

PART 1

GENERAL

1.1

References

- .1 Canadian General Standards Board (CGSB).
 - .1 CAN/CGSB-37.2-M88, Emulsified Asphalt, Mineral-Colloid Type, Unfilled, for Dampproofing and Waterproofing and for Roof Coatings.
 - .2 CAN/CGSB 37.3-M89, Application of Emulsified Asphalts for Dampproofing or Waterproofing.
 - .3 CAN/CGSB 37.5-M89, Cement, Plastic, Cutback Asphalt.
 - .4 CGSB 37-GP-6Ma-83, Asphalt, Cutback, Unfilled, for Dampproofing.
 - .5 CGSB 37-GP-9Ma-83, Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing.
 - .6 CGSB 37-GP-11M-76(R1984), Application of Cutback Asphalt Plastic Cement.
 - .7 CGSB 37-GP-12Ma-84, Application of Unfilled Cutback Asphalt for Dampproofing.
 - .8 CGSB 37-GP-15M-76(R1984), Application of Asphalt Primer for Asphalt Roofing, Dampproofing and Waterproofing.
 - .9 CAN/CGSB 37.16-M89, Filled, Cutback, Asphalt, for Dampproofing and Waterproofing.
 - .10 CAN/CGSB 37.28-M89, Reinforced, Mineral Colloid Type Emulsified, Asphalt for Roof Coatings and for Waterproofing.
 - .11 CGSB 37-GP-36M-76, Application of Filled Cutback Asphalts for Dampproofing and Waterproofing.
 - .12 CGSB 37-GP-37M-77, Application of Hot Asphalt for Dampproofing or Waterproofing.
- .2 Canadian Standards Association (CSA).
 - .1 CSA A123.4-M1979(R1992), Bitumen for Use in Construction of Built-Up Roof Coverings and Dampproofing and Waterproofing Systems.

1.2

Submittals

- .1 Submit proof of manufacturer's CCMC Listing and listing number to Contract Administrator.
- .2 Manufacturer's Instructions: Provide to indicate special handling criteria, installation sequence and cleaning procedures.

1.3

Product Data

- .1 Submit product data in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Submit WHMIS MSDS – Material Safety Data Sheets. WHMIS acceptable to Labour Canada and Health and Welfare Canada.
- .3 Submit product data sheets for bituminous Dampproofing products. Include:
 - .1 Product characteristics.
 - .2 Performance criteria.

- .3 Application methods.
- .4 Limitations.
- 1.4 Delivery, Storage And Handling
 - .1 Deliver, handle, store and protect materials of this section in accordance with Section 01 61 00 – Product Requirements.
 - .2 Provide and maintain dry, off-ground weatherproof storage.
 - .3 Store materials on supports to prevent deformation.
 - .4 Remove only in quantities required for same day use.
 - .5 Store materials in accordance with manufacturer’s written instructions.
- 1.5 Project/Site Environmental Requirements
 - .1 Temperature, relative humidity, moisture content.
 - .1 Apply dampproofing materials only when surfaces and ambient temperatures are within manufacturers’ prescribed limits.
 - .2 Do not proceed with Work when the wind chill effect would tend to set bitumen before proper curing takes place.
 - .3 Maintain air temperature and substrate temperature at dampproofing installation area above 5°C for 24 hours before, during and after installation.
 - .4 Do not apply dampproofing in wet weather.
 - .2 Safety: Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of asphalt, sealing compounds, primers and caulking materials.
 - .3 Ventilation:
 - .1 Ventilate area of Work as directed by Contract Administrator.
 - .2 Ventilate enclosed spaces in accordance with Section 01 51 00 - Temporary Utilities.
- PART 2 PRODUCTS**
- 2.1 Materials
 - .1 Asphalt:
 - .1 Acceptable materials: “Bakelite 710-11”, “SCP Insul-Mastic 7101”, or approved equal.
 - .2 Asphalt primer: to CAN/CGSB-37.2.
 - .1 Acceptable materials: “Bakelite 910-01”, “SCP Insul-Mastic 7501”, compatible with substrate or approved equal.
- PART 3 EXECUTION**
- 3.1 Workmanship
 - .1 Keep hot asphalt:
 - .1 Below its flash point.
 - .2 At or below its final blowing temperature.

.3 Within its equiviscous temperature range at place of application.

3.2 Preparation

.1 Before applying dampproofing:

.1 Seal exterior joints between foundation walls and footings, joints between concrete floor slab and foundation and around penetrations through dampproofing with sealing compound.

3.3 Application

.1 Do dampproofing in accordance with CAN/CGSB-37.3 except where specified otherwise.

.2 Do sealing Work in accordance with CGSB 37-GP-11M except where specified otherwise.

.3 Do priming of surface in accordance with CGSB 37-GP-15M except where specified otherwise.

.4 Apply primer.

.5 Apply dampproofing in accordance with applicable CGSB application standard.

Material		Application
CAN/CGSB-37.2	use	CAN/CGSB-37.3
CGSB 37-GP-6Ma	use	CGSB-37-GP-12M
CAN/CGSB-37.16	use	CGSB-37-GP-36M
CAN/CGSB-37.28	use	CAN/CGSB-37.3
CSA A123.4	use	CGSB-37-GP-37M

3.4 Schedule

.1 Apply continuous, uniform coating to entire exterior faces of foundation walls from 50 mm below finished grade level to and including tops of foundation wall footings unless indicated otherwise.

