation. May damage the unborn child. Suspected of damaging fertility. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.
CAS number/other identifiers	

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Acetone	≥25 - ≤50	67-64-1
Methyl Ethyl Ketone	≥10 - ≤25	78-93-3
Propane	≥10 - ≤25	74-98-6
Butane	≤10	106-97-8
Ethanol	≤3	64-17-5
2-Propanol	≤3	67-63-0
Butyl Benzyl Phthalate	<1	85-68-7
Toluene	<1	108-88-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Section 7. Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Acetone	<p>ACGIH TLV (United States, 3/2015). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.</p>
Methyl Ethyl Ketone	<p>ACGIH TLV (United States, 3/2015). TWA: 200 ppm 8 hours. TWA: 590 mg/m³ 8 hours. STEL: 300 ppm 15 minutes. STEL: 885 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 200 ppm 10 hours. TWA: 590 mg/m³ 10 hours. STEL: 300 ppm 15 minutes. STEL: 885 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 200 ppm 8 hours. TWA: 590 mg/m³ 8 hours.</p>
Propane	<p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
Butane	<p>NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 3/2015). STEL: 1000 ppm 15 minutes.</p>
Ethanol	<p>ACGIH TLV (United States, 3/2015). STEL: 1000 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.</p>

Section 8. Exposure controls/personal protection

<p>2-Propanol</p>	<p>ACGIH TLV (United States, 3/2015). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes. NIOSH REL (United States, 10/2013). TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes. OSHA PEL (United States, 2/2013). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.</p>
<p>Butyl Benzyl Phthalate Toluene</p>	<p>None. OSHA PEL Z2 (United States, 2/2013). TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. NIOSH REL (United States, 10/2013). TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours.</p>

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 1.05%
Upper: 19%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.5 [Air = 1]
- Relative density** : 0.76
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): <0.205 cm²/s (<20.5 cSt)
Kinematic (40°C (104°F)): <0.205 cm²/s (<20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 29.26 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : No specific data.

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
	LD50 Dermal	Rabbit	6480 mg/kg	-
Methyl Ethyl Ketone	LD50 Oral	Rat	2737 mg/kg	-
	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Butane	LC50 Inhalation Vapor	Rat	124700 mg/m ³	4 hours
	LD50 Oral	Rat	7 g/kg	-
Ethanol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
2-Propanol	LD50 Dermal	Rabbit	>10000 mg/kg	-
	LD50 Dermal	Rat	6700 mg/kg	-
	LD50 Oral	Rat	2330 mg/kg	-
Butyl Benzyl Phthalate	LD50 Oral	Rat	49 g/m ³	4 hours
	LC50 Inhalation Vapor	Rat	636 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation	
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-	
	Eyes - Mild irritant	Rabbit	-	10 microliters	-	
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-	
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-	
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-	
Methyl Ethyl Ketone	Skin - Mild irritant	Rabbit	-	395 milligrams	-	
	Skin - Moderate irritant	Rabbit	-	24 hours 14 milligrams	-	
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-	
Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-	
	Eyes - Moderate irritant	Rabbit	-	0.06666667 minutes 100 milligrams	-	
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-	
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-	
	Skin - Mild irritant	Rabbit	-	400 milligrams	-	
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-	
	2-Propanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
		Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
Eyes - Severe irritant		Rabbit	-	100 milligrams	-	
Skin - Mild irritant		Rabbit	-	500 milligrams	-	
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-	

Section 11. Toxicological information

	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	870 Micrograms	-
	Skin - Mild irritant	Pig	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 250 microliters	-
	Skin - Moderate irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethanol	-	1	-
2-Propanol	-	3	-
Butyl Benzyl Phthalate	-	3	-
Toluene	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl Ethyl Ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Propanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract irritation and

Section 11. Toxicological information

Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Methyl Ethyl Ketone	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Ethanol	Category 2	Not determined	Not determined
2-Propanol	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain or irritation
 watering
 redness

Inhalation : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Skin contact : Adverse symptoms may include the following:
 irritation
 redness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Ingestion : Adverse symptoms may include the following:
 nausea or vomiting
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	10245.4 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 6900 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Methyl Ethyl Ketone	Acute EC50 >500000 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 5091000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
Ethanol	Acute LC50 3220000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours	
Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna -	21 days	

Section 12. Ecological information

2-Propanol	Chronic NOEC 0.375 µl/L Fresh water	Neonate Fish - Gambusia holbrooki - Larvae	12 weeks
Butyl Benzyl Phthalate	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
	Acute EC50 0.22 ppm Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 100 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
Toluene	Acute EC50 1000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 3.69 mg/l Fresh water	Crustaceans - Moina macrocopa - New born	48 hours
	Acute LC50 510 µg/l Marine water	Fish - Cymatogaster aggregata - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.26 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
Toluene	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Methyl Ethyl Ketone	-	-	Readily
Ethanol	-	-	Readily
2-Propanol	-	-	Readily
Toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Butyl Benzyl Phthalate	-	1693.25	high
Toluene	-	90	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	Special provisions LIMITED QUANTITY ERG No. 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). Special provisions LIMITED QUANTITY ERG No. 126	Special provisions Not Applicable ERG No. 126	Special provisions LIMITED QUANTITY	Emergency schedules (EmS) F-D, S-U Special provisions LIMITED QUANTITY

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.
Ship type : Not available.
Pollution category : Not available.

Section 15. Regulatory information

[SARA 313](#)

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

[California Prop. 65](#)

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

[Hazardous Material Information System \(U.S.A.\)](#)

Health	2
Flammability	3
Physical hazards	1

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

[Procedure used to derive the classification](#)

Classification

FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 1B	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

Justification

[History](#)

Date of printing : 5/28/2016

Date of issue/Date of revision : 5/28/2016

Date of previous issue : 3/27/2016

Version : 2.01

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

[Notice to reader](#)

Section 16. Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

DAL1607

Section 1. Identification

Product name	: DUPLI-COLOR® Acrylic Lacquer Aerosol Paint Flat Black
Product code	: DAL1607
Other means of identification	: Not available.
Product type	: Aerosol.
<u>Relevant identified uses of the substance or mixture and uses advised against</u>	Not applicable.
Manufacturer	: THE SHERWIN-WILLIAMS CO. DUPLI-COLOR Products Group Cleveland, OH 44115
Emergency telephone number of the company	: (216) 566-2917
Product Information Telephone Number	: (800) 247-3270
Regulatory Information Telephone Number	: (216) 566-2902
Transportation Emergency Telephone Number	: (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	: FLAMMABLE AEROSOLS - Category 1 GASES UNDER PRESSURE - Compressed gas SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation and Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1 Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 11.8%

GHS label elements

Hazard pictograms



Signal word

: Danger

Section 2. Hazards identification

Hazard statements	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. Causes skin irritation. May cause cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness and dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling.
Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Please refer to the SDS for additional information. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

CAS number/other identifiers

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Acetone	38.1	67-64-1
Methyl Ethyl Ketone	16.6	78-93-3
Propane	11.8	74-98-6
Butane	11.3	106-97-8
Ethanol	3.8	64-17-5
Ethyl Acetate	3.1	141-78-6
2-Propanol	1.1	67-63-0
Carbon Black	0.2	1333-86-4
Methyl Isobutyl Ketone	0.1	108-10-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Carbon Black	<p>NIOSH REL (United States, 10/2013). TWA: 400 ppm 10 hours. TWA: 980 mg/m³ 10 hours. STEL: 500 ppm 15 minutes. STEL: 1225 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 3.5 mg/m³ 8 hours.</p> <p>ACGIH TLV (United States, 4/2014). TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction</p>
Methyl Isobutyl Ketone	<p>ACGIH TLV (United States, 4/2014). TWA: 20 ppm 8 hours. STEL: 75 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 50 ppm 10 hours. TWA: 205 mg/m³ 10 hours. STEL: 75 ppm 15 minutes. STEL: 300 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 2/2013). TWA: 100 ppm 8 hours. TWA: 410 mg/m³ 8 hours.</p>

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 1%
Upper: 19%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.5 [Air = 1]
- Relative density** : 0.73
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (room temperature): <0.07 cm²/s (<7 cSt)
Kinematic (40°C (104°F)): <0.07 cm²/s (<7 cSt)

Aerosol product

- Type of aerosol** : Spray
- Heat of combustion** : 0.00003086 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).

Section 10. Stability and reactivity

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
	LD50 Dermal	Rabbit	6480 mg/kg	-
Methyl Ethyl Ketone	LD50 Oral	Rat	2737 mg/kg	-
	LD50 Oral	Rat	2737 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m ³	4 hours
	LD50 Oral	Rat	7 g/kg	-
Ethyl Acetate	LD50 Oral	Rat	5620 mg/kg	-
	LD50 Dermal	Rabbit	12800 mg/kg	-
2-Propanol	LD50 Oral	Rat	5000 mg/kg	-
	LD50 Oral	Rat	>15400 mg/kg	-
Carbon Black	LD50 Oral	Rat	>15400 mg/kg	-
Methyl Isobutyl Ketone	LD50 Oral	Rat	2080 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Methyl Ethyl Ketone	Skin - Mild irritant	Rabbit	-	395 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 14 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
Ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	10 milligrams	-
2-Propanol	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Mild irritant	Rabbit	-	500	-

Section 11. Toxicological information

Methyl Isobutyl Ketone	Eyes - Moderate irritant	Rabbit	-	milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Mild irritant	Rabbit	-	40 milligrams	-
				24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethanol	-	1	-
2-Propanol	-	3	-
Carbon Black	-	2B	-
Methyl Isobutyl Ketone	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl Ethyl Ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Propanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Methyl Isobutyl Ketone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Methyl Ethyl Ketone	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Ethanol	Category 2	Not determined	Not determined
2-Propanol	Category 2	Not determined	Not determined
Methyl Isobutyl Ketone	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Causes skin irritation.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	10254.2 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
Methyl Ethyl Ketone	Acute EC50 >500000 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 5091000 µg/l Fresh water	Daphnia - Daphnia magna - Larvae	48 hours
Ethanol	Acute LC50 3220000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
Ethyl Acetate	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
2-Propanol	Acute EC50 2500000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 750000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 154000 µg/l Fresh water	Daphnia - Daphnia cucullata	48 hours
	Acute LC50 212500 µg/l Fresh water	Fish - Heteropneustes fossilis	96 hours
	Chronic NOEC 2400 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 75.6 mg/l Fresh water	Fish - Pimephales promelas - Embryo	32 days
Methyl Isobutyl Ketone	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 4200 mg/l Fresh water	Fish - Rasbora heteromorpha	96 hours
Methyl Isobutyl Ketone	Acute LC50 505000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 78 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 168 mg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days

Section 12. Ecological information

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Methyl Ethyl Ketone	-	-	Readily
Ethanol	-	-	Readily
Ethyl Acetate	-	-	Readily
2-Propanol	-	-	Readily
Methyl Isobutyl Ketone	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Ethyl Acetate	-	30	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

Date of issue/Date of revision : 4/21/2015. Date of previous issue : No previous validation. Version : 1 13/15

Section 14. Transport information

Additional information	Special provisions LIMITED QUANTITY	Special provisions LIMITED QUANTITY	Special provisions (ERG#126)	Special provisions LIMITED QUANTITY	Emergency schedules (EmS) LIMITED QUANTITY, F-D, S-U
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Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

State regulations

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		4
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

Section 16. Other information

[Notice to reader](#)

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

DAP1692

Section 1. Identification

Product name : DUPLI-COLOR® Sandable Primer
Gray Hot Rod

Product code : DAP1692

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against
Not applicable.

Manufacturer : Dupli-Color Products Company
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 247-3270

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 22.5%

GHS label elements

Hazard pictograms :



Signal word : Danger

Date of issue/Date of revision :

6/4/2016

Date of previous issue :

6/3/2016

Version : 3

1/17

Section 2. Hazards identification

Hazard statements	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. Suspected of damaging the unborn child. Suspected of causing cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
General	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Pressurized container: Do not pierce or burn, even after use.
Response	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
Storage	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.
CAS number/other identifiers	

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Acetone	35.04	67-64-1
Propane	14.95	74-98-6
Butane	14.36	106-97-8
Toluene	10.25	108-88-3
Lt. Aliphatic Hydrocarbon Solvent	6.49	64742-89-8
Titanium Dioxide	1.06	13463-67-7
Naphthalene	0.15	91-20-3
Methyl Ethyl Ketoxime	0.11	96-29-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Section 7. Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Acetone	<p>ACGIH TLV (United States, 3/2015). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.</p>
Propane	<p>NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
Butane	<p>NIOSH REL (United States, 10/2013). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 3/2015). STEL: 1000 ppm 15 minutes.</p>
Toluene	<p>OSHA PEL Z2 (United States, 2/2013). TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes.</p> <p>NIOSH REL (United States, 10/2013). TWA: 100 ppm 10 hours. TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes.</p> <p>ACGIH TLV (United States, 3/2015). TWA: 20 ppm 8 hours.</p>
Lt. Aliphatic Hydrocarbon Solvent Titanium Dioxide	<p>None.</p> <p>ACGIH TLV (United States, 3/2015). TWA: 10 mg/m³ 8 hours.</p> <p>OSHA PEL (United States, 2/2013). TWA: 15 mg/m³ 8 hours. Form: Total dust</p>
Naphthalene	<p>ACGIH TLV (United States, 3/2015). Absorbed through skin. TWA: 10 ppm 8 hours. TWA: 52 mg/m³ 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 10 ppm 10 hours.</p>

Section 8. Exposure controls/personal protection

Methyl Ethyl Ketoxime	<p>TWA: 50 mg/m³ 10 hours. STEL: 15 ppm 15 minutes. STEL: 75 mg/m³ 15 minutes. OSHA PEL (United States, 2/2013). TWA: 10 ppm 8 hours. TWA: 50 mg/m³ 8 hours.</p> <p>AIHA WEEL (United States, 10/2011). Skin sensitizer. TWA: 10 ppm 8 hours.</p>
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Occupational exposure limits (Canada)

Ingredient name	Exposure limits
Acetone	<p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 1200 mg/m³ 8 hours. 15 min OEL: 1800 mg/m³ 15 minutes. 8 hrs OEL: 500 ppm 8 hours. 15 min OEL: 750 ppm 15 minutes. CA British Columbia Provincial (Canada, 5/2015). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. CA Ontario Provincial (Canada, 7/2015). TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes. CA Quebec Provincial (Canada, 1/2014). TWAEV: 500 ppm 8 hours. TWAEV: 1190 mg/m³ 8 hours. STEV: 1000 ppm 15 minutes. STEV: 2380 mg/m³ 15 minutes. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 750 ppm 15 minutes. TWA: 500 ppm 8 hours.</p>
Propane	<p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 1000 ppm 8 hours. CA British Columbia Provincial (Canada, 5/2015). TWA: 1000 ppm 8 hours. CA Quebec Provincial (Canada, 1/2014). TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. CA Ontario Provincial (Canada, 7/2015). TWA: 1000 ppm 8 hours. CA Saskatchewan Provincial (Canada, 7/2013). STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p>
Butane	<p>CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 1000 ppm 8 hours. CA British Columbia Provincial (Canada, 5/2015). TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes. CA Quebec Provincial (Canada, 1/2014). TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours.</p>

Section 8. Exposure controls/personal protection

Toluene	<p>CA Ontario Provincial (Canada, 7/2015). TWA: 800 ppm 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p> <p>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin. 8 hrs OEL: 50 ppm 8 hours. 8 hrs OEL: 188 mg/m³ 8 hours.</p> <p>CA British Columbia Provincial (Canada, 5/2015). TWA: 20 ppm 8 hours.</p> <p>CA Ontario Provincial (Canada, 7/2015). TWA: 20 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 1/2014). Absorbed through skin. TWAEV: 50 ppm 8 hours. TWAEV: 188 mg/m³ 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin. STEL: 60 ppm 15 minutes. TWA: 50 ppm 8 hours.</p>
Naphthalene	<p>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin. 15 min OEL: 15 ppm 15 minutes. 8 hrs OEL: 10 ppm 8 hours. 8 hrs OEL: 52 mg/m³ 8 hours. 15 min OEL: 79 mg/m³ 15 minutes.</p> <p>CA British Columbia Provincial (Canada, 5/2015). Absorbed through skin. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes.</p> <p>CA Ontario Provincial (Canada, 7/2015). Absorbed through skin. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes.</p> <p>CA Quebec Provincial (Canada, 1/2014). TWAEV: 10 ppm 8 hours. TWAEV: 52 mg/m³ 8 hours. STEV: 15 ppm 15 minutes. STEV: 79 mg/m³ 15 minutes.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin. STEL: 15 ppm 15 minutes. TWA: 10 ppm 8 hours.</p>
Methyl Ethyl Ketoxime	<p>AIHA WEEL (United States, 10/2011). Skin sensitizer. TWA: 10 ppm 8 hours.</p>

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

:

Section 8. Exposure controls/personal protection

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%
Upper: 12.8%
- Vapor pressure** : 13.5 kPa (101.325 mm Hg) [at 20°C]
- Vapor density** : 1.55 [Air = 1]

Section 9. Physical and chemical properties

Relative density	: 0.75
Solubility	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (room temperature): <0.205 cm ² /s (<20.5 cSt) Kinematic (40°C (104°F)): <0.205 cm ² /s (<20.5 cSt)
Molecular weight	: Not applicable.
Aerosol product	
Type of aerosol	: Spray
Heat of combustion	: 29.89 kJ/g

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame).
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
Toluene	LC50 Inhalation Vapor	Rat	49 g/m ³	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Naphthalene	LD50 Dermal	Rabbit	>20 g/kg	-
	LD50 Oral	Rat	490 mg/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395	-

Section 11. Toxicological information

Toluene	Eyes - Mild irritant	Rabbit	-	milligrams 0.5 minutes 100	-
	Eyes - Mild irritant	Rabbit	-	milligrams 870	-
	Eyes - Severe irritant	Rabbit	-	Micrograms 24 hours 2	-
	Skin - Mild irritant	Pig	-	milligrams 24 hours 250	-
	Skin - Mild irritant	Rabbit	-	microliters 435	-
	Skin - Moderate irritant	Rabbit	-	milligrams 24 hours 20	-
	Skin - Moderate irritant	Rabbit	-	milligrams 500	-
Titanium Dioxide	Skin - Mild irritant	Human	-	milligrams 72 hours 300	-
Naphthalene	Skin - Mild irritant	Rabbit	-	Micrograms Intermittent 495	-
	Skin - Severe irritant	Rabbit	-	milligrams 24 hours 0.05	-
Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	Milliliters 100 microliters	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Titanium Dioxide	-	2B	-
Naphthalene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract

Section 11. Toxicological information

Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	irritation and Narcotic effects Respiratory tract irritation and Narcotic effects
Naphthalene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Naphthalene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Naphthalene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

- Skin contact** : Adverse symptoms may include the following:
 irritation
 redness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 nausea or vomiting
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4539.5 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 6900 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours

Section 12. Ecological information

Lt. Aliphatic Hydrocarbon Solvent Titanium Dioxide Naphthalene	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Methyl Ethyl Ketoxime	Acute EC50 1600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2350 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 213 µg/l Fresh water	Fish - Melanotaenia fluviatilis - Larvae	96 hours
	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Toluene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Naphthalene	-	36.5 to 168	low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	- <u>ERG No.</u> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). <u>ERG No.</u> 126	- <u>ERG No.</u> 126	-	<u>Emergency schedules (EmS)</u> F-D, S-U

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification

- FLAMMABLE AEROSOLS - Category 1
- GASES UNDER PRESSURE - Compressed gas
- SKIN CORROSION/IRRITATION - Category 2
- SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
- SKIN SENSITIZATION - Category 1
- CARCINOGENICITY - Category 2
- TOXIC TO REPRODUCTION (Unborn child) - Category 2
- SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
- SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
- SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
- ASPIRATION HAZARD - Category 1

Justification

- On basis of test data
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method

History

- Date of printing** : 6/4/2016
- Date of issue/Date of revision** : 6/4/2016
- Date of previous issue** : 6/3/2016
- Version** : 3
- Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

Notice to reader

Section 16. Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.



Envy Foaming Disinfectant Cleaner (US)

Version Number: 1

Preparation date: 2014-08-08

1. IDENTIFICATION

Product name: Envy Foaming Disinfectant Cleaner (US)
Product Code: 04531
SDS #: MS0800465
Recommended use:

- Disinfectant
- This product is intended to be used neat.

Uses advised against: Uses other than those identified are not recommended

Manufacturer, importer, supplier:

US Headquarters Diversey, Inc. 8310 16th St. Sturtevant, Wisconsin 53177-1964 Phone: 1-888-352-2249 MSDS Internet Address: www.diversey.com	Canadian Headquarters Diversey, Inc. - Canada 2401 Bristol Circle Oakville, Ontario L6H 6P1 Phone: 1-800-668-3131
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Emergency telephone number: 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

Classification for the undiluted product

Flammability Extremely flammable aerosol, Category 1



Signal Word: Danger

Precautionary Statements

EXTREMELY FLAMMABLE AEROSOL. HEATING MAY CAUSE AN EXPLOSION. CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not incinerate. Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50 °C (122 °F) which may cause bursting. Dispose of in accordance with all federal, state and local applicable regulations.

Health hazards not otherwise classified (HHNOC) - Not applicable

Physical hazards not otherwise classified (PHNOC) - Not applicable

Classification for the diluted product @ RTU

Precautionary Statements

3. COMPOSITION/INFORMATION ON INGREDIENTS

Classified Ingredients

Ingredient(s)	CAS #	Weight %
Isobutane	75-28-5	3% - < 5%
Dipropylene glycol methyl ether	34590-94-8	1% - < 3%
Tetrapotassium pyrophosphate	7320-34-5	1% - < 3%
n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride	68391-01-5	> 0.1% - < 1%
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	68956-79-6	> 0.1% - < 1%

*Exact percentages are being withheld as trade secret information

4. FIRST AID MEASURES

Undiluted Product:

Eyes: Rinse with plenty of water. If irritation occurs and persists, get medical attention.

Skin: Rinse with plenty of water. If irritation occurs and persists, get medical attention.

Inhalation: No specific first aid measures are required.

Ingestion: Rinse mouth with water.

Most Important Symptoms/Effects: No information available.

Immediate medical attention and special treatment needed: Not applicable.

Diluted Product:

Eyes: Rinse with plenty of water. If irritation occurs and persists, get medical attention.

Skin: Rinse with plenty of water. If irritation occurs and persists, get medical attention.

Inhalation: No specific first aid measures are required.

Ingestion: Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

Specific methods: Aerosol Product - Containers may rocket or explode in heat of fire.
Suitable extinguishing media: Dry chemical, water spray, foam.
Specific hazards: NFPA 30B Level 1 Aerosol.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Ensure adequate ventilation. Remove all sources of ignition.
Environmental precautions and clean-up methods: Clean-up methods - large spillage. Remove all sources of ignition. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep away from open flames, hot surfaces and sources of ignition. CONTENTS UNDER PRESSURE. Do not puncture or incinerate. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

Storage:

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 degrees C or 120 degrees F. Exposure to heat may cause bursting. Do not pierce or burn, even after use. NFPA 30B Level 1 Aerosol. Protect from freezing. Store in a cool, dry, well ventilated area away from heat or open flame.

Aerosol Level (if applicable): Level 1

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

Ingredient(s)	CAS #	ACGIH	OSHA
Isobutane	75-28-5	1000 ppm (STEL)	-
Dipropylene glycol methyl ether	34590-94-8	150 ppm (STEL) 100 ppm (TWA)	Skin 100 ppm (TWA) 600 mg/m ³ (TWA)
Tetrapotassium pyrophosphate	7320-34-5	-	-
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chloride	68956-79-6	-	-
n-Alkyl (60% C14, 30% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chloride	68391-01-5	-	-

Undiluted Product:

Engineering measures to reduce exposure:

None known

Personal Protective Equipment

Eye protection:	No special requirements under normal use conditions.
Hand protection:	No special requirements under normal use conditions.
Skin and body protection:	No special requirements under normal use conditions.
Respiratory protection:	No special requirements under normal use conditions.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

Diluted Product:

Personal Protective Equipment

Eye protection:	No special requirements under normal use conditions.
Hand protection:	No special requirements under normal use conditions.
Skin and body protection:	No special requirements under normal use conditions.
Respiratory protection:	No special requirements under normal use conditions.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Pressurized Liquid	Color: Clear White
Evaporation Rate: No information available	Odor: Lavender Ammonia
Odor threshold: No information available.	Boiling point/range: Not determined
Melting point/range: Not determined	Decomposition temperature: Not determined
Autoignition temperature: No information available	Solubility: Completely Soluble
Solubility in other solvents: No information available	Relative Density (relative to water): 0.98
Density: 8.17 lbs/gal 0.98 Kg/L	Vapor density: No information available
Bulk density: No information available	Vapor pressure: No information available.
Flash point: 19 °F -7 °C	Partition coefficient (n-octanol/water): No information available
Dilution Flash Point: 19 °F -7 °C	Viscosity: No information available
Elemental Phosphorus: 0.30 % by wt.	VOC: 7.2 % *
pH: 12.1	VOC % by wt. at use dilution: 7.2 % *
Dilution pH: 12.1 @ RTU	Flammability (Solid or Gas): Not applicable
Metal Corrosion: Not determined	
Flame Extension (inches): 0	
Explosion limits: - upper: Not determined - lower: Not determined	

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Reactivity:	Not Applicable
Stability:	The product is stable
Hazardous decomposition products:	None reasonably foreseeable.
Materials to avoid:	None known.
Conditions to avoid:	Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Skin contact, Eye contact, Inhalation, Ingestion

Delayed, immediate, or chronic effects and symptoms from short and long-term exposure

Skin contact: Unlikely to be irritant in normal use.

Eye contact: May be mildly irritating to eyes.

Ingestion: No information available.

Inhalation: No information available.

Sensitization: No known effects.

Numerical measures of toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity: No information available.

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Dispose in compliance with all Federal, state, provincial, and local laws and regulations. If possible, recycle empty aerosol cans to the nearest steel recycling center.

Contaminated Packaging: Do not re-use empty containers.

RCRA Hazard Class (undiluted product): D001 Ignitable Waste

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: Please refer to the Diversey HazMat Library, only available through Internet Explorer, <http://naextranet.diversey.com/dot/>, for up to date shipping information.

DOT (Ground) Bill of Lading Description: LTD. QTY.

IMDG (Ocean) Bill of Lading Description: UN1950, AEROSOLS, 2.1, LTD. QTY.

15. REGULATORY INFORMATION

International Inventories at CAS# Level

All components of this product are listed on the following inventories: U.S.A. (TSCA).

U.S. Regulations

EPA Reg. No. : 70627-35

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

FIFRA Text

CAUTION: Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. PHYSICAL AND CHEMICAL HAZARDS: CONTENTS UNDER PRESSURE. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause bursting.

California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65.

RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
---------------	-------	--------	--------	--------	--------

Water	7732-18-5	-	-	-	-
Isobutane	75-28-5	X	X	X	-
Dipropylene glycol methyl ether	34590-94-8	X	X	X	-
Tetrapotassium pyrophosphate	7320-34-5	-	-	-	-

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Dipropylene glycol methyl ether	34590-94-8	1% - < 3%			X

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
Dipropylene glycol methyl ether	X		

SARA 311/312 Hazard Categories

Immediate: -
Delayed: -
Fire: X
Reactivity: -
Sudden Release of Pressure: X

Canada

WHMIS hazard class: Not for sale in Canada.

16. OTHER INFORMATION

NFPA

Health 1
Flammability 4
Instability 0

Version Number: 1
Preparation date: 2014-08-08

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice: • Contains an added fragrance, see "Odor" heading in section 9 for specific description

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.



Material Safety Data Sheet

Revision Date 13-Sep-2013

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code P91010
Product name ETP Gold Cutting Fluid
Recommended Use Lubricant
Supplier Lawson Products, Inc.
8770 W.Bryn Mawr Ave.- Suite 900
Chicago, IL 60631
1-866-529-7664
Emergency telephone number (888) 426-4851

2. HAZARDS IDENTIFICATION

Emergency Overview
Irritant. Contents under pressure.

Aggravated Medical Conditions
Pre-existing skin sensitivity. May cause allergic skin reaction.

Principal Routes of Exposure
Eyes. Inhalation. Skin contact.

Potential health effects

Eyes May cause the following effects: Irritation. Redness. Itching. Burning sensation.
Skin Repeated or prolonged exposure may cause: Skin Irritation. Redness. Itching. Burning sensation.
Inhalation Repeated or prolonged exposure may cause the following effects: Headaches. Dizziness. Nausea. Irritating to respiratory system.
Ingestion No hazard under normal industrial and institutional use.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Triethanolamine	102-71-6	7-13
Diethanolamine	111-42-2	0.5-1.5

4. FIRST AID MEASURES

Eye contact Flush with plenty of water for at least 15 minutes. Seek medical attention.
Skin contact Wash area thoroughly with soap and water. Remove and wash contaminated clothing before re-use. Seek medical attention if irritation persists.
Ingestion Do Not induce vomiting. Seek medical attention immediately.
Inhalation Remove from exposure. Restore breathing. Keep warm and quiet. Contact physician if breathing difficulty develops.

5. FIRE FIGHTING MEASURES

Flash point °C > 93
Flash point °F > 200
Method Tag Closed Cup

Autoignition temperature °C Not Applicable
Autoignition temperature °F Not Applicable

Flammability Limits (% in Air)
Upper No data available
Lower No data available

Suitable extinguishing media
Carbon dioxide (CO₂). Alcohol foam. Dry chemical.

Special protective equipment for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Fire and Explosion Hazards
Keep product and empty container away from heat and sources of ignition. Containers may vent or burst under extreme or prolonged fire conditions. Water should be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. Water spray may be ineffective. If water is used, fog nozzles are preferable. During emergency conditions, overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

Sensitivity to shock
No information available.

Sensitivity to static discharge
No information available.

6. ACCIDENTAL RELEASE MEASURES

6. ACCIDENTAL RELEASE MEASURES**Methods for cleaning up**

Eliminate all sources of ignition. Ventilate area to maintain exposure below permissible exposure limits. Soak up with inert absorbent material.

7. HANDLING AND STORAGE**Handling**

Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep container closed when not in use. Do not take internally. Keep out of reach of children.

Storage

Keep in properly labelled containers. Keep out of the reach of children.

NFPA Storage Code

Store as Level 3 Aerosol (NFPA 30B)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Diethanolamine	-	-	1 mg/m ³	-
Triethanolamine	-	-	5 mg/m ³	-

Ventilation and Environmental Controls

Use enough ventilation, local exhaust at the work area, general, or both, to keep below the TLV's in the worker's breathing zone and the general area. General: as necessary.

Hygiene measures

Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing.

Other precautions

Avoid breathing vapors or mists.

Respiratory protection

Avoid breathing concentrated vapors or particles from all products not specifically designed to be inhaled. Wear a NIOSH approved organic vapor/particulate respirator.

Hand Protection

Consult glove manufacturer to determine the proper type for a specific operation. Use of a barrier cream on exposed skin is highly recommended.

Eye protection

Wear safety glasses with side shields.

Skin and body protection

None necessary under normal conditions

Other Protective Equipment

A safety shower and eye wash station should be available for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Aerosol
Color	No information available
Odor	No information available
Odor Threshold	No information available
pH	9.0
Specific Gravity	1.06
Vapor pressure	No data available
Density	8.84 lbs/gal, 1059 g/l
Vapor density	>1 (air=1)
Evaporation Rate	<1 (ether = 1)
Water solubility	No data available
VOC Content	0.11 lbs/gal; 13 g/l
Partition Coefficient (n-octanol/water)	No data available
Boiling point/range °C	100 - 269
Boiling point/range °F	212 - 517
Melting point/range °C	No data available
Melting point/range °F	No data available
Flash point °C	> 93
Flash point °F	> 200

10. STABILITY AND REACTIVITY**Stability**

Stable.

Conditions to avoid

None known.

Incompatibility

None.

Hazardous Decomposition Products

By fire: Carbon dioxide. Carbon monoxide.

Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION**Component Information**

Chemical Name	LD50 (oral, rat)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat)
Diethanolamine 111-42-2	-	-	-
Triethanolamine 102-71-6	4190 mg/kg	20 mL/kg	-

Synergistic Products

None known

Potential health effects**Sensitization**

None known

Chronic toxicity See Section 2 .
Mutagenic effects None known
Teratogenic effects None known
Reproductive toxicity None known
Target Organ Effects See Section 2
Carcinogenic effects See table below

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
Diethanolamine	A3	Group 2B	Not Listed	Not Listed	Listed
Triethanolamine	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
Diethanolamine	Listed	Listed	Carcinogen
Triethanolamine	Not Listed	Listed	Not Listed

International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA
Diethanolamine	X	X	-	X
Triethanolamine	X	X	-	X

CPR

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by the Controlled Product Regulations

12. ECOLOGICAL INFORMATION

Diethanolamine

Microtox Data

Photobacterium phosphoreum EC50=73 mg/L (5 min)
Pseudomonas fluorescens EC50>16 mg/L (16 h)
Pseudomonas putida EC50>16 mg/L (16 h)

Water Flea Data

Daphnia magna EC50=55 mg/L (48 h)

Ecotoxicity effects No information available

13. DISPOSAL CONSIDERATIONS

Disposal Information

As supplied, this product is classified as non-hazardous waste according to RCRA regulations. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not incinerate. Dispose in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

DOT

Not Regulated

TDG

Not Regulated

15. REGULATORY INFORMATION

Chemical Name	US EPA SARA 313 Emission Reporting
Diethanolamine	Listed

State Regulations

16. OTHER INFORMATION

HMIS

Health - 2
Flammability - 1
Physical Hazard - 0

Prepared By

V. Shargorodsky, Regulatory Affairs Engineer

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

MATERIAL SAFETY DATA SHEET

Date Printed: 07/25/2008
 Product Code(s): 1273

Page: 1

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: European Auto Coat

Product Code(s): 1273

Manufacturer/Supplier: TRANSTAR AUTOBODY TECHNOLOGIES
 2040 Heiserman Dr.
 Brighton, MI, 48114, USA

24 Hour Emergency Phone(s): 800-424-9300 (CHEMTREC), 613-996-6666 (CANUTEC)

Business Phone: 810-220-3000

Product Use: Specialty Coating

MSDS Prepared By: Transtar Autobody Technologies

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% by Weight
Acetone	67-64-1	25- 40%
* Methylbenzene; Toluene	108-88-3	15- 25%
Propane	74-98-6	15.5
n-Butane	106-97-8	9.0
* Methyl Ethyl Ketone (MEK)	78-93-3	5 - 10%
* Propylene Glycol Monomethyl Ether Acetate	108-65-6	0 - 5%
* Ethylene Glycol Monobutyl Ether	111-76-2	0 - 5%
Carbon Black Pigment	1333-86-4	0 - 5%

See Section 15. Regulatory Information for code descriptions
 Weight percent (%) of 0.0 means chemical is in trace amounts.

3. HAZARDS IDENTIFICATION

DANGER: EXTREMELY FLAMMABLE. CONTENTS UNDER PRESSURE. Aerosol cans produce flammable vapors which can travel to a source of ignition and flash back. IRRITANT.

HMIS Hazard Ratings: Health =3 , Flammability =4, Chemical Reactivity =0

Note: HMIS ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Potential Health Effects

Eyes: Moderate irritation to the eyes.

Skin: Moderate irritation to the skin.

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Inhalation: Moderate irritation to the respiratory system. May be harmful if inhaled. High concentrations may be fatal.

Ingestion: Moderate irritation to the digestive tract.

4. FIRST AID MEASURES

Seek professional medical attention for all over-exposures and/or persistent problems.

Eyes Contact: Flush eyes with clean water for a minimum of 15 minutes. Seek medical attention.

Skin Contact: Wash exposed area thoroughly with soap and water.

Inhalation: Remove person from area to fresh air. If breathing difficulty persists, seek medical attention.

Ingestion: DO NOT INDUCE VOMITTING. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point: -4 Deg F, -20 Deg C
Method: TCC
Upper Explosive Limit (UEL): 12.8
Lower Explosive Limit (LEL): 1.1
Autoignition Temperature: No data

Extinguishing Media: Foam, Alcohol Foam, CO₂, Dry Chemical, Water Fog, Other.

Special Firefighting Procedures: Full fire fighter equipment including SCBA should be worn to avoid skin contact and inhalation of concentrated vapors. Minimize skin exposure. Highly toxic fumes may be generated by thermal decomposition.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, oxides of nitrogen.

Unusual Fire and Explosion Hazards: Vapors can travel to a source of ignition and flash back. Aerosol cans contain flammable, pressurized propellant. Cans will explode when exposed to flame, high heat and temperatures. Combustion generates toxic fumes.

6. ACCIDENTAL RELEASE MEASURES

For large spills or transportation accidents involving release of this product, contact the Emergency Response Center: 800-424-9300.

Eliminate all sources of ignition, provide adequate ventilation, dike spill area and add absorbent earth or sawdust to spilled liquid. Sweep up and dispose of in appropriate containers in accordance with Federal, State and/or Local regulations.

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7. HANDLING AND STORAGE

Aerosol cans contain pressurized, flammable propellant. Cans will burst if exposed to extreme heat or temperatures. Keep spray nozzle pointed away from face and do not direct nozzle spray towards people or animals. Avoid hot surfaces. Use in cool, well-ventilated areas. Keep aerosol can capped when not in use. Keep away from excessive heat and open flames. Follow all MSDS/label precautions even after container is emptied because they may retain product residues. Store in a cool area away from heat and flames. Do not reuse container when empty.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name/Exposure Limits	CAS Number
Acetone	67-64-1
OSHA PEL: 1000 ppm, ACGIH TLV: 500 ppm, OTHER: STEL 750 ppm	
* Methylbenzene; Toluene	108-88-3
OSHA PEL: 200 ppm, 300 ppm ceiling	
ACGIH TLV: 50 ppm (skin)	
IDLH: 500 ppm	
Propane	74-98-6
OTHER: TWA1000ppm	
n-Butane	106-97-8
OTHER: TWA 800ppm	
* Methyl Ethyl Ketone (MEK)	78-93-3
OSHA PEL: 200 ppm, ACGIH TLV: 200 ppm, OTHER: STEL 300 ppm	
* Propylene Glycol Monomethyl Ether Acetate	108-65-6
OSHA PEL: N/A, ACGIH TLV: N/A, OTHER: N/A	
* Ethylene Glycol Monobutyl Ether	111-76-2
OSHA PEL: 50ppm, ACGIH TLV: 20ppm	
Carbon Black Pigment	1333-86-4
OSHA PEL: 3.5 mg/m ³ , ACGIH TLV: 3.5mg/m ³	

Engineering Controls: General mechanical ventilation or local exhaust should be utilized to keep vapor concentrations below exposure limits (PEL & TLV). Ventilation equipment must be explosion proof.

Respiratory Protection: Utilize engineering controls to reduce emission levels below the time weighted exposure limits (ACGIH TLV & OSHA PEL). Wear an approved respirator if exposure limits are above the exposure limits listed above.

Eye Protection: Use safety glasses or splash goggles.

Skin Protection: Use chemical resistant gloves.

Safe Work Practices: Eye washes and safety showers in the workplace are recommended. Avoid contact with skin and eyes. Avoid breathing vapors. Wash hands thoroughly after using and before eating, drinking or smoking. Employee education and training in the safe use and

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handling of this product is required under the OSHA Hazard Communication Standard 29CFR1200. When spraying an aerosol can, use ventilation to minimize vapors. Smoking in area where this material is used should be strictly prohibited. Always use protective clothing and equipment. Remove all contaminated clothing and wash thoroughly when finished working. Keep food and drink away from material and from area where material is being used.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Homogeneous mixture
Physical State: Liquid
Color: Black
Odor: Organic solvent
Odor Threshold: No Data
Specific Gravity (water=1) 0.75
Vapor Pressure: No data
Vapor Density: Heavier than air
Material VOC: 3.40 lb/gl 407 g/l
Coating VOC: 5.37 lb/gl 644 g/l
Evaporation Rate: Faster than ether.
Boiling Point: -44øF
Melting Point: No data
Freezing Point: No data
Viscosity at Ambient Temperature: No data
Solubility in Water: Insoluble
Octanol/Water Partition Coefficient: No data
pH: No data

10. STABILITY AND REACTIVITY

Stability: Stable

Incompatibility: Strong acids, strong bases and strong oxidizing agents.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Effects of Exposure:

ACUTE:

INHALATION - Dizziness, breathing difficulty, headaches, & loss of coordination.

EYE CONTACT - Moderate irritation, tearing, redness, and blurred vision.

SKIN CONTACT - Moderate irritant. Can dry and defat skin causing cracks, irritation, and dermatitis.

INGESTION - Can cause gastrointestinal irritation, vomiting, nausea, & diarrhea.

CHRONIC:

May affect liver, kidney and central nervous system with repeated exposure.

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Aerosol spraying may create an oxygen deficient environment. Use proper ventilation to remove vapors, mists and fumes. Aerosol propellents can cause asphyxia characterized by blueness of the skin, difficulty breathing, headaches, loss of coordination and unconsciousness.

Acute Toxicity Data: No data.

Carcinogenicity: NTP -No, IARC -Yes, OSHA -No
This product has not been tested for carcinogenic effects. Some chemicals in this product may be identified by NTP, IARC and/or OSHA as carcinogenic, indicated above as "Yes". No further information available.

Teratology: No data.

Reproduction: No data.

Mutagenicity: No data.

12. ECOLOGICAL INFORMATION

No data.

13. DISPOSAL CONSIDERATIONS

Subject to hazardous waste generation, treatment, storage and disposal. Product should be disposed of in accordance with all governmental regulations. Subject to hazardous waste generation, treatment, storage and disposal under RCRA, 40CFR261. Product should be disposed of in accordance with all Federal, State and local regulations.

14. TRANSPORT INFORMATION

The following transportation information is provided based on Transtar Autobody Technologies interpretation of shipping regulations. Each shipper is responsible for identifying, naming, marking and labeling prior to offering for transport.

USA (DOT) Status: Consumer Commodity ORM-D

Water (IMDG) Status: UN1950, AEROSOL, 2.1, Limited Quantity

Air (ICAO, IATA) Status: UN1950, AEROSOL, 2.1, Limited Quantity

Canada (TDG) Status: Consumer Commodity ORM-D

15. REGULATORY INFORMATION

The information listed in this section is not all inclusive of all regulations for this product or the chemical components of this product.

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US Federal Regulations

TSCA Status: All known major components of this product are listed on the TSCA Inventory and/or are otherwise in compliance with TSCA.

SARA 302 (EHS) Status: No EHS chemicals present.

SARA 311/312 Status: Immediate Health Hazard, Delayed Health Hazard, Fire Hazard.

SARA 313 Status: * Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

OSHA Status: This material meets the requirement of hazardous material and is subject to 29CFR1910.1200.

USA State Information

California Proposition 65: This product contain chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

Pennsylvania RtK Status: This material contains chemical(s) subject to notification under Pennsylvania Right to Know.

New Jersey RtK Status: This material contains chemical(s) subject to notification under New Jersey Right to Know.

Massachusetts RtK Status: This material contains chemical(s) subject to notification under Massachusetts Right to Know.

Rhode Island RtK Status: This material contains chemical(s) subject to notification under Rhode Island Right to Know.

International Regulations

Canada

DSL Status: All known major components of this product are listed on the DSL Inventory and/or are otherwise in compliance with the DSL

NDSL Status: Contains no chemicals on the NDSL

WHMIS: AB5D2B

New Zealand

HSNO Number: HSR002515

EINECS Status: All components of this material are listed on the EINECS Inventory.

16. OTHER INFORMATION

To the best of our knowledge, the information contained herein is accurate, obtained from sources believed by Transtar Autobody Technologies to be accurate. As with all chemicals, KEEP AWAY FROM CHILDREN AND ANIMALS. FOR PROFESSIONAL USE ONLY. The hazard information contained herein is offered solely for the consideration of the user, subject to his own investigation and verification of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

6.

Safety Data Sheet

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SECTION 1 Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier** 100632
Everglass quart
- 1.2 Relevant identified uses of the substance or mixture and uses advised against** Automotive repair
- 1.3 Details of the supplier of the safety data sheet** ITW Evercoat
a division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, OH 45242
513-489-7600
- 1.4 Emergency telephone number** CHEM TEL: +1-813-248-0591

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

- Classified in accordance to (EC) No. 1272/2008** Skin Corrosion/Irritation Category 2
Serious Eye Damage/Eye Irritation Category 2
Flammable Liquid Category 3

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



Signal Word

Warning

Hazard Statements

H226 - Flammable liquid and vapour.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

Precautionary Statements

P233 - Keep container tightly closed.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

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rinsing.

P403+P235 - Store in a well-ventilated place. Keep cool.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P240 - Ground/bond container and receiving equipment.

Supplemental Hazard information (EU)

EUH208 - Contains Acid anhydride. May produce an allergic reaction.

2.3 Other hazards

No data available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical Name	%	CAS #	(EC) No 1272/2008	M Factor	SCL
Styrene	14.41	100-42-5	Acute Tox. 4; H332 Acute Tox. 4; H332 Acute Tox. 4; H332 Eye Irrit. 2; H319 Flam. Liq. 3; H226 Skin Irrit. 2; H315	No data available	No data available
Acid anhydride	0.75	85-43-8	Aquatic Chronic 3; H412 Eye Dam. 1; H318 Resp. Sens. 1; H334 Skin Sens. 1; H317 EUH208	No data available	No data available
Dimethylaniline (DMA)	0.11	121-69-7	Aquatic Chronic 2; H411 Acute Tox. 3; H311 Acute Tox. 3; H331 Acute Tox. 3; H331 Acute Tox. 3; H301 Acute Tox. 3; H331 Carc. 2; H351	No data available	No data available

For full text of H-statements; See Section 16

SECTION 4 First aid measures

4.1 Description of first aid measures

Inhalation

Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately. Get medical attention immediately. Keep the victim warm and quiet. If the victim has stopped breathing open airway, loosen collar and belt, and administer artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice.

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Eye Contact	Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention. No data available
Skin Contact	Wash with soap and water. Get medical attention if irritation develops or persists. Remove contaminated clothing and continue flushing with water. Seek medical advice if symptoms persist Wash clothing before reuse.
Ingestion	Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this MSDS. Do not induce vomiting unless directed to do so by medical personnel.
Self protection of the first aider	No data available

4.2 Most important symptoms and effects, both acute and delayed

Symptom See Section 4.1

4.3 Indication of any immediate medical attention and special treatment needed

Note to Doctor No additional first aid information available

SECTION 5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid. Carbon dioxide Dry chemical

Unsuitable extinguishing media No data available

5.2 Special hazards arising from the substance or mixture

Fire and/or Explosion Hazards Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back.

Hazardous Combustion Products Carbon dioxide, Carbon monoxide, Phthalic anhydride, Hydrocarbons

5.3 Advice for firefighters

Fire Fighting Methods and Protection Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface.

SECTION 6 Accidental release measures

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Prepared in accordance with Commission Regulation (EU) 2015/830

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6.1 Personal precautions, protective equipment and emergency procedures

For Non-emergency Personnel

Non-emergency personnel should be kept clear of the area.

For emergency responders

No health effects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section VIII of this MSDS

6.2 Environmental precautions

No data available

6.3 Methods and material for containment and cleaning up

No special spill clean-up considerations. Collect and discard in regular trash. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container.

6.4 Reference to other sections

Refer to section 13 for disposal information.