.2 Apply continuous, uniform coating to exterior side of foundation walls enclosing rooms below finished grade. Include exterior portion of interior walls where floors in adjacent rooms are at different elevations.

.3 Apply two additional coats of dampproofing to vertical corners and construction joints for a minimum width of 230 mm on each side, and all around and for 230 mm along pipes and through walls.

PART 1 GENERAL

- 1.1 Related Sections
 - .1 Vapour and Air Barriers Section 07 27 00
- 1.2 References
 - .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM E96-96, Test methods for Water Vapour Transmission of Materials.
 - .2 ASTM C208-95, Standard Specification for Cellulosic Fibre Insulating Board.
 - .3 ASTM C591-94, Standard Specification for Unfaced Preformed Rigid Polyisocyanurate Thermal Insulation.
 - .4 ASTM C726-93, Standard Specification for Mineral Fibre Roof Insulation Board.
 - .5 ASTM C728-97, Standard Specification for Perlite Thermal Insulation Board.
 - .6 ASTM C1126-98, Standard Specification for Faced or Unfaced Rigid Cellular Phenolic Thermal Insulation.
 - .7 ASTM C1289-98, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
 - .2 Canadian Gas Association (CGA)
 - .1 CAN/CGA-B149.1-M95, Natural Gas Installation Code.
 - .2 CAN/CGA-B149.2-95, Propane Installation Code.
 - .3 Canadian General Standards Board (CGSB)
 - .1 CGSB 71-GP-24M-77, Adhesive, Flexible, for Bonding Cellular Polystyrene Insulation.
 - .4 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S701-97, Thermal Insulation, Polystyrene, Boards and Pipe Coverings.
 - .2 CAN/ULC-S702-97, Thermal Insulation, Mineral Fibre, for buildings.

PART 2 PRODUCTS

2.1 Insulation

PROPERTIES	TYPE				
	1	2	3	4	5
Thermal Resistance Minimum (R-Value/inch)	3.7	4.0	4.75	5	4.2
Moisture Absorption Maximum (% by Volume)	6%	4%	<2%	<1%	<1%
Compressive Strength Minimum (psi)	8psi	16psi	20psi	30psi	-
Flexural Strength Minimum (psi)	25psi	35psi	44psi	50psi	-
Standard of Acceptance	Beadboard Expanded Polystyrene I	Cladmate* Wallmate* Deckmate* Expanded Polystyrene II	Styrospan* Cavitymate* Cavitymate Ultra* Cellfort 200	Styrofoam*SM Perimate* HI-40-60-100 Roofmate*CT Cellfort 300	Roxul Curtain Rock FBX 1240 Fibrex

2.2 Adhesive

- .1 Adhesive (for polystyrene): to CGSB 71-GP-24, Type Bulldog Wetstick/Bulldog Grip PL 200.

2.3 Accessories

- .1 Insulation clips: impale type, perforated 50 x 50 mm cold rolled carbon steel 0.8 mm thick, adhesive back, spindle of 2.5 mm diameter annealed steel, length to suit insulation, 25 mm diameter washers of self locking type.

PART 3 EXECUTION

3.1 Workmanship

- .1 Install insulation after building materials are dry.
- .2 Install insulation to maintain continuity of thermal protection to building elements and spaces.
- .3 Fit insulation tight around electrical boxes, plumbing and heating pipes and ducts, around exterior doors and windows and other protrusions.
- .4 Keep insulation minimum 75 mm from heat emitting devices such as recessed light fixtures, and minimum 50 mm from sidewalls of CAN4-S604 type A chimneys or as required by code, whichever is more stringent.

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- .5 Cut and trim insulation neatly to fit spaces. Butt joints tightly, offset vertical joints. Use only insulation boards free from chipped or broken edges. Use largest possible dimensions to reduce number of joints.
 - .6 Offset both vertical and horizontal joints in multiple layer applications.
 - .7 Do not enclose insulation until it has been inspected and approved by Contract Administrator.
- 3.2 Examination
- .1 Examine substrates and immediately inform Contract Administrator in writing of defects.
 - .2 Prior to commencement of Work ensure:
 - .1 Substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and debris.
- 3.3 Rigid Insulation Installation
- .1 Imbed insulation boards into vapour barrier type adhesive, applied as specified, prior to skinning of adhesive.
 - .2 Leave insulation board joints unbonded over line of expansion and control joints. Bond a continuous 150 mm wide 0.15 mm polyethylene strip over expansion and control joints using compatible adhesive before application of insulation.
- 3.4 Perimeter Foundation Insulation
- .1 Exterior application: extend boards full height of grade beams as indicated. Install on exterior face of perimeter foundation wall with adhesive.

PART 1 GENERAL

1.1 Related Sections

- .1 Vapour and Air Barriers Section 07 27 00

1.2 References

- .1 American Society for Testing and Materials (ASTM).
 - .1 ASTM C 665-98, Standard Specification for Mineral-Fibre Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
 - .2 ASTM C1320-99, Standard Practice for Installation of Mineral Fibre Batt and Blanket Thermal Insulation for Light Frame Construction.
- .2 Canadian Standards Association (CSA).
 - CSA B111-1974(R1998), Wire Nails, Spikes and Staples.

PART 2 PRODUCTS

2.1 Insulation

- .1 Batt and Blanket mineral fibre: to ASTM C 665, Type 1, with minimum 40% recycled content thickness as indicated.
 - .1 Acceptable thermal material: Johns Manville or approved equal.