SECTION 7 Handling and storage

7.1 Precautions for safe handling

Mildly irritating material. Avoid unnecessary exposure. Do not get in eyes, on skin and clothing Wash hands before eating Use with adequate ventilation Avoid contact with material, avoid breathing dusts or fumes, use only in a well ventilated area.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool dry place. Isolate from incompatible materials. Store in a cool dry place Keep away from heat, sparks, and flame Store in a tightly closed container

7.3 Specific end use(s)

Automotive repair

SECTION 8 Exposure controls/personal protection

Occupational Exposure limit values

Chemical Name	ACGIH TLV-TWA	ACGIH STEL	IDLH
Styrene	20 ppm	40 ppm STEL; 170 mg/m ³ STEL	No data available

8.2 Exposure controls

Appropriate engineering controls

No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Individual protection measures, such as personal protective equipment

Eye and face protection

Wear chemically resistant safety glasses with side shields when handling this product. Do not wear contact lenses. None

Skin Protection

Hand protection

No information available

Other skin protection

Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene and wear a barrier

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	cream and/or impervious surgical style gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Respiratory Protection	Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms.
Thermal hazards	No data available
Environmental exposure controls	No data available

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Paste
Colour	Blue
Odour	Aromatic
Odour Threshold	No data available
pH	Neutral
Melting point / Freezing point (°C)	-30.6
Initial boiling point and boiling range (°C)	145
Flash Point (°C)	49
Evaporation Rate	No data available
Flammability (Solid, gas)	No data available
Upper/lower flammability or explosive limits	
Upper Flammable/Explosive Limit, % in air	6.1
Lower Flammable/Explosive Limit, % in air	1.1
Vapour Pressure	5.0 mmHg @ 68 °F / 20 °C (Styrene)
Vapour Density	Heavier than air. Vapors that evolve from this product will tend to settle and accumulate near the floor.
Relative Density	1.71
Solubility(ies)	No data available
Partition coefficient: n-octanol/water	1.36
Autoignition Temperature (°C)	490
Decomposition Temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

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9.2 Other information No data available

SECTION 10 Stability and reactivity

10.1 Reactivity No data available
10.2 Chemical stability Stable under normal conditions.
10.3 Possibility of hazardous reactions No data available
10.4 Conditions to avoid No data available
10.5 Incompatible materials Peroxides; Strong acids; Strong oxidizing agents
10.6 Hazardous decomposition products Carbon dioxide Carbon monoxide Hydrocarbons

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Acute Toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

pH	Neutral
----	---------

Classification is based on pH and the components listed in Section 3.

Serious eye damage/irritation

pH	Neutral
----	---------

Classification is based on pH and the components listed in Section 3.

Respiratory or skin sensitization

EUH208 - Contains Acid anhydride. May produce an allergic reaction.
Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

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Based on available data, the classification criteria are not met.

SECTION 12 Ecological information

12.1 Toxicity No data available

Ecotoxicity Data

Chemical Name	CAS Number	Aquatic EC50 Crustacea	Aquatic ERC50 Algae	Aquatic LC50 Fish
No data available				

12.2 Persistence and degradability No data available

12.3 Bioaccumulative potential No data

12.4 Mobility in soil No data available

12.5 Results of PBT and vPvB assessment No data available

12.6 Other adverse effects No data available

12.7 Additional information No data available

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Waste Description for Spent Product Spent or discarded material is a hazardous waste.

Disposal Methods Dispose of by incineration following Federal, State, Local, or Provincial regulations.

Waste Disposal Code(s) (European Waste Catalogue) W080111

SECTION 14 Transport information

Ground:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT
14.3 Transport hazard class(es): 3
14.4 Packing group: III
Exemptions: Limited Quantity

Air:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT

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14.3 Transport hazard class(es): 3

14.4 Packing group: III

Water:

14.1 UN number: UN3269

14.2 UN proper shipping name: POLYESTER RESIN KIT

14.3 Transport hazard class(es): 3

14.4 Packing group: III

Exemptions: Limited Quantity

14.5 Environmental hazards: No

14.6 Special precautions for user: No data available

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: No data available

SECTION 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

<u>Chemical Name</u>	<u>EINECS</u>	<u>SVHC</u>
Styrene	Y	N
Acid anhydride	Y	N
Dimethylaniline (DMA)	Y	N
Aniline	Y	N
Styrene Oxide	Y	N

15.2 Chemical safety assessment No data available

SECTION 16 Other information

SDS Abbreviations: No data available

References: No data available

Hazard phrase(s) referenced in section 3

- H226 - Flammable liquid and vapour.
- H301 - Toxic if swallowed.
- H302 - Harmful if swallowed.
- H311 - Toxic in contact with skin.
- H312 - Harmful in contact with skin.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.

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- H331 - Toxic if inhaled.
- H332 - Harmful if inhaled.
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H336 - May cause drowsiness or dizziness.
- H341 - Suspected of causing genetic defects.
- H350 - May cause cancer.
- H351 - Suspected of causing cancer.
- H372 - Causes damage to organs through prolonged or repeated exposure.
- H400 - Very toxic to aquatic life.
- H411 - Toxic to aquatic life with long lasting effects.
- H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/lighting equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 - Wash thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P284 - Wear respiratory protection.

Response

- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P307+P311 - IF exposed: Call a POISON CENTER or doctor/physician.

P308+P313 - IF exposed or concerned: Get medical advice/attention.

P314 - Get medical advice/attention if you feel unwell.

P321 - Specific treatment (see on this label).

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P363 - Wash contaminated clothing before reuse.

P370+P378 - In case of fire: Use for extinction.

Storage

P233 - Keep container tightly closed.

P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up.

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances

Safety Data Sheet



Revision Number: 005.1

Issue date: 06/08/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Extend(R) Rust Treatment
Product type: Rust converter
Restriction of Use: None identified
Company address:
 Henkel Corporation
 One Henkel Way
 Rocky Hill, Connecticut 06067

IDH number: 497093
Item number: 37557
Region: United States
Contact information:
 Telephone: (860) 571-5100
 MEDICAL EMERGENCY Phone: Poison Control Center
 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC
 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkeln.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: CONTENTS UNDER PRESSURE.
 EXTREMELY FLAMMABLE AEROSOL.
 HARMFUL IF SWALLOWED.
 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
 MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE AEROSOL	1
ACUTE TOXICITY ORAL	4
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention: Keep away from heat, sparks, open flames, hot surfaces - no smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe the mist or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and face protection.

Response: If SWALLOWED: Immediately call poison control or physician if you feel unwell. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison control center or physician. Wash contaminated clothing before reuse.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
2-Butoxyethanol	111-76-2	30 - 60
Acetone	67-64-1	30 - 60
Butyral resin	Proprietary	5 - 10
Formic acid	64-18-6	5 - 10
3,4,5-Trihydroxybenzoic acid	149-91-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical advice.
Skin contact:	Remove contaminated clothing and footwear. Wash with soap and water. If symptoms develop and persist, get medical attention. Wash clothing before reuse.
Eye contact:	Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention at once.
Ingestion:	Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Carbon dioxide. Dry chemical. foam
Special firefighting procedures:	Use water spray to keep fire exposed containers cool and disperse vapors. Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. Vapours may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back.
Hazardous combustion products:	Oxides of carbon. Hydrocarbons

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow material to contaminate ground water system. Do not let product enter drains. Absorb spill with inert material. Shovel material into appropriate container for disposal.
Clean-up methods:	Absorb the spilled material with an inert absorbent (nonflammable) material.

7. HANDLING AND STORAGE

Handling: Avoid breathing mists or aerosols of this product. Keep away from sources of ignition - no smoking. Avoid contact with eyes, skin and clothing.

Storage: Store in a cool, dry area. Keep containers closed when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
2-Butoxyethanol	20 ppm TWA	50 ppm (240 mg/m ³) PEL (SKIN)	None	None
Acetone	750 ppm STEL 500 ppm TWA	1,000 ppm (2,400 mg/m ³) PEL	None	None
Butyral resin	None	None	None	None
Formic acid	5 ppm TWA 10 ppm STEL	5 ppm (9 mg/m ³) PEL	None	None
3,4,5-Trihydroxybenzoic acid	None	None	None	None

Engineering controls: Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Aerosol, Liquid
Color:	Translucent
Odor:	Acetone
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Specific gravity:	1.0000
Vapor density:	Not available.
Flash point:	< -17.7 °C (< 0.14 °F) ; This product exhibits no flashback when tested for flame extension.
Flammable/Explosive limits - lower:	1.1 %
Flammable/Explosive limits - upper:	57 %
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Not available.
Partition coefficient (n-octanol/water):	Not available.
VOC content:	50.4 %
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Irritating organic vapours. Oxides of carbon.
Incompatible materials:	Acids and bases. Oxidizing agents.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, spark and flame.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation:	Vapours may cause drowsiness and dizziness.
Skin contact:	Causes skin burns.
Eye contact:	Causes serious eye damage.
Ingestion:	Harmful if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
2-Butoxyethanol	Oral LD50 (RAT) = 560 mg/kg Oral LD50 (RABBIT) = 0.32 g/kg Oral LD50 (RAT) = 1.48 g/kg Dermal LD50 (RABBIT) = 400 mg/kg Inhalation LC50 (RAT, 4 h) = 486 ppm Inhalation LC50 (RAT, 4 h) = 450 ppm	Blood, Central nervous system, Irritant, Kidney, Liver
Acetone	Oral LD50 (RABBIT) = 5,340 mg/kg Oral LD50 (RAT) = 5,800 mg/kg Oral LD50 (RAT) = 9,800 mg/kg Dermal LD50 (RABBIT) = 20,000 mg/kg Inhalation LC50 (RAT, 8 h) = 50.1 mg/l Inhalation LC50 (RAT, 4 h) = 76 mg/l	Blood, Central nervous system, Irritant, Reproductive
Butyral resin	None	No Records
Formic acid	Oral LD50 (RAT) = 730 mg/kg Inhalation LC50 (RAT, 15 min) = 15 mg/l Inhalation LC50 (RAT, 4 h) = 7.4 mg/l	Central nervous system, Corrosive, Irritant, Kidney, Metabolic
3,4,5-Trihydroxybenzoic acid	Oral LD50 (RABBIT) = 5.0 g/kg	Irritant, Central nervous system

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
2-Butoxyethanol	No	No	No
Acetone	No	No	No
Butyral resin	No	No	No
Formic acid	No	No	No
3,4,5-Trihydroxybenzoic acid	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Not available.

Hazardous waste number: D001: Ignitable.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
DOT Hazardous Substance(s): Acetone

International Air Transportation (ICAO/IATA)

Proper shipping name: Aerosols, flammable
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: AEROSOLS
Hazard class or division: 2.1
Identification number: UN 1950
Packing group: None
Additional information: IMDG-Code: Segregation group 1- Acids

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire, Sudden Release
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). 2-Butoxyethanol (CAS# 111-76-2).
Acetone (CAS# 67-64-1) 5,000 lbs. (2,270 kg)
Formic acid (CAS# 64-18-6) 5,000 lbs. (2,270 kg)

CERCLA Reportable quantity:

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Catherine Bimler, Regulatory Affairs Specialist

Issue date: 06/08/2015

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101G FILM FORMING LUBRICANT

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- HYDRAULIC OILS
- PIPE COATINGS
- THREAD SEALANTS
- BEARING GREASES
- SPECIALTY GREASES
- THREAD COMPOUNDS
- SUCKER ROD COATINGS
- OUTSIDE PRESERVATIVES
- WIRELINE GREASE SEALS
- CLEANERS & DEGREASERS
- PIPE STORAGE COMPOUNDS
- RUST & CORROSION INHIBITORS
- THREAD LOCKING COMPOUNDS
- VALVE LUBRICANTS & SEALANTS
- TOOL JOINT & DRILL COLLAR COMPOUNDS

PRODUCT DESCRIPTION

101G Film Forming Lubricant is a premium quality highly concentrated lubricant that resists the corrosive effects of downhole chemicals. 101G is made with LIQUILON®, which enhances the lubricity and extreme pressure properties. LIQUILON® is unaffected by acids, caustics, downhole chemicals, and hydrocarbons including gasoline and solvents.

101G is inert and thermally stable. The film forming properties of 101G eliminates wear, guards against rust and corrosion, and prevents metal-to-metal contact thereby significantly reducing operating temperature. In many cases, the power (electricity) to operate is reduced. 101G provides instant lubrication to equipment critical areas during start up.

BENEFITS

- Made with LIQUILON®
- Highly concentrated
- Eliminates wear
- Guards against rust and corrosion
- Prevents metal-to-metal contact
- Provides residual lubrication
- Seals wireline tools from the effects of downhole chemicals
- Ensures against galling and seizing during makeup of wireline tools
- Provides instant lubrication during start up

APPLICATION

101G is recommended for use on O-rings, seal nipples, gaskets, packer plugs, and other downhole tool accessories to ensure against drying, cracking, and downhole contamination.

101G is also recommended for application to wireline equipment and various downhole tools, where lubrication and corrosion resistance are vital. This lubricant will allow easy break-out and disassembly of downhole tools that have been subjected to adverse downhole chemicals.

TYPICAL OBSERVATIONS

Type	Concentrated Film Forming Lubricant
Color	Green
Texture	Smooth Paste
Consistency	Buttery
Active Component	LIQUILON®
Density, lb/gal @ 77°F (25°C)	8.5
Specific Gravity, @ 77°F (25°C)	1.02
Dropping Point,	
ASTM D-2265	>450°F (232°C)
Flash Point, ASTM D-92	>500°F (260°C)
Penetration, ASTM D-217	
Worked @ 77°F (25°C)	265–295
Base Oil Viscosity	
cSt, 40°C	174.0
cSt, 100°C	17.0
Corrosion Preventive Properties,	
ASTM D-1743 @ 125°F (51°C)	Pass
Water Washout Characteristics,	
ASTM D-1264 @ 100°F (37°C)	1.0%
Evaporation Loss,	
ASTM D-972 @ 210°F (98°C)	2.8%
Oil Separation,	
ASTM D-1742 @ 77°F (25°C)	Nil
Oxidation Stability,	
ASTM D-942 @ 210°F (98°C) 72 Hrs. PSI Loss	6
Shelf Life (unopened container)	Two years

CONTAINER SIZE

- Small Case (12 jars)
- Standard Case (6 jars)
- Cart Case (6 cartridges)
- Pint Case (12 cans)
- 1 gal (4 L) pail
- 5 gal (19 L) pail
- 55 gal (208 L) drum



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WARRANTY Because the conditions of use and the supervision of application are beyond our control, we assume no liability for any product failure or other damage beyond the purchase price of the material furnished by us. No agent, representative, or employee of this Company is authorized to change this provision, which relates to all goods delivered, whether sold, delivered as samples, or otherwise. Each user should independently determine the suitability of this product based on their specific application.

Manufactured by

BALMAR, L.L.C.

616 WEST PONT DES MOUTON ROAD | LAFAYETTE, LA 70507

Sales Locations:

LAFAYETTE, LA | HOUSTON, TX | LONGVIEW, TX | MIDLAND, TX | OKLAHOMA CITY, OK

*Registered trade name of Oil Center Research, Inc. 09/10/09

The product information and specifications listed in this publication are constantly being updated to keep up with government regulations and technology changes. Please visit our web site, www.oilcenter.com, or contact your Account Representative for the most current information relating to this product.



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101EU

FILM FORMING LUBRICANT

Made with LIQUILON®*

- GEAR OILS
- MOTOR OILS
- HYDRAULIC OILS
- PIPE COATINGS
- THREAD SEALANTS
- BEARING GREASES
- SPECIALTY GREASES
- THREAD COMPOUNDS
- SUCKER ROD COATINGS
- OUTSIDE PRESERVATIVES
- WIRELINE GREASE SEALS
- CLEANERS & DEGREASERS
- PIPE STORAGE COMPOUNDS
- RUST & CORROSION INHIBITORS
- THREAD LOCKING COMPOUNDS
- VALVE LUBRICANTS & SEALANTS
- TOOL JOINT & DRILL COLLAR COMPOUNDS

PRODUCT DESCRIPTION

101EU Film Forming Lubricant is a premium quality highly concentrated lubricant that resists the corrosive effects of downhole chemicals. 101EU is made with LIQUILON®, which enhances the lubricity and extreme pressure properties. LIQUILON® is unaffected by acids, caustics, downhole chemicals, and hydrocarbons including gasoline and solvents.

101EU is inert and thermally stable. The film forming properties of 101EU eliminates wear, guards against rust and corrosion, and prevents metal-to-metal contact thereby significantly reducing operating temperature. In many cases, the power (electricity) to operate is reduced. 101EU provides instant lubrication to equipment critical areas during start up.

BENEFITS

- REACH Compliant
- Made with LIQUILON®
- Highly concentrated
- Eliminates wear
- Guards against rust and corrosion
- Prevents metal-to-metal contact
- Provides residual lubrication
- Seals wireline tools from the effects of downhole chemicals
- Ensures against galling and seizing during makeup of wireline tools
- Provides instant lubrication during start up
- Service temperatures 10°F to >400°F

APPLICATION

101EU is recommended for use on O-rings, seal nipples, gaskets, packer plugs, and other downhole tool accessories to ensure against drying, cracking, and downhole contamination.

101EU is also recommended for application to wireline equipment and various downhole tools, where lubrication and corrosion resistance are vital. This lubricant will allow easy break-out and disassembly of downhole tools that have been subjected to adverse downhole chemicals.

TYPICAL OBSERVATIONS

Type	Concentrated
	Film Forming Lubricant
Color	Green
Texture	Smooth Paste
Consistency	Buttery
Active Component	LIQUILON®
Density, lb/gal @ 77°F (25°C)	7.70
Specific Gravity, @ 77°F (25°C)	0.922
Dropping Point,	
ASTM D-2265	>450°F (232°C)
Flash Point, ASTM D-92	>450°F (232°C)
Penetration, ASTM D-217	
Worked @ 77°F (25°C)	265–295
Base Oil Viscosity	
cSt, 40°C	174.0
cSt, 100°C	17.0
Corrosion Preventive Properties,	
ASTM D-1743 @ 125°F (51°C)	Pass
Water Washout Characteristics,	
ASTM D-1264 @ 100°F (37°C)	1.0%
Evaporation Loss,	
ASTM D-972 @ 210°F (98°C)	2.8%
Oil Separation,	
ASTM D-1742 @ 77°F (25°C)	Nil
Oxidation Stability, ASTM D-942	
@ 210°F (98°C) 72 Hrs. PSI Loss	6
Shelf Life (unopened container)	Two years

CONTAINER SIZE

- Small Case (12–5oz jars)
- Standard Case (6–1lb jars)
- 1 gal (4 L) pail
- 5 gal (19 L) pail
- 55 gal (208 L) drum



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WARRANTY Because the conditions of use and the supervision of application are beyond our control, we assume no liability for any product failure or other damage beyond the purchase price of the material furnished by us. No agent, representative, or employee of this Company is authorized to change this provision, which relates to all goods delivered, whether sold delivered as samples, or otherwise. Each user should independently determine the suitability of this product based on their specific application.

Manufactured by
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The product information and specifications listed in this publication are constantly being updated to keep up with government regulations and technology changes. Please visit our web site, www.oilcenter.com, or contact your Account Representative for the most current information relating to this product.

SAFETY DATA SHEET

Film Forming Lubricant

Page: 1 of 6

Revision: 01/12/2016

1. Product and Company Identification

Product Code: 101G
Product Name: Film Forming Lubricant
Company Name: Balmar, LLC
616 W. Pont Des Mouton Rd.
Lafayette, LA 70507-4002
Phone Number: (337)232-2496
Email address: Info@oilcenter.com
Emergency Contact: 01-703-527-3887

2. Hazards Identification

Skin Corrosion/Irritation, Category 3

GHS Signal Word: Warning
GHS Hazard Phrases: H316 - Causes mild skin irritation.
GHS Precaution Phrases: No phrases apply.
GHS Response Phrases: P332+313 - If skin irritation occurs, get medical advice/attention.
GHS Storage and Disposal Phrases: No phrases apply.
Potential Health Effects (Acute and Chronic): Chronic: Effects may be delayed.
Inhalation: The toxicological properties of this substance have not been fully investigated. Effects may be delayed.
Skin Contact: May cause skin irritation.
Eye Contact: May cause eye irritation.
Ingestion: The toxicological properties of this substance have not been fully investigated. Moderately toxic to humans by ingestion. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

3. Composition/Information on Ingredients

CAS #	Components (Chemical Name)	Concentration	
NA	Mineral Oil	64.0 - 81.0 %	
NA	Thickener	4.00 - 9.00 %	
NA	Coloring agent	3.00 - 5.00 %	
1314-13-2	Zinc oxide	1.00 - 5.00 %	

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4. First Aid Measures

Emergency and First Aid Procedures:

In Case of Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid.

In Case of Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical aid.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

In Case of Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Consult a physician.

Note to Physician: Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Pt: > 232 F Method Used: Estimate

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: NA

Suitable Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam. Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Material will not burn.

Flammable Properties and Hazards: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Vacuum or sweep up material and place into a suitable disposal container.

7. Handling and Storage

Precautions To Be Taken in Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.

Precautions To Be Taken in Storing: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
NA	Mineral Oil	No data.	No data.	No data.
NA	Thickener	No data.	No data.	No data.
NA	Coloring agent	PEL: 15 (dust) mg/m3	TLV: 10 mg/m3	No data.
1314-13-2	Zinc oxide	PEL: 5 (fume); 15 (dust) mg/m3	TLV: 2 mg/m3 (R) STEL: 10 mg/m3 (R)	No data.

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Respiratory Equipment (Specify Type):	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Eye Protection:	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Protective Gloves:	Wear appropriate protective gloves to prevent skin exposure.
Other Protective Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Engineering Controls (Ventilation etc.):	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

9. Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas	<input type="checkbox"/> Liquid	<input checked="" type="checkbox"/> Solid
Appearance and Odor:	Paste. Petroleum-like. Appearance: green.		
Melting Point:	> 232 F		
Boiling Point:	NP		
Autoignition Pt:	NA		
Flash Pt:	> 232 F Method Used: Estimate		
Explosive Limits:	LEL: No data. UEL: No data.		
Specific Gravity (Water = 1):	1.02	at 77.0 F	
Density:	8.51	at 77.0 F	
Vapor Pressure (vs. Air or mm Hg):	No data.		
Vapor Density (vs. Air = 1):	No data.		
Evaporation Rate:	No data.		
Solubility in Water:	< 1		
Percent Volatile:	No data.		

10. Stability and Reactivity

Stability:	Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>
Conditions To Avoid - Instability:	Incompatible materials.
Incompatibility - Materials To Avoid:	Oxidizing agents, magnesium, chlorinated rubber.
Hazardous Decomposition Or Byproducts:	Carbon monoxide.
Possibility of Hazardous Reactions:	Will occur <input type="checkbox"/> Will not occur <input checked="" type="checkbox"/>
Conditions To Avoid - Hazardous Reactions:	No data available.

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11. Toxicological Information

Toxicological Information: Epidemiology: No information found.
Teratogenicity: No information available.
Reproductive Effects: No information found.
Mutagenicity: Neurotoxicity:

Carcinogenicity/Other Information: CAS# 6966-09-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 1314-13-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

CAS #	Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
NA	Mineral Oil	n.a.	n.a.	n.a.	n.a.
NA	Thickener	n.a.	n.a.	n.a.	n.a.
NA	Coloring agent	n.a.	2B	A4	n.a.
1314-13-2	Zinc oxide	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

General Ecological Information: Environmental: No information available.

13. Disposal Considerations

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not regulated as a hazardous material()
DOT Hazard Class:
UN/NA Number:

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: No information available.

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: No information available.
UN Number:
Hazard Class:

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Not regulated as a hazardous material

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not regulated as a hazardous material

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15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
NA	Mineral Oil	No	No	No
NA	Thickener	No	No	No
NA	Coloring agent	No	No	No
1314-13-2	Zinc oxide	No	No	Yes-Cat. N982

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Yes No Acute (immediate) Health Hazard
 Yes No Chronic (delayed) Health Hazard
 Yes No Fire Hazard
 Yes No Sudden Release of Pressure Hazard
 Yes No Reactive Hazard

CAS #	Components (Chemical Name)	Other US EPA or State Lists
NA	Mineral Oil	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; MA Oil/HazMat: No; NJ EHS: No; NY Part 597: No; PA HSL: No
NA	Thickener	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; MA Oil/HazMat: No; NJ EHS: No; NY Part 597: No; PA HSL: No
NA	Coloring agent	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: Yes; MA Oil/HazMat: No; NJ EHS: Yes; NY Part 597: No; PA HSL: Yes - 1
1314-13-2	Zinc oxide	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No; MA Oil/HazMat: Yes - Cat.; NJ EHS: Yes - 2037; NY Part 597: No; PA HSL: Yes - E

CAS #	Components (Chemical Name)	International Regulatory Lists
NA	Mineral Oil	Canadian DSL: Yes; REACH: Yes - (R), (P), C2
NA	Thickener	Canadian DSL: Yes; REACH: Yes - (P)
NA	Coloring agent	Canadian DSL: Yes; REACH: Yes - (R), (P)
1314-13-2	Zinc oxide	Canadian DSL: Yes; REACH: Yes - (R), (P)

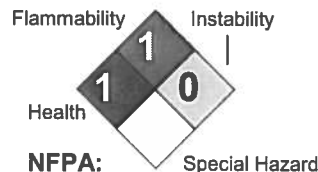
16. Other Information

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Hazard Rating System:

HEALTH	1
FLAMMABILITY	1
PHYSICAL	0
PPE	B

HMIS:



Additional Information About This Product: No data available.

Company Policy or Disclaimer:

The information contained here is based upon data available to us and reflects our best professional judgment. Since it is impossible to anticipate the conditions under which our products may be used, we cannot guarantee that the recommendations will be adequate for all individuals and situations. Each user of this product should determine the suitability of the product with zero or minimum hazards. Our products are improved daily as up-to-date information and research data is received from our suppliers in our quest to

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use products with less or no hazards. Please feel free to contact us for current information.



GLANCE FOAMING GLASS CLEANER

HMIS		NFPA	Personal protective equipment
Health	1	1	None / Aucune / Ninguno
Flammability	2	4	
Physical Hazard / Instability	0	0	

Version Number: 5

Preparation date: 2014-09-18

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: GLANCE FOAMING GLASS CLEANER

MSDS #: MS0301498
Product Code: 04553
Recommended use: • Glass Cleaner

Manufacturer, importer, supplier:
 US Headquarters: Diversey, Inc. 8310 16th St. Sturtevant, Wisconsin 53177-1964
 Phone: 1-888-352-2249
 MSDS Internet Address: www.diversey.com
 Canadian Headquarters: Diversey, Inc. - Canada 3755 Laird Road Mississauga, Ontario L5L 0B3
 Phone: 1-800-668-3131
Emergency telephone number: 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION. MAY BE MILDLY IRRITATING TO EYES. COMBUSTIBLE LIQUID AND VAPOR.

Principal routes of exposure: Eye contact. Skin contact. Inhalation.
Eye contact: May be mildly irritating to eyes.
Skin contact: None known.
Inhalation: None known.
Ingestion: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral - Rat (mg/kg)	LD50 Dermal - Rabbit	LC50 Inhalation - Rat
Butane	106-97-8	1 - 5%	2000	Not available	=658 g/m ³ (4 h)
2-butoxyethanol	111-76-2	1 - 5%	1400	=99 mg/kg	=450 ppm (4 h)
Isopropyl alcohol	67-63-0	1 - 5%	4396	=4059 mg/kg	=72600 mg/m ³ (4 h)
Propane	74-98-6	1 - 5%	2400	Not available	=658 mg/L (4 h)
Sodium nitrite	7632-00-0	0.1 - 1.5%	85	Not available	=5.5 mg/L (4 h)

4. FIRST AID MEASURES

Eye contact: Flush immediately with plenty of water. If irritation develops, get medical attention.
Skin contact: Rinse with plenty of water.
Inhalation: No specific first aid measures are required.
Ingestion: No specific first aid measures are required.

Aggravated Medical Conditions: None known.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Extinguish fire using agent suitable for surrounding fire.
Extinguishing media which must not be used for safety reasons: No information available.
Specific hazards: NFPA 30B Level 1 Aerosol. Aerosol product - Containers may rocket or explode in heat of fire.
Unusual hazards: None known.
Specific methods: Use water spray to keep fire-exposed containers cool.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area).
Environmental precautions and clean-up methods: No information available.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. COMBUSTIBLE LIQUID AND VAPOR. Keep away from open flames, hot surfaces and sources of ignition. Use only in well-ventilated areas. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage: Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements General room ventilation is adequate

Personal Protective Equipment

Eye protection: No special requirements under normal use conditions.
Hand protection: No special requirements under normal use conditions
Skin and body protection: No special requirements under normal use conditions.
Respiratory protection: No special requirements under normal use conditions.
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Ingredient(s)	CAS #	ACGIH	OSHA	Mexico
Butane	106-97-8	1000 ppm (STEL)		800 ppm (TWA) 1900 mg/m ³ (TWA)
2-butoxyethanol	111-76-2	20 ppm (TWA)	Skin 50 ppm (TWA) 240 mg/m ³ (TWA)	75 ppm (STEL) 360 mg/m ³ (STEL) 26 ppm (TWA) 120 mg/m ³ (TWA)
Isopropyl alcohol	67-63-0	400 ppm (STEL) 200 ppm (TWA)	400 ppm (TWA) 980 mg/m ³ (TWA)	500 ppm (STEL) 1225 mg/m ³ (STEL) 400 ppm (TWA) 980 mg/m ³ (TWA)
Propane	74-98-6	1000 ppm (TWA)	1000 ppm (TWA) 1800 mg/m ³ (TWA)	

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Aerosol
Appearance: No information available
Specific gravity: 0.9948
Vapor density: No information available
Boiling point/range: Not determined
Decomposition temperature: Not determined
Solubility: Partially Soluble
Solubility in other solvents: No information available
Partition coefficient (n-octanol/water): No information available
Elemental Phosphorus: 0.00 % by wt.
pH: 10.93
Explosion limits: - upper: Not determined - lower: Not determined

Bulk density: No information available
Evaporation Rate: No information available
Color: Clear Colorless
Odor: Solvent
Melting point/range: Not determined
Autoignition temperature: No information available
Density: 8.3 lbs/gal 0.9948 Kg/L
Flash point: -156 °F -104.4 °C
Viscosity: No information available
VOC: 8.82 % *
Dilution pH: 11.43 @ RTU

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Stability:	The product is stable
Polymerization:	Hazardous polymerization does not occur.
Hazardous decomposition products:	None reasonably foreseeable.
Conditions to avoid:	Extremes of temperature and direct sunlight. Keep away from open flames, hot surfaces and sources of ignition.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Oral LD50 estimated to be greater than 5000 mg/kg Dermal LD50 estimated to be > 2000 mg/kg
Component Information: See Section 3.

Chronic toxicity: None known

Specific effects

Carcinogenic effects:	• None known
Mutagenic effects:	None known
Reproductive toxicity:	None known
Target organ effects:	None known

Ingredient(s)	CAS #	NTP	IARC	OSHA
Isopropyl alcohol	67-63-0		3	X
Sodium nitrite	7632-00-0		2A	

12. ECOLOGICAL INFORMATION

Environmental Information: No data available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:

Use up contents if possible before disposal. If possible, recycle empty aerosol cans to the nearest steel recycling center. This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Dispose in compliance with all Federal, state, provincial, and local laws and regulations.

RCRA Hazard Class (undiluted product): D001 Ignitable Waste

14. TRANSPORT INFORMATION

DOT/TDG/IMDG: Please refer to the Diversey HazMat Library, only available through Internet Explorer, <http://naextranet.diversey.com/dot/>, for up to date shipping information.

DOT (Ground) Bill of Lading Description: LTD. QTY.

IMDG (Ocean) Bill of Lading Description: UN1950, AEROSOLS, 2.1, LTD. QTY.

15. REGULATORY INFORMATION

International Inventories at CAS# Level

All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (ECL), Japan (ENCS), Philippines (PICCS), China (IECSC).

U.S. Regulations

California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65.

RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Water	7732-18-5	-	-	-	-
Butane	106-97-8	X	X	X	-
2-butoxyethanol	111-76-2	X	X	X	-
Isopropyl alcohol	67-63-0	X	X	X	-
Propane	74-98-6	X	X	X	-
Sodium nitrite	7632-00-0	X	X	X	X

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
2-butoxyethanol	111-76-2	1 - 5%			X
Isopropyl alcohol	67-63-0	1 - 5%			X
Sodium nitrite	7632-00-0	0.1 - 1.5%	100		X

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
2-butoxyethanol	X		

SARA 311/312 Hazard Categories

Immediate: -
Delayed: -
Fire: X
Reactivity: -
Sudden Release of Pressure: X

Canada

WHMIS hazard class: A Compressed gases, B5 Flammable aerosol.



Ingredient(s)	CAS #	NPRI
2-butoxyethanol	111-76-2	X
Isopropyl alcohol	67-63-0	X
Propane	74-98-6	X
Sodium nitrite	7632-00-0	X

16. OTHER INFORMATION

Reason for revision: Not applicable
Prepared by: NAPRAC
Additional advice:

- Does not contain an added fragrance
- This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.



SAFETY DATA SHEET

1. Identification

Product number 1000000075
Product identifier **GLASS CLEANER**
Revision date 05-30-2015
Company information Sprayway, Inc.
1005 S. Westgate Drive
Addison, IL 60101 United States
Company phone General Assistance 1-630-628-3000
Emergency telephone US 1-866-836-8855
Emergency telephone outside US 1-952-852-4646
Version # 02
Supersedes date 05-26-2015
Recommended use cleaner
Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards Gases under pressure Liquefied gas
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements



Signal word Warning
Hazard statement Contains gas under pressure; may explode if heated.
Precautionary statement
Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Protect from sunlight. Store in a well-ventilated place.
Disposal Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC) None known.
Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-Butoxyethanol		111-76-2	2.5 - 10
Ethyl Alcohol		64-17-5	2.5 - 10
Butane		106-97-8	1 - 2.5
Propane		74-98-6	1 - 2.5
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Get medical attention if symptoms persist.
Skin contact	Get medical attention if irritation develops and persists.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. See Section 8 of the SDS for Personal Protective Equipment. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
--------------------------------------	---

Conditions for safe storage, including any incompatibilities

Level 1 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3 50 ppm
Ethyl Alcohol (CAS 64-17-5)	PEL	1900 mg/m3 1000 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm
Ethyl Alcohol (CAS 64-17-5)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3 5 ppm
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Ethyl Alcohol (CAS 64-17-5)	TWA	1900 mg/m3 1000 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
2-Butoxyethanol (CAS 111-76-2)	200 mg/g	Butoxyacetic acid (BAA), with hydrolysis	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

US - Tennessee OELs: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Hand protection	For prolonged or repeated skin contact use suitable protective gloves.
Skin protection	
Other	Wear suitable protective clothing.
Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Clear.
Physical state	Gas.
Form	Aerosol. Liquefied gas.
Color	Light yellow.
Odor	Characteristic.
Odor threshold	Not available.
pH	9.1 - 10.1 estimated
Melting point/freezing point	Not available.
Initial boiling point and boiling range	212 °F (100 °C) estimated
Flash point	-156.0 °F (-104.4 °C) Propellant estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	80 - 100 psig @70F estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Aerosol spray enclosed space	
Deflagration density	> 2.52 g/cm ³ Tested
Aerosol spray ignition distance	< 15 cm Tested estimated
Specific gravity	0.977 - 0.997

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Eye contact Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity May be harmful if swallowed. May be harmful in contact with skin. May be harmful if inhaled. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components	Species	Test Results
2-Butoxyethanol (CAS 111-76-2)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	230 ml/kg, 24 Hours 7.3 ml/kg, 4 Days
	Rabbit	450 ml/kg, 24 Hours 435 mg/kg, 24 Hours 0.63 ml/kg
	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rabbit	400 ppm, 7 Hours
	Rat	450 ppm, 4 Hours
<i>Oral</i>		
LD100	Rabbit	695 mg/kg
LD50	Dog	> 695 mg/kg
	Guinea pig	1200 mg/kg
	Rat	530 - 2800 mg/kg
Butane (CAS 106-97-8)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes
	Rat	1355 mg/l

Components	Species	Test Results
Ethyl Alcohol (CAS 64-17-5)		
Acute		
<i>Inhalation</i>		
LC50	Cat	85.41 mg/l, 4.5 Hours 43.68 mg/l, 6 Hours
	Mouse	> 60000 ppm 79.43 mg/l, 134 Minutes
	Rat	> 115.9 mg/l, 4 Hours 51.3 mg/l, 6 Hours
<i>Oral</i>		
LD50	Monkey	6000 mg/kg
	Mouse	10500 ml/kg
	Rat	1187 - 2769 mg/kg 7800 ml/kg
Propane (CAS 74-98-6)		
Acute		
<i>Inhalation</i>		
LC50	Mouse	1237 mg/l, 120 Minutes 52 %, 120 Minutes
	Rat	1355 mg/l 658 mg/l/4h

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation May be irritating to the skin. Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation. May be irritating to eyes.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2)

3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard. Not likely, due to the form of the product.

Chronic effects Prolonged inhalation may be harmful. May be harmful if absorbed through skin.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Product	Species		Test Results
GLASS CLEANER (CAS Mixture)			
Aquatic			
Crustacea	EC50	Daphnia	13838.1602 mg/l, 48 hours estimated
Components	Species		Test Results
2-Butoxyethanol (CAS 111-76-2)			
Aquatic			
Fish	LC50	Inland silverside (Menidia beryllina)	1250 mg/l, 96 hours
Ethyl Alcohol (CAS 64-17-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	7700 - 11200 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100.1 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

2-Butoxyethanol	0.83
Butane	2.89
Ethyl Alcohol	-0.31
Propane	2.36

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, non-flammable

Transport hazard class(es)**Class** 2.2**Subsidiary risk** -**Label(s)** 2.2**Packing group** Not applicable.**Environmental hazards** No.**ERG Code** 2L**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Other information****Passenger and cargo aircraft** Allowed.**Cargo aircraft only** Allowed.**Packaging Exceptions** LTD QTY**IMDG****UN number** UN1950**UN proper shipping name** AEROSOLS**Transport hazard class(es)****Class** 2.2**Subsidiary risk** -**Label(s)** 2.2**Packing group** Not applicable.**Environmental hazards****Marine pollutant** No.**EmS** Not available.**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**Packaging Exceptions** LTD QTY**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.**DOT****IATA; IMDG****15. Regulatory information****US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - Yes
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No**SARA 313 (TRI reporting)**
Not regulated.**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)Butane (CAS 106-97-8)
Propane (CAS 74-98-6)**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Ethyl Alcohol (CAS 64-17-5)
Propane (CAS 74-98-6)**US. New Jersey Worker and Community Right-to-Know Act**2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Ethyl Alcohol (CAS 64-17-5)
Propane (CAS 74-98-6)**US. Pennsylvania Worker and Community Right-to-Know Law**2-Butoxyethanol (CAS 111-76-2)
Butane (CAS 106-97-8)
Ethyl Alcohol (CAS 64-17-5)
Propane (CAS 74-98-6)**US. Rhode Island RTK**Butane (CAS 106-97-8)
Propane (CAS 74-98-6)**US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-26-2015

Revision date 05-30-2015

Version # 02

References EPA: AQUIRE database
 NLM: Hazardous Substances Data Base
 US. IARC Monographs on Occupational Exposures to Chemical Agents

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Information Product and Company Identification: Alternate Trade Names

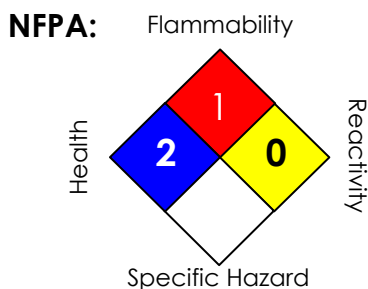
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HMIS III:

HEALTH	3*
FLAMMABILITY	1
PHYSICAL	0

 0 = Insignificant, 1 = Slight,
2 = Moderate, 3 = High, 4 = Extreme

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Commercial Product Name : High Build Undercoat 550G. Paintable
 Product code : 890.9072
 SDS-Identcode : 10047413
 Product Use Description : Colouring agents, dyes
 Company : Würth Canada Limited
 345 Hanlon Creek Blvd
 GUELPH, ON N1C 0A1
 Canada
 Telephone : +1 (905) 564 6225
 Telefax : +1 (905) 564 3671
 Responsible/issuing person : prodsafe@wuerth.com
 Emergency telephone number : In case of emergency please contact: CANUTEC (5:00 pm - 8:00 am):
 +1 (613) 996 6666
 WÜRTH CANADA LIMITED (8:00 am - 5:00 pm):
 +1 (905) 564 6225

SECTION 2. HAZARDS IDENTIFICATION
Emergency Overview

Form : Aerosol containing a liquefied gas
 Colour : black
 Odour : solvent-like
 Odour - Control parameters : No data available
 Hazard Summary : Extremely flammable aerosol.

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May cause fire.
Compressed gas
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C / 122 °F.
Irritant
Reproductive hazard
Possible cancer hazard - may cause cancer

Potential Health Effects

Target Organs	: Liver Kidney Eyes Skin Central nervous system
Eyes	: May cause eye irritation.
Skin	: May cause skin irritation. Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	: Harmful if inhaled. May be fatal if inhaled. May cause drowsiness or dizziness.
Chronic Exposure	: This product contains a material that may cause adverse reproductive effects.*
ACGIH	: Carbon black (CAS-No.: 1333-86-4) distillates (petroleum), hydrotreated light (CAS-No.: 64742-47-8)
NTP	: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC	: Titanium dioxide (CAS-No.: 13463-67-7) Carbon black (CAS-No.: 1333-86-4)

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OSHA : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight percent- Weight percent
tert-butyl acetate	540-88-5	>= 55 - < 60
toluene	108-88-3	>= 25 - < 35
propane	74-98-6	>= 7 - < 10
isobutane	75-28-5	>= 3 - < 5
Carbon black	1333-86-4	>= 0.75 - < 1

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). First aider needs to protect himself. Move out of dangerous area. Never give anything by mouth to an unconscious person. Take off contaminated clothing and shoes immediately.

Inhalation : If breathed in, move person into fresh air. Call a physician immediately. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Skin contact : In case of contact, immediately flush skin with soap and plenty of water. Do NOT use solvents or thinners. If skin irritation persists, call a physician.

Eye contact : Protect unharmed eye. If easy to do, remove contact lens, if worn. Rinse with water. Get medical attention.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. If swallowed, DO NOT induce vomiting. If a person vomits when lying on his back, place him in the recovery position. Get medical attention.

SECTION 5. FIREFIGHTING MEASURES

Form : Aerosol containing a liquefied gas
Ignition temperature : 450 °C (842 °F)

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- Lower explosion limit : 2.1 %(V)
- Upper explosion limit : 9.5 %(V)
- Suitable extinguishing media : Foam
Alcohol-resistant foam
Dry chemical
Water mist
- Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Hazardous decomposition products may be formed under fire conditions (see section 10).
Exposure to decomposition products may be a hazard to health.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
- Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
In the event of fire and/or explosion do not breathe fumes.
Use water spray to cool unopened containers.
Collect contaminated fire extinguishing water separately.
This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Refer to protective measures listed in sections 7 and 8.
Use personal protective equipment.
Remove all sources of ignition.
Avoid contact with skin and eyes.

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- Ensure adequate ventilation, especially in confined areas.
Immediately evacuate personnel to safe areas.
Avoid inhalation of vapour or mist.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for cleaning up : Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.
Clean contaminated surface thoroughly.

SECTION 7. HANDLING AND STORAGE**Handling**

- Handling : For personal protection see section 8.
Limit the stocks at work place.
Use only in well-ventilated areas.
Do not breathe vapours or spray mist.
Avoid contact with skin and eyes.
Do not spray on a naked flame or any incandescent material.
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
Take precautionary measures against static discharges.
Handle with care.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
Vapours are heavier than air and may spread along floors.
Vapours may form explosive mixtures with air.
Keep away from heat and sources of ignition.
Do not smoke.
No sparking tools should be used.
Electrical equipment should be protected to the appropriate standard.

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Dust explosion class : Not applicable

Storage

Requirements for storage areas and containers : Store in a place accessible by authorized persons only. Store in original container. BEWARE: Aerosol is pressurized. Keep away from heat. Keep away from direct sunlight. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. Keep containers tightly closed in a cool, well-ventilated place. Please observe the storage instructions for aerosols!

Advice on common storage : Incompatible with oxidizing agents. Keep away from reducing agents.

Keep away from food, drink and animal feedingstuffs. Do not store together with oxidizing and self-igniting products.

Other data : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Exposure Guidelines

Components	CAS-No.	List	Type:	Value	Update
tert-butyl acetate	540-88-5	CA AB OEL	TWA	200 ppm 950 mg/m3	2007-01-01
		CA BC OEL	TWA	200 ppm	2006-11-29
		CA QC OEL	TWAEV	200 ppm 950 mg/m3	2006-12-29
toluene	108-88-3	CA AB OEL	TWA	50 ppm 188 mg/m3	2007-01-01
		CA BC OEL	TWA	20 ppm	2009-02-09
		CA QC OEL	TWAEV	50 ppm 188 mg/m3	2006-12-29
propane	74-98-6	CA AB OEL	TWA	1,000 ppm	2009-04-30
		CA BC OEL	TWA	1,000 ppm	2006-11-29
		CA QC OEL	TWAEV	1,000 ppm 1,800 mg/m3	2006-12-29
Calcium carbonate	1317-65-3	CA ON OEL	TWA	1,000 ppm	2010-11-05
		CA AB OEL	TWA	10 mg/m3	2009-04-30
		CA BC OEL	TWA	10 mg/m3	2006-11-29

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		CA BC OEL	STEL	20 mg/m ³	2006-11-29
		CA QC OEL	TWAEV	10 mg/m ³	2012-11-28
isobutane	75-28-5	CA BC OEL	TWA	1,000 ppm	2006-11-29
		CA AB OEL	TWA	1,000 ppm	2009-04-30
		CA ON OEL	TWA	800 ppm	2012-06-12
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	64742-47-8	CA BC OEL	TWA	200 mg/m ³	2006-11-29
		CA QC OEL	TWAEV	5 mg/m ³	2006-12-29
		CA QC OEL	STEV	10 mg/m ³	2006-12-29
		CA ON OEL	TWA	525 mg/m ³	2010-11-05
		CA AB OEL	TWA	200 mg/m ³	2009-04-30
		CA AB OEL	TWA	5 mg/m ³	2009-04-30
		CA AB OEL	STEL	10 mg/m ³	2009-04-30
		CA QC OEL	TWAEV	5 mg/m ³	2012-11-28
		CA QC OEL	STEV	10 mg/m ³	2012-11-28
Carbon black	1333-86-4	CA AB OEL	TWA	3.5 mg/m ³	2007-01-01
		CA QC OEL	TWAEV	3.5 mg/m ³	2006-12-29
		CA BC OEL	TWA	3 mg/m ³	2011-09-15

- Engineering measures : Provide sufficient air exchange and/or exhaust in work rooms.
- Eye protection : Tightly fitting safety goggles
- Hand protection : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.
- Skin and body protection : Flame retardant antistatic protective clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Product contains low-boiling liquids. Respiratory protective equipment must be air supplied respirators.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. General industrial hygiene practice. Do not inhale aerosol. Avoid contact with skin, eyes and clothing. When using do not eat, drink or smoke.

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Wash hands before breaks and at the end of workday.
Follow the skin protection plan.
Take off all contaminated clothing immediately.
Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Aerosol containing a liquefied gas
Colour	: black
Odour	: solvent-like
Ignition temperature	: 450 °C (842 °F)
Lower explosion limit	: 2.1 %(V)
Upper explosion limit	: 9.5 %(V)
pH	: Not applicable
Boiling point/boiling range	: >98 °C(208 °F)
Vapour pressure	: 3.79 - 4.14 bar at 20 °C (68 °F)
Relative vapour density	: >1 (Air = 1.0)
Density	: 0.90 g/cm ³ at 25 °C (77 °F)
Water solubility	: insoluble
Volatile organic compounds (VOC) content	: 29.5 % 265.35 g/l

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: Strong oxidizing agents Reducing agents hydrides
Hazardous decomposition	: Carbon oxides

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products	Smoke Hydrocarbons
	Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.
Hazardous reactions	: Note: No decomposition if stored and applied as directed. Vapours may form explosive mixtures with air. If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

SECTION 11. TOXICOLOGICAL INFORMATION

Carcinogenicity	: No data is available on the product itself.
Reproductive toxicity	: No data is available on the product itself.
Teratogenicity	: No data is available on the product itself.
Further information	: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Vapours may cause drowsiness and dizziness.