2.2 Accessories

- .1 Insulation clips where indicated:
 - .1 Impale type, perforated 50 x 50 mm cold rolled carbon steel 0.8 mm thick, adhesive back, spindle of 2.5 mm diameter annealed steel, length to suit insulation, 25 mm diameter washers of self locking type.
- .2 Nails: Galvanized steel, length to suit insulation plus 25 mm, to CSA B111.
- .3 Staples: 12 mm minimum leg.
- .4 Tape: as recommended by manufacturer.

PART 3 EXECUTION

3.1 Insulation Installation

- .1 Install insulation to maintain continuity of thermal protection to building elements and spaces.
- .2 Fit insulation closely around electrical boxes, pipes, ducts, frames and other objects in or passing through insulation.
- .3 Do not compress insulation to fit into spaces.
- .4 Keep insulation minimum 75 mm from heat emitting devices such as recessed light fixtures, and minimum 50 mm from sidewalls of CAN/ULC-S604 Type A chimneys and CAN/CGA-B149.1 and CAN/CGA-B149.2 Type B and L vents.
- .5 Do not enclose insulation until it has been inspected and approved by Contract Administrator.

PART 1 GENERAL

- 1.1 Section Includes
 - .1 Materials and installation methods providing air/vapour barrier materials and assemblies.
 - .2 Air/vapour barrier materials to provide continuous seal between components of building envelope and building penetrations.
- 1.2 Related Sections
 - .1 Joint Sealers Section 07 92 00
- 1.3 References
 - .1 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-19.13M-M87, Sealing Compound, One Component, Elastomeric Chemical Curing.
 - .2 CAN/CGSB-19.18M-M87, Sealing Compound, One Component, Silicone Base Solvent Curing.
 - .3 CAN/CGSB-19.24M-M90, Multi-Component, Chemical Curing Sealing Compound.
 - .4 CGSB 19-GP-14M-76, Sealing Compound, One Component, Butyl-Polyisobutylene Polymer Base, Solvent Curing.
 - .2 NBCC 1995; Part 5 – Environmental Separation.
 - .3 Sealant and Waterproofers Institute – Sealant and Caulking Guide Specification.
 - .4 National Air Barrier Association (NABA).
- 1.4 Quality Assurance
 - .1 Perform work in accordance with Sealant and Waterproofers Institute – Sealant and Caulking Guide Specification requirements for materials and installation.
 - .2 Perform work in accordance with National Air Barrier Association – Professional Contractor Quality Assurance Program and requirements for materials and installation.
 - .3 Maintain one copy of documents on site.
- 1.5 Delivery, Storage And Handling
 - .1 Deliver, store and handle materials in accordance with manufacturers written instructions.
- 1.6 Project Environmental Requirements
 - .1 Do not install solvent curing sealants or vapour release adhesive materials in enclosed spaces without ventilation.
 - .2 Maintain temperature and humidity recommended by materials manufacturer before, during and after installation.
- 1.7 Sequencing
 - .1 Sequence Work to permit installation of materials in conjunction with related materials and seals.
- 1.8 Warranty
 - .1 Provide a 1-year warranty under provisions of Closeout Submittals.

- .2 Warranty: Include coverage of installed sealant and sheet materials, which fail to achieve air tight and watertight, seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.1 Sheet Materials

- .1 Type A: sloped roof peel and stick vapour barrier.
 - .1 Acceptable material: Ice and Water Shield- Grace, Sopraseal Stick 1100, Soprema 1.1 mm or approved equal.
- .2 Type B: Eave protection.
 - .1 Acceptable material: Ice and Water Shield- Grace, Sopraseal Stick 1100, Soprema or approved equal.
- .3 Type C: Thermo-fusible vapour barrier on concrete or masonry substrate.
 - .1 Acceptable material: Blueskin TG, Bakor, Sopraseal, Soprema or approved equal.
- .4 Type D: Peel and stick vapour barrier for wood substrate or where open flame cannot be used.
 - .1 Acceptable material: Blueskin SA, Bakor, Lasto Bond, Soprema, Perma Barrier, Grace or approved equal.
- .5 Type E: Basement/crawlspace areas.
 - .1 Acceptable material: 10 mil poly vapour barrier; (CAN CG SB 51.34-M86).
- .6 Type F: Exterior wall and roof surfaces as per drawings.
 - .1 Acceptable material: 6 mil poly vapour barrier, CMHC approved; (CANCG SB 51.34-M86).
- .7 Type G: Exterior wall surface sheet air barrier.
 - .1 Acceptable material: Tyvek, Dupont, Typar housewrap or approved equal.
- .8 Type H: Roof under asphalt shingles.
 - .1 Acceptable material: 15 lb roofing felt (CAN CG SB 51.34-M86).
- .9 Type J: Flat roof vapour barrier.
 - .1 Acceptable material: Orange Label Fibrene, Permastop, Fibreglass Canada, or approved equal.

2.2 Sealants

- .1 Sealants in accordance with Section 07 92 00 – Joint Sealers.

2.3 Adhesives

- .1 Mastic Adhesive: Compatible with sheet seal and substrate.
- .2 Acceptable material: Tremco Acoustical Sealant, or approved equal.

2.4 Accessories

- .1 Thinner and cleaner for Butyl or Neoprene Sheet: as recommended by sheet material manufacturer. Non-staining type.

.2 Joint Cleaner: Non-corrosive and non-staining type; recommended by sealant manufacturer; compatible with joint forming materials.

.3 Tape: No. Y-8086, 3M, Contractor's Sheathing Tape, or approved equal.

PART 3 EXECUTION

3.1 Examination

.1 Verify that surfaces and conditions are ready to accept the Work of this section.

.2 Ensure all surfaces are clean, dry, sound, smooth, and continuous and comply with air barrier manufacturer's requirements.

.3 Report any unsatisfactory conditions to the Contract Administrator in writing.

.4 Do not start work until deficiencies have been corrected. Commencement of work implies acceptance of conditions.

3.2 Preparation

.1 Remove loose or foreign matter, which might impair adhesion of materials.

.2 Ensure all substrates are clean of oil or excess dust, all masonry joints struck flush and open joints filled, and all concrete surfaces free of large voids, spalled areas or sharp protrusions.

.3 Ensure all substrates are free of surface moisture prior to application of self-adhesive membrane and primer.

.4 Ensure metal closures are free of sharp edges and burrs.

.5 Prime substrate surfaces to receive adhesive and sealants in accordance with manufacturer's instructions.

3.3 Installation

.1 Install materials in accordance with manufacturer's instructions.

.2 Install per drawings and details.

.3 Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

3.4 Protection of Work

.1 Protect finished work in accordance with Section 01 61 00 – Product Requirements.

.2 Do not permit adjacent work to damage work of this section.

.3 Ensure finished work is protected from climatic conditions.

PART 1 GENERAL

1.1 References

- .1 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-37.4- M89, Fibrated, Cutback Asphalt, Lap Cement for Asphalt Roofing.
 - .2 CAN/CGSB-37.5- M89, Cutback Asphalt Plastic Cement.
 - .3 CAN/CGSB- 51.32- M77, Sheathing, Membrane, Breather Type.
 - .4 CAN/CGSB-51.33- M89, Vapour Barrier Sheet, Excluding Polyethylene, for use in Building Construction.
- .2 Canadian Roofing Contractor's Association (CRCA)
 - .1 CRCA Specification.
- .3 Canadian Standards Association (CSA)
 - .1 CSA A123.1- M1979 (R1992), Asphalt Shingles Surfaced with Mineral Granules.
 - .2 CSA A123.2- M1979 (R1992), Asphalt Coated Roofing Sheets.
 - .3 CSA A123.3- M1979 (R1992), Asphalt or Tar Saturated Roofing.
 - .4 CAN3- A123.51- M85 (R1992), Asphalt Shingle Application on Roof Slopes 1:3 and Steeper.
 - .5 CAN3- A123.52- M85 (R1992), Asphalt Shingle Application on Roof Slopes 1:6 to less than 1:3.
 - .6 CSA B111- 1974, Wire Nails, Spikes and Staples.

1.2 Submittals

- .1 Submit proof of manufacturer's CCMC Listing and listing number to Contract Administrator.
- .2 Manufacturer's Instructions: Provide to indicate special handling criteria, installation Sequence, And Cleaning Procedures.

1.3 Product Data

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit WHMIS MSDS- Material Safety Data Sheets. WHMIS acceptable to Labour Canada, Health and Welfare Canada for asphalt shingles.
- .3 Submit product data sheets for asphalt shingles. Include:
 - .1 Product characteristics.
 - .2 Performance criteria.
 - .3 Installation instructions.
 - .4 Limitations.
 - .5 Colour and finish.

1.4 Samples

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.

- .2 Submit duplicate samples of full size specified shingles.
- 1.5 Delivery, Storage And Handling
 - .1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 – Product Requirements.
 - .2 Provide and maintains dry, off-ground weatherproof storage.
 - .3 Remove only in quantities required for same day use.

1.6 Extra Materials

- .1 Provide maintenance materials in accordance with Section 01 78 10 - Closeout Submittals.
- .2 All unused shingles remain property of City.

PART 2 PRODUCTS

2.1 Materials

- .1 Asphalt shingles: to CSA A123.1
 - .1 Type: low slope and standard as indicated on drawings, pattern rectangular 3 tab, 25 year warranty.
 - .2 Colours: as selected by Contract Administrator.
 - .3 Texture: as selected by Contract Administrator.
 - .4 Acceptable material: IKO Aristocrat, BP/EMCO Rampart.
- .2 Sheathing paper: to CAN/CGSB-51.32 single ply.
- .3 Roofing Felt: to CSA A123.3 organic felt No. 15.
 - .1 Number of layers as indicated on drawings.
 - .2 Acceptable material: IKO, BP/EMCO Rampart or approved equal.
- .4 Cement:
 - .1 Plastic cement: to CAN/CGSB-37.5.
 - .2 Lap cement: to CAN/CGSB-37.4.
- .5 Nails: to CSA B111, of galvanized steel, sufficient length to penetrate 19mm into deck.
- .6 Eave Protection: Refer to Section 07 27 00 - Vapour and Air Barriers to extend 900mm from line of exterior wall face up the roof slope.
- .7 Ridge Vent: Air Vent Inc. continuous ridge vent c/w associated connectors and end caps. Ridge Vents to be continuous 'Ridgemaster Plus' or approved equal as shown on drawings. Shingles to cover vents as per manufacturer's details.