Component:

toluene	108-88-3	<u>Acute oral toxicity</u> : LD50 Rat Dose: 5,580 mg/kg <u>Acute dermal toxicity</u> : LD50 Rabbit Dose: ca. 12,267 mg/kg <u>Acute inhalation toxicity</u> : LC50 Rat Dose: >= 28.1 mg/l/Exposure time: 4 h Method: OECD Test Guideline 403 <u>Skin irritation</u> : Rabbit Result: irritating <u>Eye irritation</u> : Rabbit Result: No eye irritation Method: OECD Test Guideline 405 <u>Reproductive toxicity</u> : Suspected human reproductive toxicant, Suspected of damaging the unborn child.
isobutane	75-28-5	<u>Acute inhalation toxicity</u> : LC50 Mouse Dose: 1,237 mg/l/Exposure time: 120 min <u>Mutagenicity</u> : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

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Reproductive toxicity: No toxicity to reproduction

Carbon black

1333-86-4

Eye irritation: Result: irritating**SECTION 12. ECOLOGICAL INFORMATION**

Volatile organic compounds (VOC) content : 29.5 %

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

Component:

toluene

108-88-3

Toxicity to fish:
LC50
Species: Oncorhynchus kisutch (coho salmon)
Dose: 5.5 mg/l
Exposure time: 96 hAcute and prolonged toxicity for aquatic invertebrates:
EC50
Species: Ceriodaphnia dubia (water flea)
Dose: 3.78 mg/l
Exposure time: 48 hToxicity to algae:
EC50
Species: Chlorella vulgaris (Fresh water algae)
Dose: 134 mg/l
Exposure time: 3 hToxicity to bacteria:
EC50
Species: Bacteria
Dose: 84 mg/l
Exposure time: 24 h**SECTION 13. DISPOSAL CONSIDERATIONS**

Adequate disposal : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

Material Safety Data Sheet

High Build Undercoat 550G. Paintable

Version 1.0

Revision Date 12/03/2014

Print Date 12/05/2014

DOT 49 CFR

ID No : UN 1950
Proper shipping name : Aerosols
Class : 2.1
Labels : 2.1
Emergency Response : 126
Guidebook Number

TDGR

ID No : UN 1950
Proper shipping name : AEROSOLS
Class : 2.1
Labels : 2.1

ICAO/IATA-DGR

ID No : UN 1950
Proper shipping name : Aerosols, flammable
Class : 2.1
ICAO-Labels : 2.1
Packing instruction (cargo aircraft) : 203
Packing instruction (passenger aircraft) : 203
Packing instruction (passenger aircraft) : Y203
Environmentally hazardous : no

IMDG-Code

ID No : UN 1950
Description of the goods : AEROSOLS

Class : 2.1
IMDG-Labels : 2.1
EmS Number 1 : F-D
EmS Number 2 : S-U

Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

WHMIS Classification : A Compressed Gas
B1 Flammable gas
D2A Very Toxic Material Causing Other Toxic Effects
D2B Toxic Material Causing Other Toxic Effects

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High Build Undercoat 550G. Paintable

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Revision Date 12/03/2014

Print Date 12/05/2014

Compressed Gas
Flammable gas
Carcinogen
Reproductive hazard
Moderate skin irritant

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION**Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Prepared by : SAP Business Compliance Services GmbH
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Revision Date : 12/03/2014



JOHNSEN'S BRAKE CLEANER 16 OZ.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 08/19/2014

Version:

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : JOHNSEN'S BRAKE CLEANER 16 OZ.
Product code : 2420

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Brake Parts Cleaner

1.3. Details of the supplier of the safety data sheet

Technical Chemical Company
P.O. BOX 139
Cleburne, Texas 76033
T 817-645-6088

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Compressed gas H280
Acute Tox. 4 (Inhalation) H332
Acute Tox. 4 (Inhalation:gas) H332
Eye Irrit. 2B H320
Carc. 1B H350

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS04

GHS07

GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated
H320 - Causes eye irritation
H332 - Harmful if inhaled
H350 - May cause cancer

Precautionary statements (GHS-US) : P201 - Obtain special instructions
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust, fume, gas, mist, vapor spray
P264 - Wash affected areas thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention
P312 - Call a POISON CONTROL CENTER, doctor, if you feel unwell.
P337+P313 - If eye irritation persists: Get medical advice/attention
P405 - Store locked up
P410+P403 - Protect from sunlight. Store in a well-ventilated place
P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

2.3. Other hazards

Other hazards not contributing to the classification : Contains gas under pressure; may explode if heated.

2.4. Unknown acute toxicity (GHS-US)

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Tetrachloroethylene	(CAS No) 127-18-4	>= 95	Carc. 1B, H350 Aquatic Chronic 2, H411
Carbon Dioxide, Liquefied, Under Pressure	(CAS No) 124-38-9	1 - 5	Compressed gas, H280

The exact percentage is a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow victim to breathe fresh air. Allow the victim to rest. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: May cause cancer.
Symptoms/injuries after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/injuries after skin contact	: May cause slight irritation . Itching. Skin rash/inflammation. Red skin.
Symptoms/injuries after eye contact	: Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue. Causes eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable.
-------------	------------------

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: NFPA Aerosol Level 1.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources.
------------------	----------------------------

6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Safety glasses.
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

- For containment : Dam up the liquid spill. Contain released substance, pump into suitable containers. Plug the leak, cut off the supply.
- Methods for cleaning up : Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Use only outdoors or in a well-ventilated area. Avoid breathing dust, fume, gas, mist, vapor spray. Obtain special instructions. Do not handle until all safety precautions have been read and understood.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Storage area : Store in a well-ventilated place.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Tetrachloroethylene (127-18-4)		
USA ACGIH	ACGIH TWA (mg/m ³)	170 mg/m ³
USA ACGIH	ACGIH TWA (ppm)	25 ppm
USA ACGIH	ACGIH STEL (mg/m ³)	685 mg/m ³
USA ACGIH	ACGIH STEL (ppm)	100 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	200 ppm

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)		
USA ACGIH	ACGIH TWA (mg/m ³)	9000 mg/m ³
USA ACGIH	ACGIH TWA (ppm)	5000 ppm
USA ACGIH	ACGIH STEL (mg/m ³)	54000
USA ACGIH	ACGIH STEL (ppm)	30000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	9000 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	5000 ppm

8.2. Exposure controls

- Appropriate engineering controls : Local exhaust ventilation, vent hoods. Ensure good ventilation of the work station.
- Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.



- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear appropriate mask.
- Other information : Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Liquid.
Molecular mass	: 165.83 g/mol
Color	: Colourless.
Odor	: Sweet odour. Ether-like odour.
Odor threshold	: 2.0 - 71 ppm
pH	: 6.8 - 8.4
Relative evaporation rate (butyl acetate=1)	: 2
Relative evaporation rate (ether=1)	: 8
Melting point	: -22 °C
Freezing point	: No data available
Boiling point	: 121 °C
Flash point	: None
Critical temperature	: 347 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: > 150 °C
Flammability (solid, gas)	: No data available
Vapor pressure	: 19 hPa
Vapor pressure at 50 °C	: 82 hPa
Relative vapor density at 20 °C	: 5.8
Relative density	: 1.62
Relative density of saturated gas/air mixture	: 1.1
Specific gravity / density	: 1623 kg/m ³
Solubility	: Insoluble in water. Substance sinks in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in tetrachloromethane. Soluble in hexane. Soluble in oils/fats. Water: 0.015 g/100ml Ethanol: soluble Ether: soluble Acetone: > 10 g/100ml
Log Pow	: 3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Log Kow	: No data available
Viscosity, kinematic	: 0.555 mm ² /s (20 °C)
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

Saturation concentration	: 127 g/m ³
VOC content	: 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

JOHNSEN'S BRAKE CLEANER 16 OZ.

Safety Data Sheet

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled. Harmful if inhaled.

JOHNSEN'S BRAKE CLEANER 16 OZ.	
LD50 oral rat	3835 mg/kg body weight
LD50 dermal rabbit	> 3000 mg/kg (Rabbit; Literature study; >10000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.58 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	5200 ppm/4h (Rat; Experimental value)

Tetrachloroethylene (127-18-4)	
LD50 oral rat	> 2000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 3835 mg/kg bodyweight; Rat; Equivalent or similar to OECD 401; Experimental value; 3005 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 3000 mg/kg (Rabbit; Literature study; >10000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	27.58 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	3786 ppm/4h (Rat; Experimental value)

Skin corrosion/irritation : Not classified
pH: 6.8 - 8.4

Serious eye damage/irritation : Causes eye irritation.
pH: 6.8 - 8.4

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

JOHNSEN'S BRAKE CLEANER 16 OZ.	
IARC group	2A

Tetrachloroethylene (127-18-4)	
IARC group	2A

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if inhaled.

Symptoms/injuries after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.

Symptoms/injuries after skin contact : May cause slight irritation . Itching. Skin rash/inflammation. Red skin.

Symptoms/injuries after eye contact : Irritation of the eye tissue. Inflammation/damage of the eye tissue. Redness of the eye tissue. Causes eye irritation.

Symptoms/injuries after ingestion : May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Dangerous for the environment.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.5/I.

JOHNSEN'S BRAKE CLEANER 16 OZ.	
LC50 fish 1	4.99 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Locomotor effect)
EC50 Daphnia 1	8.5 mg/l (48 h; Daphnia magna; Locomotor effect)
LC50 fish 2	13 mg/l (96 h; Lepomis macrochirus)

Tetrachloroethylene (127-18-4)	
LC50 fish 1	4.99 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Locomotor effect)
EC50 Daphnia 1	8.5 mg/l (48 h; Daphnia magna; Locomotor effect)
LC50 fish 2	13 mg/l (96 h; Lepomis macrochirus)
Threshold limit algae 1	816 mg/l (96 h; Selenastrum capricornutum; Cell numbers)
Threshold limit algae 2	3.64 mg/l (72 h; Chlamydomonas angulosa; Growth rate)

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Carbon Dioxide, Liquefied, Under Pressure (124-38-9)	
LC50 fish 1	35 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)
LC50 fish 2	60 - 240 mg/l (12 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)

12.2. Persistence and degradability

JOHNSEN'S BRAKE CLEANER 16 OZ.	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.06 g O ₂ /g substance
ThOD	0.39 g O ₂ /g substance
BOD (% of ThOD)	0.15 % ThOD

Tetrachloroethylene (127-18-4)	
Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	0.06 g O ₂ /g substance
ThOD	0.39 g O ₂ /g substance
BOD (% of ThOD)	0.15 % ThOD

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)	
Persistence and degradability	Biodegradability: not applicable. Not applicable (gas).
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

JOHNSEN'S BRAKE CLEANER 16 OZ.	
BCF fish 1	40 - 115 Salmo gairdneri (Oncorhynchus mykiss)
BCF fish 2	25.8 - 77.1 (8 weeks; Cyprinus carpio)
BCF other aquatic organisms 1	63 (Modiolus modiolus; Mantle, dry weight)
BCF other aquatic organisms 2	39 (Buccinum undatum; Muscles, dry weight)
Log Pow	3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Tetrachloroethylene (127-18-4)	
BCF fish 1	40 - 115 Salmo gairdneri (Oncorhynchus mykiss)
BCF fish 2	25.8 - 77.1 (8 weeks; Cyprinus carpio)
BCF other aquatic organisms 1	63 (Modiolus modiolus; Mantle, dry weight)
BCF other aquatic organisms 2	39 (Buccinum undatum; Muscles, dry weight)
Log Pow	3.40 (Experimental value; 2.53; Experimental value; Equivalent or similar to OECD 107; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Carbon Dioxide, Liquefied, Under Pressure (124-38-9)	
Log Pow	0.83 (Experimental value)
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

JOHNSEN'S BRAKE CLEANER 16 OZ.	
Surface tension	0.0313 N/m (20 °C)

Tetrachloroethylene (127-18-4)	
Surface tension	0.0313 N/m (20 °C)

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Ecology - waste materials : Avoid release to the environment.

JOHNSEN'S BRAKE CLEANER 16 OZ.

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): UN1950, Aerosols, 2.2, Limited Quantity
ICAO/IATA (air): UN1950, Aerosols, 2.2, Limited Quantity
IMO/IMDG (water): UN1950, Aerosols, 2.2, Limited Quantity

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Aerosols
poison, (each not exceeding 1 L capacity)
Department of Transportation (DOT) Hazard Classes : 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
Hazard labels (DOT) : 2.2 - Non-flammable gas
6.1 - Poison inhalation hazard



DOT Packaging Exceptions (49 CFR 173.xxx) : 306
DOT Packaging Non Bulk (49 CFR 173.xxx) : None
DOT Packaging Bulk (49 CFR 173.xxx) : None
Marine pollutant : Yes

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other : 48 - Stow "away from" sources of heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : Forbidden

SECTION 15: Regulatory information

15.1. US Federal regulations

JOHNSEN'S BRAKE CLEANER 16 OZ.	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Sudden release of pressure hazard
Tetrachloroethylene (127-18-4)	
Listed on the United States SARA Section 302 Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb Tetrachloroethylene
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

JOHNSEN'S BRAKE CLEANER 16 OZ.	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
Tetrachloroethylene (127-18-4)	
Listed on the Canadian DSL (Domestic Substances List)	

JOHNSEN'S BRAKE CLEANER 16 OZ.

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Tetrachloroethylene (127-18-4)	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.3; R40

Full text of R-phrases: see section 16

15.2.2. National regulations

Tetrachloroethylene (127-18-4)
Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

JOHNSEN'S BRAKE CLEANER 16 OZ.	
State or local regulations	Not for sale in California or New Jersey U.S. - Pennsylvania - RTK (Right to Know) List U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Tetrachloroethylene (127-18-4)
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL) Not for sale in California or New Jersey U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List U.S. - Rhode Island - Hazardous Substance List

SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information : None.

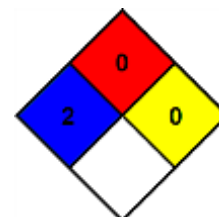
Full text of H-phrases: see section 16:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Carc. 1B	Carcinogenicity Category 1B
Compressed gas	Gases under pressure Compressed gas
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
H280	Contains gas under pressure; may explode if heated
H320	Causes eye irritation
H332	Harmful if inhaled
H350	May cause cancer
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard

Physical : 1 Slight Hazard

JOHNSEN'S BRAKE CLEANER 16 OZ.

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Personal Protection

: B

SDS US (GHS HazCom 2012) - TCC

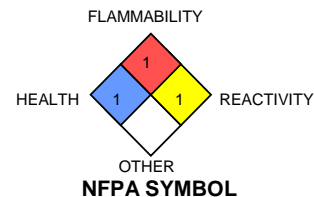
The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

Disclaimer: The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

Health	1
Flammability	1
Reactivity	1
PPI	B

MATERIAL SAFETY DATA SHEET

KOPR-KOTE THERMAL GRADE



HMIS SYMBOL

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: **KOPR-KOTE THERMAL GRADE**
 Chemical Family: Mixture
 Use: Lubricating grease anti-seize
 Manufacturer/Supplier: **Jet-Lube of Canada Ltd.**
 3820 – 97 Street
 Edmonton, Alberta
 Canada T6E 5S8
 Phone: (780) 463-7441 Fax: (780) 463-7454
 CCOHS: 1-800-668-4284

Emergency:

CANUTEC PH: (613) 996-6666 Cell: *666 TTY/TDD: 1-888-675-6863

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	Talc	Graphite	Copper	Molybdenum Disulphide
CAS NO.	14807-96-6	7782-42-5	7440-50-8	1317-33-5
WT %	3-7	7-13	5-10	1-5
OSHA PEL	2 mg/m ³ (dust)	2.5 mg/m ³	1 mg/m ³ (dust)	15 mg/m ³
ACGIH TLV	2 mg/m ³ (dust)	2 mg/m ³	1 mg/m ³ (dust)	10 mg/m ³
LD50	Not Available	10000 mg/kg	Not Available	>2000 mg/kg (oral, rat)
LC50	Not Available	64400 mg/m ³	Not Available	>2820 mg/m ³ (rat)
OTHER:	Not Applicable	Not Applicable	Not Applicable	Not Applicable

SECTION 3 - HAZARDS IDENTIFICATION

Route of Entry: Eyes, Inhalation, Ingestion, Skin
 Eyes: May cause irritation to eyes as a foreign object.
 Inhalation: Viscous nature may block breathing passages if inhaled.
 Ingestion: May cause diarrhea if ingested.
 Skin: May cause irritation after prolonged skin exposure, especially for persons with hyper sensitivity.

SECTION 4 - FIRST AID MEASURES

Eyes: Flush with water until all residual material is gone. If irritation persists, seek medical help.
 Ingestion: Do not induce vomiting. Wash out mouth. Contact a physician immediately.
 Skin: Remove by wiping or with a waterless hand cleaner, followed by washing with soap and water.
 Inhalation: Clear air passage. If breathing difficulty continues seek medical help.

SECTION 5 - FIRE FIGHTING MEASURES

Flammability: Nil at ambient temp
 Extinguishing Media: Use dry chemicals, foam, halon, CO₂
 Flash Point (OC): >293°C (560°F)
 Flammable Limits: Upper (Not Available) Lower (Not Available)
 Explosive Properties: Sensitivity to Static Discharge (Not Available)
 Sensitivity to Impact (Not Available)
 LEL – 0.9% UEL - 7%
 Auto-ignition Temp: >360°C (680°F)
 Hazardous Combustion Products: Oxides of carbon, smoke and irritating vapors as products of incomplete combustion.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spillage: Scoop up excess, then wipes down the affected area and pick up residue with diatomaceous earth to avoid a walking hazard.
 Environmental Precautions: Do not allow product to enter into drains.

SECTION 7 - HANDLING AND STORAGE

Handling Procedures: No special handling precautions are necessary. Do not pressurize, cut, heat or weld empty containers.
 Storage Requirements: Store in a cool, well ventilated place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:	Talc	Graphite	Copper	Molybdenum Disulphide
OSHA PEL	2mg/m ³	2.5mg/m ³	1mg/m ³	15mg/m ³
ACGIH TLV	2mg/m ³	2.0mg/m ³	1mg/m ³	10mg/m ³

Engineering Controls: If user's operation generates vapors or mists, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make up air should always be supplied to balance air removed by exhaust ventilation. Ensure eyewash station and safety shower are close to work station.
 Personal Protective Equipment (PPE's):
 Respiratory Protection: None required.
 Hand Protection: Protective gloves for hypersensitive persons.
 Eye Protection: Protective glasses if applied to moving parts.
 Body Protection: Protective Overall.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Paste Odor & Appearance: Light Petroleum & Dark Brown
Odor Threshold: Not Available Specific Gravity: 1.10 Typical
Vapor Pressure: <0.01 kPa Vapor Density: Not Available
Boiling Point: >370°C (698°F) Freezing Point: Not Available
pH: Neutral
Density: 1.10 g/cm³
Coefficient of Water/Oil Distribution: Not Available
Evaporation Rate (Butyl Acetate = 1.0): <0.01

SECTION 10 - STABILITY AND REACTIVITY

Stability: Chemically stable under normal conditions. No photoreactive agents.
Conditions to Avoid: Powerful sources of ignition and extreme temperatures.
Materials to Avoid: Strong acids and oxidizing agents.
Hazardous Decomposition Products: May release CO_x, smoke and irritating vapors when heated to decomposition.

SECTION 11 - TOXICOLOGICAL INFORMATION

Effects of Short-Term (Acute) Exposure: No adverse affects know.
Effects of Long-Term (Chronic) Exposure: Long term dermal application may produce possible skin irritation. Elevated temperatures or mechanical action may form vapors or fumes. Inhalation of oil mists or vapors may cause irritation of the upper respiratory tract.
Irritancy of Product: Products is not known to be an irritant.
Skin Sensitization: Product is not known to produce skin sensitization.
Respiratory Sensitization: Product is not known to produce respiratory sensitization.
Teratogenicity, Embryotoxicity & Reproductive Toxicity: Not Available
Mutagenicity: Product is not a known mutagen.
Carcinogen: Not classifiable as a human carcinogen IARC: Group 3 ACGIH: A4
Name of Synergistic Products/Effects: Not Available.

SECTION 12 - ECOLOGICAL INFORMATION

Possible Effects: May generate oil fractions that could act as a marine pollutant, but is highly unlikely.
Behavior: Product is non-reactive under ambient conditions. Bioaccumulation potential almost nil.
Environmental Fate: Highly unlikely to cause widespread contamination. May be toxic to marine and land organisms. Non-toxic to land and marine organisms.

SECTION 13 - DISPOSAL CONSIDERATIONS

Consult federal, provincial and local regulations for disposal of petroleum products.
Do not incinerate.

SECTION 14 - TRANSPORT INFORMATION

TDG (Canada): The mixture is not specifically listed in the Canadian Transportation of Dangerous Goods Regulations. The mixture is not regulated.
Land & Rail: Not Regulated
Marine: Regulated
Shipping Name: Environmentally Hazardous Substance, N.O.S (copper)
UN No.: UN3077
Packing Group: III
Classification: Class 9
Labeling Requirements: Class 9 and Marine Pollutant Labels
Placard Requirements: None
Labeling Requirements: Limited Quantities Label for containment less than LQI of 5L net Contents per containment.
Class 9 & Marine Pollutant label if >5L net contents per containment or large containment.
Placard Requirements: Limited Quantities – Non-Required
Large Containment – Class 9 & Marine Pollutant
Air Transport Requirements: Hazard Label – Miscellaneous
PG – III
Passenger and Cargo Aircraft Packing Instructions – 956
Max Net Qty/Package – 400 kg
Limited Quantity
Packing Instructions – Y956
Max Net Qty/Package – 30 kg G
Cargo Aircraft Only Packaging Instructions – 956
Max Net Qty/Package – 400kg

SECTION 15 - REGULATORY INFORMATION

WHMIS: Not Classified
DSL: All components listed
CPR Compliance: This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by those regulations.

SECTION 16 - OTHER INFORMATION

CPR - Controlled Product Regulations
DSL - Domestic Substance List

As of issue date, the information contained herein is accurate and reliable to the best of Jet-Lube of Canada Ltd.'s knowledge. Jet-Lube of Canada Ltd. does not warrant or guarantee its accuracy or reliability and shall not be liable for any loss or damage arising out of the use thereof. It is the users' responsibility to satisfy themselves that the information offered for their consideration is suitable for their particular use.

Prepared by: Jet-Lube of Canada Ltd. - Laboratory
Last Date of Revision: October 22, 2014



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product identifier	LPS® 1 (Aerosol)	
Version #	02	
Issue date	10-01-2014	
Revision date	10-26-2014	
Supersedes date	10-01-2014	
CAS #	Mixture	
Part Number	C30116	
Product use	An industrial lubricant designed to displace moisture from mechanical and electrical equipment, provide light-duty lubrication and short-term rust prevention.	
Manufacturer information	LPS Laboratories, a division of Illinois Tool Works, Inc. 4647 Hugh Howell Rd Tucker, Georgia 30084 United States www.lpslabs.com 1-800-241-8334/ 770-243-8800 Chemtrec 1-800-424-9300	
Supplier	Not available.	

2. Hazards Identification

Emergency overview	DANGER Flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame. Irritating to eyes and skin. May cause an allergic skin reaction. May cause drowsiness and dizziness.
Potential health effects	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.
Eyes	Contact with eyes may cause irritation. Avoid contact with eyes.
Skin	May cause sensitization by skin contact. May cause skin irritation. Avoid contact with the skin.
Inhalation	Intentional misuse by concentrating and inhaling the product can be harmful or fatal. May cause irritation of respiratory tract. Prolonged inhalation may be harmful.
Ingestion	Exposure by ingestion of an aerosol is unlikely. Irritating. May cause nausea, stomach pain and vomiting.
Signs and symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Potential environmental effects	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
CARBON DIOXIDE	124-38-9	1 - 5
Non-hazardous components	CAS #	Percent
Distillates Petroleum, Hydrotreated Light	64742-47-8	70 - 80
Distillates Petroleum Hydrotreated Med	64742-46-7	10 - 20
Sorbitan trioleate	26266-58-0	1 - 3
Calcium Sulfonate	61789-86-4	0.1 - 1

4. First Aid Measures

First aid procedures	
Inhalation	Move to fresh air. Get medical attention, if needed.

Skin contact	Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention if irritation develops and persists. Wash clothing separately before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
General advice	Take off contaminated clothing and shoes immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties	Flammable by WHMIS criteria. Heat may cause the containers to explode. Ruptured cylinders may rocket. Vapors may travel considerable distance to a source of ignition and flash back.
Extinguishing media	
Suitable extinguishing media	Powder. Alcohol resistant foam. Water spray. Dry chemicals. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Protection of firefighters	
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame.
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus. Structural firefighters protective clothing will only provide limited protection.
Fire fighting equipment/instructions	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
Explosion data	
Sensitivity to static discharge	None known.
Sensitivity to mechanical impact	None known.
Hazardous combustion products	May include oxides of carbon.