PART 3 EXECUTION

3.1 Application

- .1 Do asphalt shingle Work in accordance with NBC and CRCA Specification except where specified otherwise.
- .2 Install bottom step flashing (soaker base flashing) interleaved between shingles at vertical junctions.

- .3 Install asphalt shingles on roof slopes 1:3 and steeper in accordance with CAN3-A123.51.
- .4 Install asphalt shingles on roof slopes 1:6 to less than 1:3 in accordance with CAN3-A123.52

PART 1 GENERAL

1.1 Related Work

- .1 Metal Flashing and Trim Section 07 62 00
- .2 Joint Sealers Section 07 92 00

1.2 References

- .1 American Society for Testing and Materials (ASTM)
 - .1 ASTM C 36-95b, Specification for Gypsum Wallboard
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB 37.5-M89, Cutback Asphalt Plastic Cement.
 - .2 CGSB 37-GP-9Ma-83, Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing.
 - .3 CGSB 37-GP-15M-76, Application of Asphalt Primer for Asphalt Roofing, Dampproofing and Waterproofing.
 - .4 CGSB 37-GP-19M-76, Cement, Plastic, Cutback Tar.
 - .5 CAN/CGSB-37.29-M89, Rubber-Asphalt Sealing Compound.
 - .6 CGSB 37-GP-56M-80, Membrane, Modified Bituminous, Prefabricated and Reinforced for Roofing.
 - .7 CAN/CGSB 51.20-M87, Thermal Insulation, Polystyrene, Boards and Pipe Covering.
 - .8 CAN/CGSB 51.26-M86, Thermal Insulation, Urethane and Isocyanurate Boards, Faced.
 - .9 CAN/CGSB 51.31-M84, Thermal Insulation, Mineral Fibre Board for Above Roof Decks.
 - .10 CAN/CGSB 51.33-M89, Vapour Barrier Sheet, Excluding Polyethylene, for use in Building Construction.
 - .11 CAN/CGSB 51.34-M86, Vapour Barrier Sheet, Polyethylene Sheet, for use in Building Construction.
 - .12 CAN/CGSB 51.38-92, Cellular Glass Thermal Insulation.
- .3 Canadian Standards Association (CSA)
 - .1 CSA A123.3-M1992, Asphalt or Tar Saturated Roofing Felt.
 - .2 CSA A123.4-M1992, Bitumen for Use in Construction of Built-up Roof Coverings and Dampproofing and Waterproofing Systems.
 - .3 CAN/CSA-A247-M86, Insulating Fibreboard.
 - .4 CSA A284-1976, Mineral Aggregate Thermal Roof Insulation.
 - .5 CSA O121-M1978, Douglas Fir Plywood.
 - .6 CSA O151-M1978, Canadian Softwood Plywood.

- 1.3 Storage And Handling
 - .1 Provide and maintain dry, off-ground weatherproof storage.
 - .2 Store rolls of felt and membrane in upright position. Store membrane rolls with selvage edge up.
 - .3 Remove only in quantities required for same day use.
 - .4 Place plywood runways over Work to enable movement of materials and other traffic.
 - .5 Store sealants at +5°C minimum.
 - .6 Store insulation protected from daylight and weather and deleterious materials.
- 1.4 Environmental Requirements
 - .1 Do not install roofing when temperature remains below -18°C for torch application, or -10°C or manufacturers' recommendations for mop application.
 - .2 Minimum temperature for solvent-based adhesive is -5°C.
 - .3 Install roofing on dry deck, free of snow and ice, use only dry materials and apply only during weather that will not introduce moisture into roofing system.
- 1.5 Protection
 - .1 Fire Extinguishers: maintain one cartridge-operated type with hose and shut-off nozzle, ULC labelled for A, B and C class protection. Size 9 kg on roof per torch applicator, within 10 m of torch applicator.
 - .2 Maintain fire watch for 1 hour after each day's roofing operations cease.
- 1.6 Warranty
 - .1 For the Work of this Section 07 52 11- Modified Bituminous Roofing, the 12 months warranty period prescribed in subsection GC 13.2 of General Conditions "C" is extended to 60 months. Material warranty is 10 years non-prorated.
- 1.7 Compatibility
 - .1 Compatibility between components of roofing system is essential. Provide written declaration to Contract Administrator stating that materials and components, as assembled in system, meet this requirement.
- 1.8 Quality Assurance
 - .1 Submit laboratory test reports in accordance with Section 01 45 00- Quality Control.
 - .2 Installers to be CRCA member or RCAM member (in Manitoba) with 5 years minimum experience.
- PART 2 PRODUCTS**
- 2.1 Membrane
 - .1 Base Sheet: to CGSB 37-GP-56M, Styrene-Butadiene-Styrene (SBS) Elastomeric polymer thermoplastic polymer, prefabricated sheet, polyester reinforcement, weighing 180 g/m².
 - .1 Type 1, fully adhered.
 - .2 Type 2, fully adhered, loose laid.
 - .3 Class A-C plain surfaced.

- .4 Grade 1- heavy-duty service.
- .5 Top and bottom surfaces:
 - .1 Polyethylene/polyethylene.
- .6 Acceptable material: Soprabase ½ FR board with laminated base sheet or approved equal.
- .2 Cap sheet: to CGSB 37- GP-56M, Styrene-Butadiene-Styrene (SBS) Elastomeric polymer thermoplastic polymer, prefabricated sheet, polyester reinforcement, weighing 250 g/m2.
 - .1 Type 1, fully adhered.
 - .2 Class A- granule surfaced.
 - .3 Grade heavy-duty surface.
 - .4 Bottom surface polyethylene.
 - .5 Acceptable material: Sopralene Flam 250 or approved equal, granulated, colour from standard range (non-metallic) colours.
- 2.2 Insulating Fibreboard
 - .1 To CAN/CSA-A247, Type 1 roof board, surface coated, 6.4 mm thick.
 - .1 Acceptable material: Soprabase or approved equal.
- 2.3 Membrane Flashing
 - .1 Acceptable material: Soprabase or approved equal.
- 2.4 Sealers
 - .1 Plastic cement: asphalt, SBS to CAN/CGSB-37.5, to CGSB 37-GP-19M.
 - .1 Acceptable material: Sopramastic, or approved equal.
 - .2 Sealing compound: to CAN/CGSB- 37.29, rubber asphalt type.
 - .1 Acceptable material: Sopramastic, or approved equal.
 - .3 Sealants: Sopramastic, or approved equal.
- 2.5 Fasteners
 - .1 Insulation to deck: fasteners and 50mm plates minimum must meet Factory Mutual 4470 Standard for wind uplift and corrosion resistance.
- PART 3 EXECUTION**
- 3.1 Workmanship
 - .1 Do roofing Work in accordance with applicable standard in Canadian Roofing Contractors Association (CRCA) Roofing Specifications Manual.
 - .2 Do priming for asphalt roofing in accordance with CGSB 37-GP-15M.
- 3.2 Protection
 - .1 Cover walls and adjacent Work where materials hoisted or used.
 - .2 Use warning signs and barriers. Maintain in good order until completion of Work.
 - .3 Clean off drips and smears of bituminous material immediately.

- .4 Dispose of rainwater off roof and away from face of building until roof drains or hoppers are installed and connected.
 - .5 Protect roof from traffic and damage. Comply with precautions deemed necessary by Contract Administrator.
 - .6 At end of each day's Work or when stoppage occurs due to inclement weather, provide protection for completed Work and material out of storage.
- 3.3 Examination Of Roof Decks
- .1 Examine roof decks and immediately inform Contract Administrator in writing of defects.
 - .2 Inform Contrast Administrator 24 hours prior to beginning Work.
 - .3 Prior to commencement of Work, ensure:
 - .1 Decks are firm, straight, smooth, fry, free of snow, ice or frost, and swept clean of dust and debris.
 - .2 Curbs have been built.
 - .3 Roof drains have been installed at proper elevations relative to finished roof surface.
 - .4 Plywood and lumber nailer plates have been installed to deck, walls and parapets as indicated.
- 3.4 Exposed Membrane Roofing Application
- .1 Base sheet application.
 - .1 Fasten boards mechanically in conformance with illustrations in Specifications Manual.
 - .2 All panels must be in perfect condition, without any significant differences in level, and must be adhered on all their surfaces completely.
 - .3 Complete side pals sealing by torching seal and overlaps in a similar fashion.
 - .4 All vertical joints between substrate and boards will be staggered vertically and horizontally.
 - .2 Cap sheet application
 - .1 Starting at low point on roof, perpendicular to slope, unroll cap sheet, align and re-roll from both ends.
 - .2 Unroll and embed cap sheet in uniform coating of asphalt applied at rate of 1.2 kg/m², EVT at point of contact.
 - .3 Unroll and torch cap sheet onto base sheet taking care not to burn membrane or its reinforcement.
 - .4 Lap sheets 75 mm minimum for side laps and 150 mm minimum for end laps. Offset joints in cap sheet 300 mm minimum from those in base sheet.
 - .5 Application to be free of blisters, fishmouths, and wrinkles
 - .6 Do membrane application in accordance with manufacturers recommendations.
 - .3 Flashings
 - .1 Complete installation of flashing base sheet stripping prior to installing membrane cap sheet.

- .2 Torch cap sheet onto substrate in 1 metre wide strips.
- .3 Lap flashing base sheet to membrane base sheet minimum 150 mm and seal by torch welding.
- .4 Lap flashing cap sheet to membrane cap sheet 250 mm minimum and torch weld.
- .5 Provide 75 mm minimum side lap and seal.
- .6 Properly secure flashings to their support, without sags, blisters, fishmouths or wrinkles.
- .7 Do Work in accordance with manufacturers recommendations.

PART 1 GENERAL

- 1.1 Related Sections
 - .1 Submittal Procedures Section 01 33 00
- 1.2 References
 - .1 National Roofing Contractors Association (NDCA) Roofing and Waterproofing Manual.
 - .2 SAMCNA- Architectural Sheet Metal Manual.
- 1.3 Work Included
 - .1 The Work included under this section shall conform to the definitions in the “Manitoba Trade Definition” handbook produced by the Winnipeg Construction Association.
- 1.4 Submittals
 - .1 Submit shop drawings in accordance with Section 01 33 00 – Submittal Procedures.
 - .2 Indicate on shop drawings, dimensioning, panel layout, general construction details, anchorages and method of anchorage, and method of installation.
 - .3 Submit samples to requirements of Section 01 33 00 – Submittal Procedures.