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Pay attention to flashback. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the MSDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Use water spray to reduce vapors or divert vapor cloud drift. Keep out of low areas. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Ventilate the area. Should not be released into the environment. Stop the flow of material, if this is without risk. Isolate area until gas has dispersed. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not re-use empty containers. Do not get this material in contact with eyes. Do not get this material in contact with skin. Avoid breathing mist or vapor. Avoid prolonged exposure. Do not get this material on clothing. When using do not eat or drink. Do not use in areas without adequate ventilation. Wash thoroughly after handling. Avoid release to the environment.

Storage

Contents under pressure. The pressure in sealed containers can increase under the influence of heat. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Store in a closed container away from incompatible materials. Store in a well-ventilated place. Keep out of the reach of children. Use care in handling/storage. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components

Components	Type	Value	Form
Distillates Petroleum, Hydroteated Light (CAS 64742-47-8)	TWA	5 mg/m3	Oil mist

US. ACGIH Threshold Limit Values

Components

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	STEL	54000 mg/m3
	TWA	30000 ppm 9000 mg/m3 5000 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components

Components	Type	Value	Form
CARBON DIOXIDE (CAS 124-38-9)	STEL	15000 ppm	
	TWA	5000 ppm	
Distillates Petroleum, Hydroteated Light (CAS 64742-47-8)	TWA	200 mg/m3	Non-aerosol.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	STEL	30000 ppm
	TWA	5000 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	STEL	54000 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
	TWA	30000 ppm 9000 mg/m3 5000 ppm

U.S. - OSHA

Components	Type	Value	Form
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)	PEL	5 mg/m3	Oil mist

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
CARBON DIOXIDE (CAS 124-38-9)	PEL	9000 mg/m3 5000 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Canada - British Columbia OELs: Skin designation

Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8) Can be absorbed through the skin.

Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection Avoid contact with the skin. Wear appropriate chemical resistant clothing.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection Chemical resistant gloves are recommended.

9. Physical & Chemical Properties

Appearance	Liquid.
Physical state	Gas.
Form	Aerosol.
Color	Amber.
Odor	Characteristic.
Odor threshold	Not available.
pH	Not applicable
Vapor pressure	< 0.05 mm Hg @ 20°C
Vapor density	> 1 (air = 1)
Boiling point	415.4 °F (213 °C)
Melting point/Freezing point	< -58 °F (< -50 °C)
Solubility (water)	Not soluble
Specific gravity	0.79 - 0.81 @ 20°C
Relative density	0.79 - 0.81 @ 20°C
Flash point	174.2 °F (79.0 °C) Tag Closed Cup (dispensed liquid)
Flammability limits in air, upper, % by volume	7 %
Flammability limits in air, lower, % by volume	0.6 %
Auto-ignition temperature	> 442.4 °F (> 228 °C)
VOC	0.4 % per US State & Federal Consumer Product Regulations

Evaporation rate	< 0.1 (BuAc = 1)
Viscosity	< 3.8 cSt @ 25°C
Percent volatile	95 - 96 %
Partition coefficient (n-octanol/water)	< 1
Other data	
Decomposition temperature	Not established
Flammability (solid, gas)	Flammable gas.
Heat of combustion	Not established

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Oxidizing agents.
Hazardous decomposition products	Carbon oxides.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Calcium Sulfonate (CAS 61789-86-4)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
	Rat	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	> 1.9 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	10000 - 20000 mg/kg
Distillates Petroleum Hydrotreated Med (CAS 64742-46-7)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Rat	7640 mg/m ³ , 4 Hours 1.72 mg/l, 4 Hours
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg > 2000 mg/kg, 24 Hours
<i>Inhalation</i>		
LC50	Cat	> 6.4 mg/l, 6 Hours
	Rat	> 7.5 mg/l, 6 Hours > 4.3 mg/l, 4 Hours > 0.1 mg/l, 8 Hours
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg

Components	Species	Test Results
METHYL SALICYLATE (CAS 119-36-8)		
Acute		
<i>Dermal</i>		
LD50	Guinea pig	0.7 ml/kg
<i>Oral</i>		
LD50	Dog	2.1 g/kg
	Guinea pig	1060 mg/kg
		1.06 g/kg
	Rabbit	2.8 g/kg
	Rat	887 mg/kg
		0.887 g/kg
Acute effects	Narcotic effects. May cause an allergic skin reaction.	
Sensitization	Not classified.	
Local effects	Irritating to eyes. Irritating to skin. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.	
Chronic effects	Prolonged inhalation may be harmful.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/irritation	Direct contact with eyes may cause temporary irritation.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Reproductive effects	This product is not expected to cause reproductive or developmental effects.	
Teratogenicity	Not available.	
Symptoms and target organs	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Exposure may cause temporary irritation, redness, or discomfort. Defatting of the skin. Rash. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Decrease in motor functions. Behavioral changes.	
Synergistic materials	Not available.	

12. Ecological Information

Ecotoxicological data

Components	Species	Test Results
Distillates Petroleum, Hydrotreated Light (CAS 64742-47-8)		
Aquatic		
Fish	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.9 mg/l, 96 hours
Ecotoxicity	Harmful to aquatic life with long lasting effects.	
Environmental effects	Harmful to aquatic life with long lasting effects.	
Aquatic toxicity	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.	
Persistence and degradability	Not inherently biodegradable.	
Partition coefficient		
LPS® 1 (Aerosol)	< 1	
METHYL SALICYLATE	2.55	
Other adverse effects	None known.	

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
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Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

14. Transport Information

TDG

UN number	UN1950
UN proper shipping name	AEROSOLS, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, Flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, MSDS and emergency procedures before handling.

IATA; IMDG; TDG



15. Regulatory Information

Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
WHMIS status	Controlled

WHMIS classification

A - Compressed Gas
 B5 - Flammable Aerosols
 D2B - Other Toxic Effects-TOXIC

WHMIS labeling**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information**Disclaimer**

LPS Laboratories cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Prepared by

Not available.

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Alternate Trade Names



MARVEL OIL CO., INC.
625 WILLOWBROOK CTR PKWY
WILLOWBROOK, IL 60527

SAFETY DATA SHEET

1. Product and Company Identification

1.1 Product Identifier

Product Name: Marvel Air Tool Oil
Product Code (SKU): MM85R1 (50100), MM080R (50093) - See Section 15 for discontinued SKU's

1.2 Relevant Identified Uses Of The Substance

Product Use: Engine Oil Additive – Fuel additive (EPA Registered)

1.3 Details of the Supplier of the SDS

Company Name: Marvel Oil Company, Inc.
Street Address: 625 Willowbrook Centre Parkway
City, State, Zip Code: Willowbrook, Illinois 60527

1.4 Emergency Telephone Numbers

Phone Number: 1(630)455-3700
Fax Number: 1(630)455-3868
Transportation: 1(800)424-9300 (CHEMTREC)
Medical Assistance: Call your local Poison Control Center

2. Hazard Identification:

2.1 Classification of the Substance or Mixture

Hazard Classification: Flammable liquid 3
Skin irritation 2
Reproductive Toxicity 2
Aspiration toxicity 1

2.2 Label Elements



Pictogram:

Signal Word: Danger

Hazard Statement: Flammable liquid and vapor. Causes skin irritation. Suspected of damaging fertility of the un-born child. May be fatal if swallowed and enters airways.

Precautionary Statement: Keep away from heat, sparks, open flames or hot surfaces. Do not smoke. Keep containers tightly closed. Ground all containers and receiving equipment. Use explosion proof electrical, ventilation, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static

discharge. Wear protective gloves, clothing, eye glasses and face shield. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. If exposed, get medical attention. If on skin or hair, remove immediately all contaminated clothing and launder before re-use. Wash skin with soap and water. If skin irritation occurs, get medical attention. If swallowed, immediately call a poison control center or doctor. Do NOT induce vomiting. Store in a well ventilated place. Dispose of contents and container in accordance with all local, state, national and international regulations.

2.3 Other Hazards

Description of additional HNOC: None

3. Information on Ingredients:

3.1 Substance not applicable

3.2 Mixture

<u>Component</u>	<u>CAS Number</u>	<u>Concentration (wt%)</u>
Petroleum Distillates (Hydrotreated Heavy Naphthenic)	64742-52-5	60-100%
Petroleum Distillates (Stoddard Solvent)	8052-41-3	10-30%
Tricresyl Phosphate	1330-78-5	0.1-1.0%
Ortho Dichlorobenzene	95-50-1	0.1-1.0%
Para Dichlorobenzene	106-46-7	<0.1%

4. First Aid Measures:

4.1 Description of First Aid Measures

Inhalation: Remove to fresh air and promote deep breathing. Get medical attention if effects persist or you feel un-well.

Skin: In case of skin contact, wash thoroughly with soap and water. Remove contaminated clothing and footwear. Launder clothing before re-use. Call a physician if irritation develops or persists.

Eyes: In case of eye contact, immediately flush eyes with plenty of water. Remove contact lenses if worn. If irritation persists, get medical attention

Ingestion: If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately call a poison control center or physician.

4.2 Most important symptoms and effects – acute and chronic

Inhalation: May cause respiratory tract irritation. Vapors may cause drowsiness or dizziness.

Skin: Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.

Eyes: May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.

Ingestion: May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment

Symptoms may not appear immediately. Seek medical attention if effects develop or persist and you feel un-well.

5. Fire Fighting Measures:

5.1 Extinguishing media

Carbon dioxide, dry chemical, and alcohol foam

5.2 Special hazards arising from the substance or mixture

CO₂, CO, and hydrocarbons

5.3 Advice for Fire Fighters

Keep up wind of fire. Wear full firefighting turn out gear (full bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water. See Section 8 for personal protection.

6. Accidental Release Measures:

6.1 Personal precautions, protective equipment, and emergency procedures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate all source of ignition.

6.2 Methods and materials for containment and clean up

For containment: Contain and absorb spill with inert material. Place in suitable container for disposal. Do not flush to sewer or allow to enter waterways. See section 8 for PPE.

For clean up: Take up material and place in a suitable container. Vapors may be heavier than air and may travel along the ground to a distant source of ignition. Provide adequate ventilation.

7. Handling and Storage

7.1 Precautions for safe handling

Keep away from source of ignition. Do not smoke. Take precaution to eliminate static discharge. Avoid contact with skin and eyes. Avoid breathing vapor or mist. Do not swallow. Do not eat or drink while handling. Wash hands with soap and water after handling. Use only non-sparking tools.

7.2 Conditions for safe storage including incompatibilities

Keep out of reach of children. Store in a well ventilated place. Do not store above 49°C (120°F).

7.3 Specific end uses

Shelf Life: Shelf life is considered to be 7 – 10 years when properly stored.

8. Exposure Control/Personal Protection:

8.1 Control parameters

<u>Exposure Limits</u> <u>8 hr TWA:</u>	<u>(OSHA PEL)</u>	<u>(ACGIH TWA)</u>
Petroleum Distillates (Hydrotreated Heavy Naphthenic)	not applicable	not applicable
Petroleum Distillates (Stoddard Solvent)	500 ppm	100 ppm
Tricresyl Phosphate	not applicable	not applicable
Ortho Dichlorobenzene	50 ppm	25 ppm
Para Dichlorobenzene	75 ppm	10 ppm

8.2 Exposure controls

Use adequate ventilation to keep exposure below recommended limits. Ensure that eye wash station and safety shower are close to work station.

Hand Protection Equipment: Wear chemical resistant gloves to prevent skin contact.

Eye Protection Equipment: Wear safety glasses or splash goggles to prevent eye contact.

Skin and Body Protection: Wear suitable protective clothing.

Respiration/Ventilation Protection Requirements: Provide good ventilation.

Ingestion Protection Requirements: Do not eat, drink or smoke while handling. Wash hands with soap and water after handling. Launder all clothing and foot wear before re-use.

9. Physical And Chemical Properties:

9.1 Information of basic chemical and physical properties

Physical Form:	thin liquid
Color:	clear red
Odor:	typical oily
Odor Threshold:	not available
pH:	not applicable – oil based product
Melting Point/Freeze Point:	-51°C (-60°F)
Initial Boiling Point:	not available
Flash Point (Seta Closed Cup):	53°C (128°F)
Flammability Limits:	Explosive Limits: Upper: not available Lower: not available
Evaporation Rate:	not available
Flammability Solid/Gas:	not applicable
Vapor Pressure:	not available
Vapor Density:	not available
Specific Gravity:	0.876
Solubility in Water:	insoluble
Auto Ignition Temperature:	not available
Partition coefficient (n/octonol/water):	not available
Viscosity (Kinimatic @ 100°C):	2.0 – 3.0 cSt

9.2 Other information

% NVM by Weight:	75.0%
% VOC Content (California):	24.92%

10. Stability and Reactivity:

10.1 Reactivity

Does not react under normal conditions

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Does not react under normal conditions

10.4 Conditions to avoid

Heat and incompatible materials

10.5 Incompatible materials

Strong oxidizers such as bleach and peroxides

10.6 Hazardous decomposition products

CO₂, CO and hydrocarbons

11. Toxicological Information:

11.1 Information on Toxicological effects

Marvel Mystery Oil

LD50 – Oral Rat >2000 mg/Kg
LD50 – Dermal Rabbit >2000 mg/Kg
LC50 – Inhalation Rat >20 mg/L (4 hr)

Petroleum Distillates Hydrotreated Heavy Naphthenic (64742-52-5)

LD50 – Oral Rat >5000 mg/Kg
LD50 – Dermal Rabbit >5000 mg/Kg
LC50 – Inhalation Rat >5 mg/L (4 hr)

Tricresyl Phosphate (1330-78-5)

LD50 – Oral Rat 3000 mg/Kg

o-Dichlorobenzene (95-50-1)

LD50 – Oral Rat 500 mg/Kg
LD50 – Dermal Rabbit >10000 mg/Kg
LC50 – Inhalation Rat 8.15 mg/L (4 hr)

p-Dichlorobenzene (106-46-7)

LD50 – Oral Rat >2000 mg/Kg
LD50 – Dermal Rabbit >2000 mg/Kg

Skin corrosion/irritation	Causes skin irritation
Serious eye damage/irritation	Based on available data, classification data are not met
Respiratory or skin sensitization	Based on available data, classification data are not met
Germ cell mutagenicity	Based on available data, classification data are not met
Carcinogenicity	Based on available data, classification data are not met
o-Dichlorobenzene (95-50-1)	IARC Group 3 – Not Classified
p-dichlorobenzene (106-46-7)	IARC Group 2B – Possible carcinogen to humans. NTP 1-Evidence of Carcinogenicity 3, Reasonably anticipated to be a human Carcinogen
Reproductive toxicity	Suspected of damaging fertility of un-born child
Specific target organs – single exposure	Based on available data, classification data are not met
Specific target organs – repeated exposure	Based on available data, classification data are not met

Aspiration hazard	May be fatal if swallowed and enters air ways.
Symptoms/injuries after inhalation	May cause respiratory tract irritation. Vapors may cause drowsiness and dizziness.
Symptoms/injuries after skin contact	Cause skin irritation. Symptoms may include redness, edema, drying, defatting, and cracking of skin.
Symptoms/injuries after eye contact	May cause temporary eye irritation. Symptoms may include discomfort or pain, excess blinking and tearing, with redness and swelling.
Symptoms/injuries after ingestion	May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea, and vomiting.

12. Ecological Information:

12.1 Toxicity

Not recommended for release into aquatic systems without treatment

12.2 Persistence and degradability

Not established

12.3 Bioaccumulative potential

Not established

12.4 Mobility in soil

Not established

12.5 Other adverse effects

None known

13. Disposal Considerations:

13.1 Waste treatment methods

RCRA Hazardous Waste:

Regulated as a hazardous waste (D-001 Ignitable).

Waste Disposal Method:

Dispose of in accordance with local, state and federal regulations

Waste Disposal Vessel:

Metal drums are recommended.

14. Transportation Information:

14.1 UN number

1268

14.2 UN Proper shipping name

Petroleum Distillate n.o.s.

14.3 Transport Hazard class

3

14.4 Packaging group

III

14.5 Marine Pollutant

No

14.6 Transportation in Bulk

Not applicable

14.7 Special precautions

Use limited quantities

15. Regulatory Information:

15.1 US Federal Regulations

TSCA Status: All ingredients are commercially available and listed by the manufacturer under TSCA.

15.2 Foreign Regulations

Canadian Status: All materials contained in this product are listed on the Canadian Domestic Substance List (DSL). Consult Turtle Wax, Inc. regarding status of ingredients.

European Union: All materials contained in this product are listed on EINECS.

AICS: All materials are registered for AICS (Australia)

15.3 State Regulations

State Regulatory Information:

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, contact the appropriate agency in your state.

California Prop 65:

<u>CAS Number</u>	<u>Concentration</u>	<u>State Code</u>
p-Dichlorobenzene (106-46-7)	<0.1%	Cancer

15.4 HIMS & NFPA Classifications

HIMS Classification:	Health	2
	Flammability	2
	Reactivity	0
NFPA Classification:	Health	2
	Flammability	2
	Reactivity	0

15.5 Discontinued SKU's All discontinued SKU's used this same formula.

MM080, MM085, MM85R, MM086, MM088R, MM089

16. Other Information:

Reason For Issue	Conversion to OSHA GHS SDS Format
Prepared By	James Heidel
Preparer's Title	Technical Director, R&D
SDS Administrator	Jean Mayszak - Technical Compliance Manager, R&D

Approval Date	March 10, 2015
Supersedes Date	December 27, 2012
Revision Number	#11

This information is, to the best of Turtle Wax, Inc.'s knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy oneself as to the suitability and completeness of such information for their own particular use.

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EVERCOAT®

SECTION 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier	100416 Metal Glaze
1.2 Relevant identified uses of the substance or mixture and uses advised against	Automotive repair
1.3 Details of the supplier of the safety data sheet	ITW Evercoat a division of Illinois Tool Works Inc. 6600 Cornell Road Cincinnati, OH 45242 513-489-7600
1.4 Emergency telephone number	CHEM TEL: +1-813-248-0591

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

Classified in accordance to (EC) No. 1272/2008	Respiratory Sensitisation Category 1
	Skin Sensitisation Category 1
	Skin Corrosion/Irritation Category 2
	Serious Eye Damage/Eye Irritation Category 2
	Flammable Liquid Category 3
	Hazardous to the aquatic environment - Chronic Category 3

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



Signal Word

Danger

Hazard Statements

H226 - Flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.

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Precautionary Statements

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H412 - Harmful to aquatic life with long lasting effects.

P233 - Keep container tightly closed.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P235 - Store in a well-ventilated place. Keep cool.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 - Avoid release to the environment.

Supplemental Hazard information (EU)

EUH208 - Contains Acid anhydride. May produce an allergic reaction.

2.3 Other hazards

No data available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical Name	%	CAS #	(EC) No 1272/2008	M Factor	SCL
Styrene	23.42	100-42-5	Acute Tox. 4; H332 Acute Tox. 4; H332 Acute Tox. 4; H332 Eye Irrit. 2; H319 Flam. Liq. 3; H226 Skin Irrit. 2; H315	No data available	No data available
Zinc Phosphate	1.19	7779-90-0	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	No data available	No data available
Acid anhydride	1.18	85-43-8	Aquatic Chronic 3; H412 Eye Dam. 1; H318 Resp. Sens. 1; H334 Skin Sens. 1; H317 EUH208	No data available	No data available

For full text of H-statements; See Section 16

SECTION 4 First aid measures

4.1 Description of first aid measures

Inhalation

Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual

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administer oxygen. Get medical attention immediately. Get medical attention immediately. Keep the victim warm and quiet. If the victim has stopped breathing open airway, loosen collar and belt, and administer artificial respiration. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice.

Eye Contact Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

Skin Contact Wash with soap and water. Get medical attention if irritation develops or persists. Remove contaminated clothing and continue flushing with water. Seek medical advice if symptoms persist. Wash clothing before reuse.

Ingestion Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this MSDS. Do not induce vomiting unless directed to do so by medical personnel.

Self protection of the first aider No data available

4.2 Most important symptoms and effects, both acute and delayed

Symptom See Section 4.1

4.3 Indication of any immediate medical attention and special treatment needed

Note to Doctor No additional first aid information available

SECTION 5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water may be ineffective but water spray can be used to extinguish a fire if swept across the base of the flames. Water can absorb heat and keep exposed material from being damaged by fire. Carbon dioxide Dry chemical

Unsuitable extinguishing media No data available

5.2 Special hazards arising from the substance or mixture

Fire and/or Explosion Hazards Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back.

Hazardous Combustion Products Carbon dioxide, Carbon monoxide, Phthalic anhydride, Hydrocarbons

5.3 Advice for firefighters

Fire Fighting Methods and Protection Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a

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protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For Non-emergency Personnel

Non-emergency personnel should be kept clear of the area.

For emergency responders

No health effects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section VIII of this MSDS

6.2 Environmental precautions

No data available

6.3 Methods and material for containment and cleaning up

No special spill clean-up considerations. Collect and discard in regular trash. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area. Use an inert absorbent such as sand or vermiculite. Place in properly labeled closed container.

6.4 Reference to other sections

Refer to section 13 for disposal information.

SECTION 7 Handling and storage

7.1 Precautions for safe handling

Mildly irritating material. Avoid unnecessary exposure. Do not get in eyes, on skin and clothing Wash hands before eating Use with adequate ventilation Avoid contact with material, avoid breathing dusts or fumes, use only in a well ventilated area.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed. Store in a cool dry place Keep away from heat, sparks, and flame Store in a tightly closed container

7.3 Specific end use(s)

Automotive repair

SECTION 8 Exposure controls/personal protection

Occupational Exposure limit values

Chemical Name	ACGIH TLV-TWA	ACGIH STEL	IDLH
Styrene	20 ppm	40 ppm STEL; 170 mg/m ³ STEL	No data available

8.2 Exposure controls

Appropriate engineering controls

No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Individual protection measures, such as personal protective equipment

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Eye and face protection	Wear chemically resistant safety glasses with side shields when handling this product. Do not wear contact lenses. Wear goggles if dusts can reach the exposure limit.
Skin Protection	
Hand protection	No information available
Other skin protection	Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene and wear a barrier cream and/or impervious surgical style gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.
Respiratory Protection	Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Follow a respiratory protection program that meets 29 CFR 1910.134 and ANSI Z88.2 requirements whenever work place conditions warrant the use of a respirator. Respiratory protection may be required in addition to ventilation depending upon conditions of use.
Thermal hazards	No data available
Environmental exposure controls	No data available

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Liquid
Colour	Green
Odour	Aromatic
Odour Threshold	No data available
pH	Neutral
Melting point / Freezing point (°C)	-30.6
Initial boiling point and boiling range (°C)	145
Flash Point (°C)	31
Evaporation Rate	No data available
Flammability (Solid, gas)	No data available
Upper/lower flammability or explosive limits	
Upper Flammable/Explosive Limit, % in air	6.1
Lower Flammable/Explosive Limit, % in air	1.1
Vapour Pressure	5.0 mmHg @ 68 °F / 20 °C (Styrene)
Vapour Density	Heavier than air. Vapors that evolve from this product will tend to

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	settle and accumulate near the floor.
Relative Density	0.96
Solubility(ies)	Minimal; 1-9%
Partition coefficient: n-octanol/water	1.36
Autoignition Temperature (°C)	490
Decomposition Temperature	No data available
Viscosity	20,800 - 25,600
Explosive properties	No data available
Oxidizing properties	No data available
9.2 Other information	No data available

SECTION 10 Stability and reactivity

10.1 Reactivity	No data available
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	No data available
10.4 Conditions to avoid	Contamination
10.5 Incompatible materials	Peroxides; Strong acids; Strong oxidizing agents
10.6 Hazardous decomposition products	Carbon dioxide Carbon monoxide Hydrocarbons

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Acute Toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

pH	Neutral
----	---------

Classification is based on pH and the components listed in Section 3.

Serious eye damage/irritation

pH	Neutral
----	---------

Classification is based on pH and the components listed in Section 3.

Respiratory or skin sensitization

EUH208 - Contains Acid anhydride. May produce an allergic reaction.