PART 2 PRODUCTS

- 2.1 Materials
 - .1 ASTM A 446 Grade E with designation G90 for pre-painted material. V.I.C/Elite Residential Roofing System. Colorite – VW6073 – dark green.
 - .2 Air Vapour barrier as in Section 07 27 00.
- 2.2 Accessories
 - .1 Sealants: Manufacturer’s standard type suitable for use in conjunction with installation of roofing panel; non-staining, non-corrosive, non-shrinking and non-sagging, ultra-violet and ozone resistant for exterior applications. Colour to match siding colour.
 - .2 Fasteners: galvanized steel with fibreglass reinforced nylon head and soft neoprene washer, at exposed locations. Finish exposed fasteners same as flashing metal.
- 2.3 Quality Assurance
 - .1 Perform work in accordance with SMACNA and NRCA standard details and requirements.
- 2.4 Component Fabrication
 - .1 Roof peek cap detail must be installed in accordance with the manufacturer’s instructions and approval.
 - .2 Internal and external corners: same materials material thickness and finish as roofing brake formed. Exposed fasteners are to have same finish as roofing. Pop rivets to be stainless steel pre-finished.
 - .3 Flashings, closures and trim pieces: same material, and where exposed of same sheet stock; brake formed to required profiles.

PART 3 EXECUTION

- 3.1 Pre-Installation Conference
 - .1 Section 01 33 00: Convene one week prior to commencing Work of this section.
- 3.2 Installation
 - .1 Install preformed metal roofing in accordance with manufacturer's recommendations.
 - .2 Fabrication of exposed roofing components on site is not permitted.
 - .3 Exercise care when cutting roofing on site, to ensure cuttings do not remain on finish surfaces. All cuts to be cleaned with cut edge filed smooth or hand trimmed.
 - .4 Protect roofing surfaces in contact with cementitious materials and other dissimilar metals with bituminous paint. Allow protective coating to dry prior to installing members.
 - .5 Permanently fasten roofing system to structural supports, properly aligned, levelled and plumb. Maximum offset from true alignment between adjacent members butting or in line to be 2 mm. Maximum variations from plane or location indicated on drawings to be 3 mm.
 - .6 Locate end laps over supports. End lap panels minimum 50 mm. Ensure side-laps are over firm bearings.
 - .7 Install sealant where required to arrest direct weather penetration.
 - .8 Complete installation is to be free of rattles, noise due to thermal movement, and wind whistles.
 - .9 Built In Gutters
 - .10 Conform to SMACNA details, Plates 4, 9, 10, and 22.

PART 1 GENERAL

1.1 Work Included

- .1 The Work included under this section shall conform to the industry standard and be accepted by the local construction and trade associations.

PART 2 PRODUCTS

2.1 Sheet Materials

- .1 Pre-coated Galvanized Steel: ASTM A525, Z275 zinc coating; 0.6 mm (24 ga.) core steel in all installed locations higher than 2 meters, 1.23 mm (18 ga.) core steel in all installed locations at or lower than 2 meters, shop pre-coated galvalume.
- .2 Galvalume sheet steel: commercial quality to ASTM A 653 with Z275 designation zinc coating, 24 ga. thickness.
- .3 Fascia: Pre-coated Galvalume Steel: ASTM A525, Z275 zinc coating; 0.6 mm (24 ga.) core steel in all installed shop pre-galvanized.

2.2 Accessories

- .1 Fastener: Galvanized steel with fibreglass reinforced nylon head and soft neoprene washer at exposed locations. Finish exposed fasteners same as flashing metal.
- .2 Sealant: Silicone; colour-grey where not exposed to site and to match adjacent materials where exposed.
- .3 Tape: isobutyl, colour grey-3x25.
- .4 Fasteners: same material as sheet metal to CSA B111, flat head roofing nails.
- .5 Washers: of same material as sheet metal, 1 mm thick with rubber packings.
- .6 Isolation coating: to CAN/CGSB-1.108.
- .7 Isolate dissimilar metals from reacting.

2.3 Fabrication

- .1 Form sections true to shape, accurate in size, square, and free from distortion or defects.
- .2 Fabricate cleats, clips, and starter strips of same material as sheet, inter-lockable with sheet.
- .3 Form pieces in longest practical lengths.
- .4 Hem exposed edges on underside 13 mm; miter and seam corners.
- .5 Form material with flat lock seam.
- .6 Seal all joints with silicone.
- .7 Fabricate corners from one piece with minimum 450 mm long legs; solder for rigidity, seal with silicone sealant.
- .8 Fabricate vertical faces with bottom edge formed outward 6 mm and hemmed to form drip.
- .9 On exposed faces, return drip edge hem back to form interlock with concealed clip. Provide continuous clips at all exposed faces.
- .10 Fabricate flashings to allow toe to extend 50 mm over roofing. Return and brake edges.

PART 3 EXECUTION

3.1 Inspection

- .1 Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
- .2 Verify membrane termination and base flashings are in place, sealed and secure.
- .3 Beginning of installation means acceptance of existing conditions.

3.2 Preparation

- .1 Field measure site conditions prior to fabricating Work.
- .2 Install starter and edge strips, and cleats before starting installation.

3.3 Installation

- .1 Install surface mounted reglets true to lines and levels. Seal top of reglets with sealant.
- .2 Secure flashings in place using concealed continuous clip fasteners at all visible flashings. Use exposed fasteners only in locations not ordinarily visible (e.g. – inside parapet walls). All exposed fasteners must be on vertical surfaces.
- .3 Apply plastic cement compound between metal flashings and felt flashings.
- .4 Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- .5 Seal metal joints watertight.
- .6 Clean any drippage and spills of surplus sealant or plastic cement from adjacent surfaces and make good any damage caused by the Work.