Classification has been based on toxicological information of the components in Section 3.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

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Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12 Ecological information

12.1 Toxicity No data available

Ecotoxicity Data

Chemical Name	CAS Number	Aquatic EC50 Crustacea	Aquatic ERC50 Algae	Aquatic LC50 Fish
No data available				

12.2 Persistence and degradability No data available

12.3 Bioaccumulative potential No data

12.4 Mobility in soil No data available

12.5 Results of PBT and vPvB assessment No data available

12.6 Other adverse effects No data available

12.7 Additional information No data available

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Waste Description for Spent Product Spent or discarded material is a hazardous waste.

Disposal Methods Dispose of by incineration following Federal, State, Local, or Provincial regulations.

**Waste Disposal Code(s)
(European Waste Catalogue)** W080111

SECTION 14 Transport information

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Ground:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT
14.3 Transport hazard class(es): 3
14.4 Packing group: III
Exemptions: Limited Quantity

Air:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT
14.3 Transport hazard class(es): 3
14.4 Packing group: III

Water:

14.1 UN number: UN3269
14.2 UN proper shipping name: POLYESTER RESIN KIT
14.3 Transport hazard class(es): 3
14.4 Packing group: III
Exemptions: Limited Quantity

14.5 Environmental hazards: Yes
14.6 Special precautions for user: No data available
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: No data available

SECTION 15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemical Name	EINECS	SVHC
Styrene	Y	N
Zinc Phosphate	Y	N
Acid anhydride	Y	N
Acetone	Y	N
Diacetone alcohol	Y	N
1, 4 Benzenediol, 2,3,5-Trimethyl-	Y	N
1,4-Naphthoquinone	Y	N
p-Toluidene	Y	N
Styrene Oxide	Y	N

15.2 Chemical safety assessment No data available

SECTION 16 Other information

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SDS Abbreviations:	No data available
References:	No data available
Hazard phrase(s) referenced in section 3	H225 - Highly flammable liquid and vapour. H226 - Flammable liquid and vapour. H301 - Toxic if swallowed. H302 - Harmful if swallowed. H311 - Toxic in contact with skin. H312 - Harmful in contact with skin. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H319 - Causes serious eye irritation. H331 - Toxic if inhaled. H332 - Harmful if inhaled. H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled. H336 - May cause drowsiness or dizziness. H350 - May cause cancer. H351 - Suspected of causing cancer. H400 - Very toxic to aquatic life. H410 - Very toxic to aquatic life with long lasting effects. H412 - Harmful to aquatic life with long lasting effects.
Precautionary Statements	
Prevention	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P233 - Keep container tightly closed. P240 - Ground/bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting equipment. P242 - Use only non-sparking tools. P243 - Take precautionary measures against static discharge. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.

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Response	<p>P272 - Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 - Avoid release to the environment.</p> <p>P280 - Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P284 - Wear respiratory protection.</p> <p>P302+P352 - IF ON SKIN: Wash with plenty of soap and water.</p> <p>P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P307+P311 - IF exposed: Call a POISON CENTER or doctor/physician.</p> <p>P308+P313 - IF exposed or concerned: Get medical advice/attention.</p> <p>P314 - Get medical advice/attention if you feel unwell.</p> <p>P321 - Specific treatment (see on this label).</p> <p>P332+P313 - If skin irritation occurs: Get medical advice/attention.</p> <p>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P337+P313 - If eye irritation persists: Get medical advice/attention.</p> <p>P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.</p> <p>P363 - Wash contaminated clothing before reuse.</p> <p>P370+P378 - In case of fire: Use for extinction.</p>
Storage	<p>P233 - Keep container tightly closed.</p> <p>P403+P235 - Store in a well-ventilated place. Keep cool.</p> <p>P405 - Store locked up.</p>
Disposal	<p>P501 - Dispose of contents/container in accordance with local/regional/national/international regulation for hazardous wastes.</p>

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstances

MATERIAL SAFETY DATA SHEET

Lloyds Laboratories Inc.

Moovit (Aerosol) Part # 11008, 11010, 11014

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOOVIT **PRODUCT USE:** Penetrating Lubricant.
MANUFACTURER: Lloyds Laboratories Inc. **SUPPLIER:** Lloyds Laboratories Inc.

ADDRESS: 613 Neal Drive, Peterborough, Ontario, K9J 6X7 **ADDRESS:** 613 Neal Drive, Peterborough, Ontario, K9J 6X7

EMERGENCY #: 1 800 361-6766 **EMERGENCY #:** 1 800 361-6766

SECTION II: INFORMATION ON INGREDIENTS

Ingredients	CAS#	Wt%	OSHA-TWA	ACGIH-TWA	LD ₅₀
Propane	74-98-6	7-13	1800 mg/m ³	4508 mg/m ³	Not available
Isobutane	75-28-5	7-13	Not available	Not available	Vapour LC 50 Acute: 0.0057 ppm 0.25 hours Rat.

SECTION III: HAZARDOUS IDENTIFICATION

Route of Entry: Eye, skin contact, ingestion.
Potential Health Effects:
Eye Contact: May cause irritation to eyes.
Skin Contact: May cause irritation upon repeated/prolonged contact.
Inhalation: May cause slight nose, throat and respiratory tract irritation.
Ingestion: May cause irritation to mouth, esophagus and stomach. May cause gastric tract upset and/or damage.

Chronic Effects:
Carcinogenicity: No ingredients listed IARC or NTP or ACGIC. Non hazardous by WHMIS/OSHA criteria.

Teratogenicity, Mutagenicity, Reproductive Effects: The ingredients in this product were found not to be mutagenic when tested by the Ames Assay, (OECD Guidelines for chemical testing, sec.471).
Skin: Repeated or prolonged exposures to dilutions can cause drying, defatting and dermatitis.

MATERIAL SAFETY DATA SHEET

Lloyds Laboratories Inc.

Moovit (Aerosol) Part # 11008, 11010, 11014

SECTION IV: FIRST AID MEASURES

Eye Contact: Immediately flush with water for 15 minutes. Holding eyelids open during flushing. If irritation persists, repeat flushing and obtain medical attention immediately.

Skin Contact: Flush with water. Remove contaminated clothing and launder before reuse.

Inhalation: Move victim to fresh air. If conscious, have victim take deep, slow breaths. Seek medical attention if symptoms persist.

Ingestion: DO NOT INDUCE VOMITING. Rinse mouth with water, and then drink one glass of water. Seek medical attention. Do not give anything to victim if unconscious or convulsing.

SECTION V: FIRE FIGHTING MEASURES

Flammability: NFPA 30B Level 1 Aerosol.

Flash Point deg (C,TCC):

Means of Extinction: Use water spray to keep fire exposed containers cool. Dry chemicals, carbon dioxide. Fight fire from protected location or maximum possible distance.

Special Fire Hazards: Fire fighters should wear self contained breathing apparatus as for surrounding fire. Aerosol product - containers may rocket or explode.

Autoignition temperature: Not applicable.

Flame projection: 28.0 cm.

Sensitivity to static discharge: Not applicable.

Unusual Fire and Explosion Hazards: Aerosol product - containers may rocket or explode.

Hazardous decomposition products: Oxides of carbon, oxides of nitrogen.

SECTION VI: ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures: Before attempting clean up, refer to the hazard data provided above. Small spills may be absorbed with non reactive absorbent and placed in suitable, covered, labeled container. For large quantities, dispose of in accordance with local, provincial/ state or federal regulations. For large spills prevent from entering sewers and waterways. For large spills provide diking to prevent spreading.

SECTION VII: HANDLING AND STORAGE

Storage Requirements: KEEP OUT OF REACH OF CHILDREN.
Store in a dry, cool and well ventilated area. Protect from freezing. Do not puncture or incinerate. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 120°F or 50°C. Do not pierce or burn, even after use.

MATERIAL SAFETY DATA SHEET

Lloyds Laboratories Inc.

Moovit (Aerosol) Part # 11008, 11010, 11014

SECTION VIII: EXPOSURE CONTROL/PERSONAL PROTECTION

Gloves: Not normally required. Use Viton or Nitrile gloves to avoid prolonged or skin contact repeated.

Eye Protection: Not normally required, if eye contact is possible chemical splash goggles are recommended.

Respiratory Protection: Not normally required if good ventilation is maintained.

Other Protective Equipment: As required by employer code. Eye bath, safety shower, protective clothing.

Engineering Controls: General ventilation normally required.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Aerosol	Odour and Appearance: Odourless, Opaque Purple		Odour Threshold	Not applicable
Vapour Pressure (mm Hg):	4394.5	Vapour Density (Air=1)	Not applicable	Boiling Point (°C)	Not applicable
% Volatile (Wt %):	7-13 %	Solubility in water(20°C)	None	Freezing Point (°C)	-50°C
pH	Not applicable	Specific Gravity	.85	Evaporation Rate (nBuAc=1)	Not applicable
Coeff. Water/Oil Dist.	Not applicable				

SECTION X: STABILITY AND REACTIVITY

Conditions for Chemical Instability: Stable under normal conditions. Excessive heat or contamination could cause decomposition.

Incompatible Materials: Reducing agents, strong acids, strong caustics, iron and other metals.

Hazardous Decomposition Products: Oxides of carbon, Oxides of Nitrogen when heated.

SECTION XI: TOXICOLOGICAL INFORMATION

LD 50 values for individual components see section II.
Skin Sensitization (OECD Sec. 406) Non sensitizing.

SECTION XII: ECOLOGICAL INFORMATION

No data available on the adverse effects of this product on the environment.

SECTION XIII: DISPOSAL CONSIDERATIONS

Dispose of in accordance to all local, provincial/state and federal regulations.

MATERIAL SAFETY DATA SHEET

Lloyds Laboratories Inc.

Moovit (Aerosol) Part # 11008, 11010, 11014

SECTION XIV: TRANSPORTATION

T.D.G. Classification: Please refer to Bill of lading for up to date shipping information.
D.O.T. Classification: Please refer to Bill of lading for up to date shipping information.

SECTION XV: REGULATORY INFORMATION

Occupational Health and Safety

Regulations:

WHMIS Class:

Class A Compressed Gas/Class B-5 Flammable aerosol.

OSHA & WHMIS:

MSDS prepared pursuant to the Hazard Communication Standard (CFR29.1920.1200) and Canadian WHMIS regulations.

Environmental Regulatory Lists:

SARA – Section 313 (Toxic Chemical Release Reporting) 40 CFR 372:

None of these ingredients are listed.

CERCLA – Section 102 (Reportable Quantity) 40 CFR 302:

Butane, Propane.

RCRA 40 CFR 261 (Subpart D):

None of the ingredients are listed.

CLEAN WATER ACT – Section 311 (Reportable Qty) 40 CFR 116:

None of these ingredients are listed.

CLEAN AIR ACT – Section 312 (List of Hazardous Pollutants) 40 CFR 63 (Subpart C):

Flammable substances Propane, Isobutane.

National Pollutant Release Inventory: Toxic Substances Control Act (TSCA):

None of these ingredients are listed.

All ingredients are registered on the Chemical Substances Inventory.

Canadian Domestic Substance List (DSL):

All ingredients are registered on the DSL.

SECTION XVI: OTHER INFORMATION

Date: June 7, 2013	Prepared By: Technical Services Group	Telephone: 1 800 361-6766
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Disclaimer:

Information for this material safety data sheet was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond the control of supplier, it is assumed that users of this material; have been fully trained according to the mandatory requirements of WHMIS. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries for consequential damages, which may result from the use or reliance on any information contained in this form. If user requires independent information on ingredients in this or other material, we recommend contact with the Canadian Centre for Occupational Health and Safety (CCOHS) in Hamilton, Ontario (905-572-4400) or CSST in Montreal, Quebec (514-873-3990).

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C H R Y S L E R
HAZARD COMMUNICATION SHEET

5182604 DRAFT PART/COMMTY CD: 0VU01463
PREPARATION DATE: 03-09-10 STNDRD: N/AV SUPPLIER: 86056 MFGR: 03500
OSHA HAZ: YES HAZWOPER HAZ: YES CONS PROD/HAZ SUB: YES

*** SECTION 01 - PRODUCT INFORMATION ***

MFG BY: PART SALES & SERVICE FCA US LLC
26311 LAWRENCE AVE CENTERLINE MI 48015
EMERGENCY PHONE: 248-512-8002 AFTER HOURS: 248-576-8888
DIST BY: PART SALES & SERVICE FCA US LLC
26311 LAWRENCE AVE CENTERLINE MI 48015
EMERGENCY PHONE: 248-512-8002 AFTER HOURS: 248-576-8888
FCA US LLC INDUSTRIAL HYGIENE: 248-512-8260 AFTER HOURS: 248-576-8888
BRAND NAME: MOPAR MULTI-PURPOSE LUBE
MFG ID : N/AV
DESCRIPTION: LUBRICANT-POWERTRAIN,BODY

*** SECTION 02 - INGREDIENTS ***

HAZARDOUS INGREDIENTS: PERCENT
COMM NAME / CAS NO & CHEM NAME: BY WGT OSHA ACGIH CHRYS UNITS NOTATIONS
EXISTING INGREDIENTS
STODDARD SOLVENT 60-100 W 100 100 100 PPM
008052-41-3 STODDARD SOLVENT (8C
VM & P NAPHTHA 10-30 W 300 300 100 PPM
008032-32-4 MINERAL SPIRITS L 400 N/AP 400 A3
PETROLEUM PRODUCTS, LIQUEFIED GAS 10-30 W 1000 1000 1000 PPM
068476-86-8 PETROLEUM GASES, LIQ
GENERIC DESC: MULTIPURPOSE LUBRICANT CONTAINING MAINLY MINERAL SPIRITS.

*** SECTION 03 - PHYSICAL DATA ***

BOILING POINT : N/AV F SOLUB IN WATER: NEGLIGIBLE (< 0.1%)
VAPOR PRESSURE: N/AV EVAP. RATE: N/AV REF: N/AV
VAPOR DENSITY : > 1.000 AT N/AV SPECIFIC GRAVITY: > 0.800 AT 59 F
PH AT FULL STRENGTH: N/AV PH AT REC. DILUT: N/AV
%VOLATILE BY VOL : N/AV VOLATILE ORGANIC COMP: N/AV N/AV
ODOR THRESHOLD: N/AV PPM FOR % POPULATION
FREEZING POINT: N/AV COEFF. OF WATER/OIL DIST: N/AV
APPEARANCE & ODOR: STATE: LIQUID..... ODOR: HYDROCARBON..... COLOR:
YELLOW..... APPEARANCE: CLEAR.....

*** SECTION 04 - FIRE AND EXPLOSION DATA ***

FLASH POINT: 104 F PMCC IGN TEMP: N/AV LEL: N/AV UEL: N/AV

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SPECIAL FIRE & EXPLOSION HAZARDS:

CONTENTS UNDER PRESSURE. MAY EXPLODE IF EXPOSED TO HEAT OR FLAME. MATERIAL IS FLAMMABLE. DO NOT LET IT RUN-OFF TO WATERCOURSE. REACTS ON CONTACT WITH OXIDIZERS. MIST OR AEROSOL ACCUMULATIONS MAY FLASH IF IGNITED. VAPOR/GAS IS HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND CAUSE FLASH FIRES OR BE IGNITED EXPLOSIVELY BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, OR OTHER SOURCES OF IGNITION AT LOCATIONS DISTANT FROM THE MATERIAL HANDLING POINT.

EXTINGUISHING MEDIA:

CARBON DIOXIDE, DRY CHEMICAL, FOAM OR WATER FOG OR ALCOHOL FOAM.

SPECIAL FIREFIGHTING PROCEDURES:

USE PROTECTIVE CLOTHING. USE SELF-CONTAINED BREATHING APPARATUS. AVOID BREATHING VAPOR OR FUMES. USE WATER TO COOL FIRE EXPOSED CONTAINERS. WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE.

SENSITIVE TO MECHANICAL IMPACT?: YES SENSITIVE TO STATIC DISCHARGE?: YES

HAZARDOUS COMBUSTION PRODUCTS:

ORGANIC COMPOUNDS, CARBON MONOXIDE AND CARBON DIOXIDE.

FLAME PROJECTION: > 15 IN

*** SECTION 05 - HEALTH HAZARD DATA ***

EFFECTS OF OVEREXPOSURE - ACUTE & CHRONIC:

<<---INHALATION--->> VAPOR AND/OR MIST MAY PRODUCE THE FOLLOWING: IRRITATION OF UPPER RESPIRATORY TRACT AND MAY BE IRRITATING TO EYES, NOSE, AND THROAT. HIGH CONCENTRATION MAY PRODUCE THE FOLLOWING: ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY HEADACHE, DIZZINESS, STAGGERING, CONFUSION, UNCONSCIOUSNESS OR COMA. <<---SKIN CONTACT--->> LIQUID AND/OR MIST MAY PRODUCE THE FOLLOWING: MINOR IRRITATION TO SLIGHT BURNING OF SKIN. <<---EYE CONTACT--->> LIQUID AND/OR MIST MAY PRODUCE THE FOLLOWING: IRRITATION AND TEARING. <<---INGESTION--->> MAY BE HARMFUL IF SWALLOWED. CAUSES A BURNING SENSATION IN THE MOUTH AND STOMACH AND MUCOUS MEMBRANE IRRITATION. MAY CAUSE UPSET STOMACH, NAUSEA, VOMITING AND DIARRHEA. ASPIRATION (GOING DOWN THE WRONG PIPE INTO THE WINDPIPE) MAY CAUSE THE FOLLOWING: CHEMICAL PNEUMONITIS (AN INFLAMMATION OF THE LUNGS SIMILAR TO PNEUMONIA, WHICH IS CAUSED BY GETTING THE LIQUID FORM OF A CHEMICAL INTO THE LUNGS). <<---SPECIAL TOXICITY--->> HIGH CONCENTRATION MAY PRODUCE THE FOLLOWING: CARDIAC ABNORMALITIES, DAMAGE TO THE NERVOUS SYSTEM AND/OR BRAIN DAMAGE.

EMERGENCY FIRST AID PROCEDURES:

<<---INHALATION--->> REMOVE TO FRESH AIR AT ONCE. IF PULMONARY SYMPTOMS DEVELOP, CONSULT A PHYSICIAN. IF BREATHING IS DIFFICULT, GIVE OXYGEN. ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED. CARDIAC RESUSCITATION IF INDICATED. <<---SKIN CONTACT--->> REMOVE CONTAMINATED CLOTHING. WIPE OFF WITH A CLOTH. IMMEDIATELY FLUSH CONTAMINATED AREA WITH LARGE AMOUNTS OF WATER. WASH WITH SOAP AND WATER. IF CONDITION PERSISTS, CONSULT A PHYSICIAN. <<---EYE CONTACT--->> REMOVE CONTACT LENSES TO ASSURE COMPLETE FLUSHING. RINSE EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER, OCCASIONALLY LIFTING

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BOTH UPPER AND LOWER LIDS. CONTINUE FOR 15 MINUTES. IF CONDITION PERSISTS, CONSULT A PHYSICIAN. <<---INGESTION--->> DO NOT INDUCE VOMITING. IF CONSCIOUS, GIVE LARGE QUANTITIES OF WATER OR MILK. CONTACT A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT MAKE UNCONSCIOUS PATIENT VOMIT. IF VOMITING OCCURS, KEEP HEAD BELOW HIPS TO PREVENT LIQUID FROM SEEPING INTO THE WINDPIPE AND LUNGS.

*** SECTION 06 - REACTIVITY DATA ***

STABILITY: STABLE

CONDITIONS TO AVOID:

HIGH TEMPERATURE, SPARKS OR OPEN FLAME.

MATERIALS TO AVOID:

STRONG OXIDIZING AGENTS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

POLYMERIZATION CONDITIONS TO AVOID:

POLYMERIZATION WILL NOT OCCUR.

HAZARDOUS DECOMPOSITION PRODUCTS:

ORGANIC COMPOUNDS, CARBON MONOXIDE AND CARBON DIOXIDE.

*** SECTION 07 - SPILL OR LEAK PROCEDURES ***

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

WIPE UP OR SCRAPE UP SMALL SPILL OR RESIDUE. ABSORB ON AN INERT MATERIAL. DISCARD INTO SEALED CONTAINERS FOR DISPOSAL. ELIMINATE ALL IGNITION SOURCES (FLAMES, HOT SURFACES AND ELECTRICAL, STATIC OR FRICTIONAL SPARKS). WEAR PROTECTIVE CLOTHING. WEAR RESPIRATORY PROTECTION. AVOID BREATHING VAPORS. VENTILATE AREA. DO NOT FLUSH INTO SEWER SYSTEM. LARGE SPILL-CONTAIN WITH DIKE. PUMP INTO STORAGE CONTAINER.

WASTE DISPOSAL METHODS:

DISPOSE OF IN A MANNER CONSISTENT WITH STATE, PROVINCIAL, LOCAL, AND FEDERAL REGULATIONS.

*** SECTION 08 - SPECIAL PROTECTION ***

RESPIRATORY PROTECTION:

NO SPECIAL PROTECTION NEEDED UNDER NORMAL CONDITIONS. TO MAINTAIN THE TLV, THE FOLLOWING MAY BE NEEDED: ORGANIC VAPOR RESPIRATOR.

VENTILATION TYPE:

TO MAINTAIN THE TLV, THE FOLLOWING MAY BE NEEDED: GOOD GENERAL VENTILATION AND/OR LOCAL EXHAUST VENTILATION. VENTILATION EQUIPMENT SHOULD BE EXPLOSION PROOF. VAPORS ARE HEAVIER THAN AIR. VENTILATION SHOULD DRAW FROM FLOOR LEVEL TO BE EFFECTIVE.

PROTECTIVE GLOVES:

RECOMMENDED. IMPERMEABLE GLOVES.

EYE PROTECTION:

RECOMMENDED. SAFETY GLASSES WITH SIDE SHIELDS.

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OTHER PROTECTIVE EQUIPMENT:

TO AVOID PROLONGED SKIN CONTACT, USE THE FOLLOWING: APRON (SAME MATERIAL AS GLOVES) AND BOOTS (SAME MATERIAL AS GLOVES)-WEAR LONG SLEEVES. A SAFETY SHOWER MAY BE NEEDED FOR EMERGENCY SITUATIONS. AN EYE WASH MAY BE NEEDED FOR EMERGENCY SITUATIONS.

*** SECTION 09 - SPECIAL PRECAUTIONS ***

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE:

STORE IN A COOL, DRY PLACE. STORE IN A WELL VENTILATED AREA. USE WITH ADEQUATE VENTILATION. KEEP FROM HEAT, SPARK OR OPEN FLAMES. DO NOT PUNCTURE, DROP OR SLIDE CONTAINERS. REACTS WITH OXIDIZERS. KEEP VALVE PROTECTION CAP IN PLACE EXCEPT WHEN USING CYLINDER. OPEN CYLINDER VALVE SLOWLY. KEEP CONTAINER UPRIGHT AND SECURED AT ALL TIMES. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED, SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID). DO NOT SMOKE OR EAT WHEN HANDLING THIS SUBSTANCE; WASH THOROUGHLY AFTER USING. REMOVE CONTAMINATED CLOTHING AND LAUNDRY BEFORE REUSE. MAINTAIN GOOD HOUSEKEEPING AND HYGIENIC PRACTICES. TAKE "NO SMOKING" PRECAUTIONS.

OTHER PRECAUTIONARY MEASURES:

AVOID BREATHING MIST. AVOID BREATHING VAPOR. AVOID EYE CONTACT. AVOID PROLONGED OR REPEATED SKIN CONTACT. AVOID INGESTION. ASPIRATION OF MATERIAL INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS, WHICH CAN BE FATAL. MAINTAIN GOOD HOUSEKEEPING AND HYGIENIC PRACTICES.

*** SECTION 10 - WASTE LABELING INFORMATION ***

DOT LABELING INFORMATION (49 CFR 100-199)

ID#: UN1950 ERG#: 126 HAZARD CLASS - PRMY: 2.1 PACKING GROUP: N/AP
PROPER SHIPPING NAME: WASTE AEROSOLS, FLAMMABLE
LABEL(S) REQUIRED: FLAMMABLE GAS

RCRA INFORMATION (40 CFR 122-124, 260-265)

WASTE CODE(S)/HZD: D001/I | MICH:

THE ABOVE INFORMATION IS BASED ON DATA PROVIDED BY SUPPLIERS. TESTING IS NOT NEEDED

Material Safety Data Sheet

Section 1: Material Identification and Use:

MATERIAL NAME/IDENTIFIER: ONE STEP HAND SANITIZER (ALCOHOL)

MANUFACTURER'S NAME	Belvedere International Inc.	CHEMICAL NAME:	Compounded Product
STREET ADDRESS:	5675 Keaton Crescent	CHEMICAL FAMILY:	Not Applicable
CITY:	Mississauga	CHEMICAL FORMULA:	Not Applicable
PROVINCE:	Ontario	MOLECULAR WEIGHT:	Not Applicable
POSTAL CODE:	L5R 3G3	TRADE NAME:	One Step
EMERGENCY PHONE NO.	(905) 568-0700	MATERIAL USE:	Sanitizer

HAZARDS	
HEALTH	2
FLAMMABILITY	3
REACTIVITY	0
PERSONAL PROTECTION	N

Section 2: Hazardous Ingredients:

HAZARDOUS INGREDIENTS	%	UN, NA, CAS NO.	LD-50(SPECIES & ROUTE)	LC-50 (SPECIES & ROUTE)
Ethyl Alcohol	62 %	CAS #64-17-5 UN # 1170	Not Available	Not Available

Section 3: Physical Data:

PHYSICAL STATE:	Viscous Liquid	BOILING POINT:	78.3 °C
COLOUR:	Colourless, Clear	FREEZING POINT:	- 114.1 °C
ODOUR:	Match Standard	% VOLATILES:	60 % - 65 %
SPECIFIC GRAVITY:	0.8850 – 0.8950	VAPOUR PRESSURE:	Not Available
pH:	7.0-8.0	VAPOUR DENSITY (AIR=1)	Not Available
EVAPORATION RATE:	1.7	SOLUBILITY IN WATER (20°C)	Complete

Section 4: Fire and Explosion Data:

FLAMMABILITY:	Flammable		
CONDITIONS OF FLAMMABILITY	Contact with spark or open flame		
METHODS OF EXTINCTION:	Water/Carbon Dioxide Foam		
SPECIAL PROCEDURES:	Keep product away from any source of sparks or open flame		
FLASHPOINT (°C) AND METHOD	21 °C (Tag closed cup, ASTM D-56)		
U.E.L. (% BY VOLUME)	Not Available	SENSITIVITY TO IMPACT:	None
L.E.L. (% BY VOLUME)	Not Available	SENSITIVITY TO STATIC DISCHARGE:	Not Available
AUTO IGNITION TEMP. (°C)	Not Available	RATE OF BURNING:	Not Available
TDG FLAMMABILITY CLASSIFICATION	Not Available	EXPLOSIVE POWER:	Not Available

Section 5: Reactivity Data:

CHEMICAL STABILITY:	Stable
COMPATIBLE WITH OTHER SUBSTANCES:	Yes
REACTIVITY UNDER WHAT CONDITIONS:	Burning
HAZARDOUS DECOMPOSITION PRODUCTS:	Burning can produce carbon monoxide and/or carbon dioxide
NAME UNSTABLE CONDITIONS:	Mixture with oxidizing materials
NAME INCOMPATIBILITIES:	Strong oxidizing materials

Material Safety Data Sheet

MATERIAL NAME/IDENTIFIER:	ONE STEP HAND SANITIZER (ALCOHOL)
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Section 6: Toxicological Properties:

ROUTE OF ENTRY: SKIN CONTACT <input type="checkbox"/> SKIN ABSORPTION <input type="checkbox"/> EYE CONTACT <input checked="" type="checkbox"/> INHALATION ACUTE <input checked="" type="checkbox"/> INHALATION CHRONIC <input checked="" type="checkbox"/> INGESTION <input checked="" type="checkbox"/>	
EFFECTS OF ACUTE EXPOSURE TO THE MATERIAL: None under normal conditions.	
EFFECTS OF CHRONIC EXPOSURE TO THE MATERIAL: None under normal conditions.	
LD-50 OF MATERIAL (ROUTE & SPECIES) Not Available EXPOSURE LIMIT FOR THE MATERIAL Not Available SENSITIZING CAPACITY OF THE MATERIAL None Known REPRODUCTIVE EFFECTS OF THE MATERIAL None Known	LC-50 OF MATERIAL (ROUTE & SPECIES) Not Available IRRITANCY OF THE MATERIAL Concentrated product may cause eye irritation CARCINOGENICITY OF THE MATERIAL None Known SYNERGISTIC MATERIALS None Known

Section 7: Preventive Measures:

PERSONAL PROTECTIVE EQUIPMENT: GLOVES (SPECIFY): RESPIRATOR (SPECIFY): FOOTWEAR (SPECIFY): CLOTHING (SPECIFY): ENGINEERING CONTROLS (SPECIFY): LEAK & SPILLAGE PROCEDURE: WASTE DISPOSAL: HANDLING PROCEDURES & EQUIPMENT: STORAGE REQUIREMENTS SPECIAL SHIPPING INFORMATION (TDG): OTHER INFORMATION:	None required under normal conditions None required under normal conditions None required under normal conditions None required under normal conditions None required under normal conditions Fire-proof and explosion-proof equipment must be used during manufacturing Pick up large spills and transfer to suitable sealed containers Contact local authorities for disposal method Keep the product away from sources of heat, spark or open flame Store between 15°C and 30°C Class 3 Flammable liquid ; Make certain that all shipping containers are properly labeled Do not mix with other chemicals
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Section 8: First Aid Measures:

INHALATION:	Give plenty of fresh air. Call physician if dizziness or any discomfort is observed.
INGESTION:	Give plenty of milk or water. Call Physician
EYE CONTACT:	Flush for 10 minutes with running water. Call physician, if any irritation is present or develops.
SKIN CONTACT:	None required under normal conditions

Section 9: Information Sources Used:

SOURCES:	Raw material suppliers' data sheets.
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Section 10: WHMIS Classification:

WHMIS CLASS:	Class B Division 2: Flammable liquid
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Section 11: MSDS Preparation Information:

PREPARED BY: Claude Raad	PHONE NUMBER: (905) 568-0700	DATE: December 11, 2014
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Pro Form Products Ltd.
604 McGeachie Drive
Milton; Ontario; L9T 3Y5
Canada

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A
Section 01: Chemical product and company identification

Product name..... PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A
 Manufactured for..... Pro Form Products Ltd.
 604 McGeachie Drive
 Milton, Ontario L9T3Y5
 Tel (905) 878-4990 Fax (905) 878-1189
 24 hour emergency number..... IN CANADA CALL CANUTEC (613) 996-6666-IN THE UNITED STATES CALL
 CHEMTREC (800) 424-9300.
 Material use..... Adhesive applications.
 Chemical family..... Aromatic isocyanate prepolymer.
 Preparation date..... April 3, 2014.
 Hazard rate
 NFPA rating..... Health: 2 Fire: 1 Reactivity: 1.
 HMIS..... H: 2* F: 1 R: 1.

Section 02: Hazards identification


Signal Word..... DANGER.
 Hazard Classification..... Respiratory Sensitizer 1. Skin Sensitizer 1. Eye Irritant 2. Skin Irritant 2. Acute Toxicity 4.
 STOT SE 3. STOT RE 2.
 Hazard Description..... H302 Harmful if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation.
 H317 May cause an allergic skin reaction. H320 Causes eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 H335 May cause respiratory irritation. H373 May cause damage to the liver and kidneys through prolonged or repeated contact.
 Precautionary Statements..... P202 Do not handle this product until all safety instructions have been read and understood. P233 Keep container tightly closed. P251 Do not pierce or burn container, even after use. P261 Avoid breathing mists, vapours and sprays. P264 Wash thoroughly after handling. P270 Do not eat drink or smoke while using this product. P271 Use only outdoors or in a well ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves and eye protection. P284 In case of inadequate ventilation wear respiratory protection.

Section 03: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS #	Wt. %
4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	101-68-8	30-40
TALC	14807-96-6	10-30
2,4-DIPHENYLMETHANE DIISOCYANATE (MDI)	5873-54-1	0.1-1.0

Section 04: First aid measures

Eye contact..... In case of contact, immediately flush eyes, keeping eyelids open, with plenty of water for at least 15 minutes. Check for and remove any contact lenses. Obtain medical attention.
 Skin contact..... Immediately flush skin with plenty of soap and water. Remove contaminated clothing. Wash clothing before reuse. Do not peel solidified product off the skin. If irritation persists, seek medical attention.
 Inhalation..... If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen, obtain medical attention.
 Ingestion..... Do not induce vomiting. Rinse mouth with water. Give 1 to 2 glasses of water to drink. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs have victim lean forward with head down to prevent aspiration of fluid into the lungs. Get medical attention.

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A**Section 04: First aid measures**

Additional information..... Eye: stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapours have produced reversible corneal epithelial edema impairing vision. Skin: this compound is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn. Ingestion: treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound. Respiratory: this compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to any isocyanate. In the event of an incident involving this product ensure that medical authorities are provided a copy of this safety data sheet. In all cases, if irritation persists seek medical attention.

Section 05: Fire fighting measures

Extinguishing media..... Dry chemical. Carbon dioxide. Foam. In cases of larger fires, water spray should be used.
 Hazardous combustion products..... Oxides of carbon (CO,CO₂). Oxides of nitrogen. Smoke. Hydrogen cyanide. Isocyanates. Other potentially toxic fumes.
 Special fire fighting procedures..... Firefighter should be equipped with self-contained breathing apparatus and full protective clothing to protect against potentially toxic and irritating fumes. During a fire, isocyanate vapours and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Cool fire-exposed containers with cold water spray. Heat will cause pressure buildup and may cause explosive rupture. Heat will cause pressure buildup and may cause explosive rupture.
 Unusual fire / explosion hazards..... Reaction between water or foam and hot MDI can be vigorous.

Section 06: Accidental release measures

Leak/spill..... Isolate area and keep unauthorized people away. Do not walk through spilled material. Wear recommended protective equipment. Ventilate. Open windows and doors to allow air circulation. Dike area to prevent spreading. The use of absorbent socks or spill pillows may be required. Stop leak if safe to do so. Prevent runoff into drains, sewers, and other waterways.
 Major spills..... If temporary control of isocyanate vapour is required, a blanket of protein foam may be placed over spill. If transportation spill occurs in United States, call Chemtrec 1-800-424-9300. If transportation spill occurs in Canada, call Canutec at (613) 996-6666. Large quantities may be pumped into closed, but not sealed, containers for disposal.
 Minor spills..... Cover spill area with suitable absorbent material (e.g., sand, earth, sawdust, vermiculite, Oil-Dri, Kitty Litter, etc.). Saturate absorbent material with neutralizing solution. Recommended portion is ten parts neutralizing solution to one part spilled material. Suggested neutralization solution: 90% water + 5% concentrated ammonia + 5% detergent (dish soap). Add an additional layer of absorbent material. Use shovel to move absorbent material around to ensure that all spilled material comes in contact with the neutralizing solution. Shovel all absorbed material, including absorbent socks or spill pillows, into an appropriate salvage drum. Add further amounts of neutralizing solution. Allow to stand (covered loosely) for 48 to 72 hours, to allow any gases to escape.
 Clean up..... Decontaminate spill area with neutralizing solution. Area can then be washed with soap and water.

Section 07: Handling and storage

Handling procedures..... Avoid skin and eye contact. Do not breathe vapours, mist or dust. Use adequate ventilation. Decomposition products can be highly toxic and irritating. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapour or spray mist. Warning properties (irritation of the eyes, nose and throat or odour) are not adequate to prevent chronic overexposure from inhalation. Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Wear respiratory protection if material is heated, sprayed, used in confined space, or if exposure limit is exceeded. Employee education and training are important.
 Storage needs..... Store in tightly closed containers to prevent moisture contamination. Store in a cool, dry and well ventilated area. Do not reseal if contamination is suspected. Exposure to vapours of heated isocyanates can be extremely dangerous.

Section 08: Exposure controls / personal protection

Protective equipment
 Eye/type..... Chemical safety goggles. Chemical safety goggles and full faceshield if a splash hazard exists. Contact lenses should not be worn when working with this chemical.
 Respiratory/type..... In case of insufficient ventilation, wear suitable respiratory equipment. An approved air purifying respirator with organic vapour cartridges and particulate prefilter can be used to minimize exposure. However, this should be permitted only for short periods of time (< 1

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A**Section 08: Exposure controls / personal protection**

Respiratory/type.....	hour) at relatively low concentrations (at or near the exposure limit). Protection provided by air-purifying respirators is limited. The use of a positive pressure air supplied respirator is mandatory when airborne concentrations are not known or airborne solvent levels are 10 times the appropriate exposure limit or spraying is performed in a confined space or with limited ventilation. Be sure to use NIOSH approved respirator or equipment. Do not exceed the use limits of the respirator.
Gloves/ type.....	Chemical resistant gloves: butyl rubber, nitrile rubber, neoprene, PVC. Practice good hygiene, wash thoroughly before handling any food.
Clothing/type.....	Wear adequate protective clothes. Wear long sleeves and trousers to prevent dermal exposure.
Footwear/type.....	Safety boots per local regulations.
Other/type.....	Eye wash facility should be in close proximity. Emergency shower should be in close proximity. Educate and train employees on the safe use and handling of the product.
Ventilation requirements.....	Ventilate adequately. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Vent work area to ensure airborne concentrations are below the current occupational exposure limits. Avoid breathing mists; if general ventilation or local exhaust is inadequate, persons exposed to mists should wear approved breathing devices.
Monitoring.....	Exposure levels must be monitored by accepted monitoring techniques to ensure that the TLV is not exceeded.
Medical surveillance.....	Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should include preemployment and periodic medical examinations with pulmonary function test (FEC, FVC as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurring skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted. These should include preemployment and periodic medical examinations with pulmonary function test (fev, fvc as a minimum). Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases or recurrent skin eczema or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

Exposure limits

Ingredients	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL NIOSH
4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	0.005 ppm	No data	0.02 ppm	No data	0.005 ppm
TALC	2 mg/m ³	No data	2 mg/m ³	No data	2 mg/m ³
2,4-DIPHENYLMETHANE DIISOCYANATE (MDI)	No data	No data	No data	No data	No data

Section 09: Physical and chemical properties

Physical state.....	Viscous liquid.
Colour.....	Beige.
Odour.....	No data.
Odour threshold (ppm).....	No data.
Vapour pressure (mm Hg).....	<0.013 hPa @ 25C.
Vapour density (air=1).....	>1.
pH.....	No data.
Specific gravity.....	1.288 g/cm ³ @ 20C - 10.72 lb/USG @ 25C.
Freezing point (deg C).....	No data.
Solubility.....	Reacts slowly with water to liberate CO ₂ gas.
Boiling point (deg C).....	>200.
Evaporation rate.....	<1. (butyl acetate = 1).
Flash point (deg C), method.....	>100.
Auto ignition temperature (deg C).....	No data.
Upper flammable limit (% vol).....	No data.
Lower flammable limit (% vol).....	No data.
Coefficient of water/oil distribution.....	No data.
VOC.....	0.0 g/L - 0.0 lb/usg.
Viscosity.....	No data.

Section 10: Stability and reactivity

Stability.....	Stable at normal temperatures and pressures.
Reactivity conditions.....	Contact with moisture and other materials will react with isocyanates.
Incompatibility.....	Water, amines, strong bases, alcohols. Copper alloys.
Hazardous products of decomposition.....	See hazardous combustion products.
Hazardous polymerization.....	Contact with moisture, other materials that react with isocyanates, or temperatures above 177C, may cause polymerization.

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A**Section 11: Toxicological information**

Route of entry	Eye contact. Skin contact. Inhalation.
Effects of acute exposure.....	Skin irritant. Can cause reddening, itching and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling and rash. Cured material is difficult to remove. Contact with MDI can cause discolouration. EYE: Product liquid, aerosols or vapours are irritating. Can cause tearing, reddening and swelling. May cause temporary corneal injury. INHALATION: Vapour/mists at concentrations above the exposure limits can irritate (burning sensation) the mucous membranes in the respiratory tract. This can cause a runny nose, sore throat, coughing, chest discomfort, difficulty breathing and reduced pulmonary functioning. Persons with pre-existing, nonspecific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. These symptoms can be delayed up to several hours after exposure. Effects are usually reversible. INGESTION: May cause irritation. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. Talc can be absorbed into the lungs and the digestive tract, and adversely affect lung function.
Effects of chronic exposure.....	As a result of previous repeated overexposure or a single large dose, certain individuals develop sensitization, which will cause them to react to a later exposure to product at levels well below the TLV. Symptoms, including chest tightness, wheezing, cough, shortness of breath or asthma attack, could be immediate or delayed. There are reports that once sensitized, an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and, in severe cases, for several years. Prolonged or repeated exposure may cause lung damage, including a decrease in lung function. Possible risk of irreversible effects. Prolonged skin contact may cause reddening, swelling, rash, blistering, and in some cases, skin sensitization. Sensitization can be permanent. Prolonged vapour contact with eyes may cause conjunctivitis. Talc has been shown to cause fibrosis of the lungs.
Sensitizing capability of material.....	Isocyanates are known to cause skin and respiratory sensitization in humans. Animal tests have indicated that respiratory sensitization can result from skin contact with diisocyanates.
Carcinogenicity of material.....	This product contains non-asbestiform Talc, which is classified as a Group 3 (not classifiable as to carcinogenicity to humans) by IARC .
Note.....	This product is an inert plastic when fully cured, and as such, is non-hazardous. Exposure to unreacted chemicals can occur when handling the individual components in pails or when using cartridges from the time of dispensing until the mixed material has cured. The mixed material is actually curing as it is dispensed in an increasingly viscous form, making it unlikely to present an inhalation hazard. The semi-viscous mixture does not flow like a liquid when dispensed, thus minimizing the possibility of accidental skin contact.

Toxicological Data

Ingredients	LC50-inh, rat	LD50-Oral, rat
4,4'-DIPHENYLMETHANE DIISOCYANATE (MDI)	369 mg/m ³ 4 hours rat	No data
TALC	No data	No data
2,4-DIPHENYLMETHANE DIISOCYANATE (MDI)	370-490 MG/M ³ (4HR) RAT	No data

Section 12: Ecological information

Environmental.....	Do not allow to enter waters, waste water or soil.
Biodegradability.....	No data.

Section 13: Disposal considerations

Waste disposal.....	Dispose of waste in accordance with all applicable federal, provincial/state and local regulations. Industrial incineration is the preferred method. Empty containers retain product residue; observe all precautions for the product. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. Do not heat or cut empty containers with electric or gas torch as vapours and gases may be toxic.
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Section 14: Transport information

TDG Classification (Road).....	Not regulated.
IATA Classification (Air).....	Not regulated.
IMDG Classification (Marine).....	Not regulated.
Marine Pollutant.....	No.

PRODUCT: PF7770-3 TRUCK LINE PLIOGRIP URETHANE ADHESIVE PART A**Section 15: Regulatory information**

WHMIS classification.....	D2A. D2B.
CEPA status.....	On Domestic Substances List (DSL).
Section 313.....	None.
OSHA.....	This product is considered hazardous under the OSHA Hazard Communication Standard.
SARA Title III	
Section 302 - extremely hazardous substances	None.
Section 311/312 - hazard categories.....	Immediate health, delayed health.
EPA hazardous air pollutants (HAPS) 40CFR63	Methylene Diphenyl Diisocyanate (MDI).
TSCA inventory status.....	All components are listed.
California Proposition 65.....	This product does not contain any chemical(s) known to the State of California to cause cancer or reproductive toxicity.

Section 16: Other information

Prepared by:	REGULATORY AFFAIRS.
Telephone number:.....	(800) 387-7981.
Disclaimer:.....	DISCLAIMER: All information appearing herein is based upon data obtained from experience and recognized technical sources. To the best of our knowledge, it is believed to be correct as of the date of issue but we make no representations as to its accuracy or sufficiency and do not suggest or guarantee that any hazards listed herein are the only ones which exist. The hazard information contained herein is offered solely for the consideration of the user, subject to his own investigation and verification of compliance with applicable regulations, including the safe use of the product under every foreseeable condition. The information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.



MATERIAL SAFETY DATA SHEET

PYRO-CHEM ABC

Product Code: 2001-2-012 ANa

Issue Date: 01-08-2014

1. Product and Company Identification

Material name	PYRO-CHEM ABC
Version #	01
Revision date	01-08-2014
CAS #	Mixture
Product Code	2001-2-012 ANa
Product use	Fire extinguishing agent
Manufacturer / Importer / Supplier	
Name	Tyco Fire Protection Products
Address	One Stanton Street Marinette, WI 54143-2542
Phone	715-732-3465
Internet	http://www.pyrochem.com
Emergency Phone Number	CHEMTREC 800-424-9300 or 703-527-3887

2. Hazards Identification

Emergency overview	WARNING Irritating to eyes and skin.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Eye contact. Skin contact. Inhalation. Ingestion.
Eyes	Avoid contact with eyes. Contact with eyes may cause irritation.
Skin	Avoid contact with the skin. May cause skin irritation.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Ingestion	Not a likely route of entry.
Target organs	Eyes. Respiratory system. Skin.
Signs and symptoms	Irritation of eyes and mucous membranes.

3. Composition / Information on Ingredients

Non-hazardous components	CAS #	Percent
Pigment Yellow 14	5468-75-7	0.1 - 1
Silicone fluid	63148-57-2	0.1 - 1
Calcium hydroxide phosphate (Ca5(OH)(PO4)3)	12167-74-7	2.5 - 10
FULLERS EARTH	8031-18-3	2.5 - 10
Ammonium Sulfate	7783-20-2	20 - 40
Ammonium Phosphate	7722-76-1	60 - 80

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.
Skin contact	Wash off with warm water and soap. Get medical attention if irritation develops and persists.

Inhalation	Move to fresh air. Get medical attention, if needed.
Ingestion	Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Notes to physician	Symptoms may be delayed.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties	No unusual fire or explosion hazards noted.
Extinguishing media	
Suitable extinguishing media	This product is not flammable. Use extinguishing agent suitable for type of surrounding fire.
Protection of firefighters	
Specific hazards arising from the chemical	None known.
Hazardous combustion products	Carbon monoxide and carbon dioxide.

6. Accidental Release Measures

Personal precautions	Local authorities should be advised if significant spillages cannot be contained. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect dust using a vacuum cleaner equipped with HEPA filter. Avoid dust formation. Following product recovery, flush area with water.
Other information	Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling	Keep formation of airborne dusts to a minimum. Do not breathe dust. Avoid contact with eyes. Do not use in areas without adequate ventilation. Wear personal protective equipment. Wash thoroughly after handling.
Storage	Store in a well-ventilated place. Keep container tightly closed. Guard against dust accumulation of this material. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Engineering controls	Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	
Eye / face protection	Do not get in eyes. Chemical goggles are recommended.
Skin protection	No special protective equipment required.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygiene considerations	Do not get in eyes.

9. Physical & Chemical Properties

Appearance	
Form	Powder.
Color	Yellow.
Odor	Odorless.
Physical state	Solid.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.

Flash point	Not available.
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	Not available.
Relative density	Not available.
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	Not available.

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Incompatible materials	Strong acids.
Hazardous decomposition products	Carbon oxides.

11. Toxicological Information

Toxicological information	The toxicity of this product has not been tested.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Further information	This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicological data

Product	Test Results
PYRO-CHEM ABC (Mixture)	EC50 Daphnia: 167 mg/l 48.00 hours estimated LC50 Fish: 3181 mg/l 96.00 hours estimated
Components	Test Results
Ammonium Sulfate (7783-20-2)	EC50 Water flea (Ceriodaphnia dubia): 52 - 67 mg/l 48.00 hours LC50 Pink salmon (Oncorhynchus gorbuscha): 0.068 mg/l 96.00 hours
Ecotoxicity	This material is not expected to be harmful to aquatic life.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
Waste from residues / unused products	Dispose of in accordance with local regulations.

14. Transport Information

DOT

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Ammonium Phosphate (CAS 7722-76-1)	1.0 %
Ammonium Sulfate (CAS 7783-20-2)	1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Ammonium Phosphate (CAS 7722-76-1)	Listed.
Ammonium Sulfate (CAS 7783-20-2)	Listed.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Acute Health - No
Chronic Health - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Ammonium Sulfate (CAS 7783-20-2)	Listed.
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16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 0
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 0
Flammability: 0
Instability: 0

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Issue date 01-08-2014