PART 1 GENERAL

- 1.1 Related Work
 - .1 Fire stopping and smoke seals within mechanical assemblies (i.e. inside ducts, dampers) and electrical assemblies (i.e. inside cable trays) are specified in Division 15 and 16 respectively.
- 1.2 References
 - .1 Underwriter's Laboratories of Canada (ULC)
 - .1 ULC-S115-1995, Fire Tests of Firestop Systems.
- 1.3 Samples
 - .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- 1.4 Shop Drawings
 - .1 Submit shop drawings in accordance with Section 01 33 00- Submittal Procedures.
 - .2 Submit shop drawings to show proposed material, reinforcement, anchorage, fastenings and method of installation. Construction details should accurately reflect actual job conditions.
- 1.5 Product Data
 - .1 Submit product data in accordance with Section 01 33 00- Submittal Procedures.
 - .2 Submit manufacturer's product data for materials and prefabricated devices, providing descriptions are sufficient for identification at job site. Include manufacturer's printed instructions for installation.

PART 2 PRODUCTS

- 2.1 Materials
 - .1 Fire stopping and smoke seal systems: in accordance with ULC-S115.
 - .1 Asbestos-free materials and systems capable of maintaining an effective barrier against flame, smoke and gases on compliance with requirements of ULC-S115 and not to exceed opening sizes for which they are intended.
 - .2 Firestop system rating: 1½ hour.
 - .2 Service penetration assemblies: certified by ULC in accordance with ULC-S115 and listed in ULC Guide No.40 U19.
 - .3 Service penetration firestop components: certified by ULC in accordance with ULC-S115 and listed in ULC Guide No. 40 U19.13 and ULC Guide No. 40 U19.15 under the Label Service of ULC.
 - .4 Fire-resistance rating of installed fire stopping assembly in accordance with NBC.
 - .5 Fire stopping and smoke seals at openings intended for ease of re-entry such as cables: elastomeric seal.
 - .6 Fire stopping and smoke seals at openings around penetrations for pipes, ductwork and other mechanical items requiring sound and vibration control: elastomeric seal.
 - .7 Primers: to manufacturer's recommendation for specific material, substrate, and end use.

- .8 Water (if applicable): potable, clean and free from injurious amounts of deleterious substances.
- .9 Damming and backup materials, supports and anchoring devices: to manufacturer's recommendations, and in accordance with tested assembly being installed as acceptable to authorities having jurisdiction.
- .10 Sealants for vertical joints: non-sagging.

PART 3 EXECUTION

3.1 Preparation

- .1 Examine sizes and conditions of voids to be filled to establish correct thickness and installation of materials. Ensure that substrates and surfaces are clean, dry, and frost free.
- .2 Prepare surfaces in contact with fire stopping materials and smoke seals to manufacturer's instructions.
- .3 Maintain insulation around pipes and ducts penetrating fire separation without interruption to vapour barrier.
- .4 Mask where necessary, to avoid spillage and over coating onto adjoining surfaces and remove stains on adjacent surfaces.

3.2 Installation

- .1 Install fire stopping and smoke seal material and components in accordance with ULC certification and manufacturer's instructions.
- .2 Seal holes or voids made by through penetrations, poke-through termination devices, and un-penetrated openings or joints to ensure continuity and integrity of fire separation are maintained.
- .3 Provide temporary forming as required and remove forming only after materials have gained sufficient strength and after initial curing.
- .4 Tool or trowel exposed surfaces to a neat finish.
- .5 Remove excess compound promptly as Work progresses and upon completion.

3.3 Inspection

- .1 Notify Contract Administrator when ready for inspection and prior to concealing or enclosing firestopping materials and service penetration assemblies.

3.4 Schedule

- .1 Firestop and smoke seal at:
 - .1 Penetrations through fire-resistance rated masonry, concrete, and gypsum board partitions and walls.
 - .2 Top of fire-resistance rated masonry and gypsum board partitions.
 - .3 Control and sway joints in fire-resistance rated masonry and gypsum board partitions and walls.
 - .4 Penetrations through fire-resistance rated floor slabs, ceilings and roofs.
 - .5 Openings and sleeves installed for future use through fire separations.
 - .6 Around mechanical and electrical assemblies penetrating fire separations.

- .7 Rigid ducts: greater than 129 cm²: fire stopping to consist of bead of fire stopping material between retaining angle and fire separation and between retaining angle and duct, on each side of fire separation.

3.5 Clean Up

- .1 Remove excess materials and debris and clean adjacent surfaces immediately after application.
- .2 Remove temporary dams after initial set of fire stopping and smoke seal materials.

PART 1 GENERAL

- 1.1 References
- .1 CAN/CGSB-19.1-M87, Putty, Linseed Oil Type.
 - .2 CAN/CGSB-19.2-M87, Glazing Compound, Non-hardening, Modified Oil Type.
 - .3 CGSB-19-GP-5M-76, Sealing Compound, One Component, Acrylic Base.
 - .4 CAN/CGSB-19.6-M87, Caulking Compound, Oil Base.
 - .5 CAN/CGSB-19.3-M87, Sealing Compound, One Component, Elasmometric Chemical Curing.
 - .6 CAN/CGSB-19-GP-14M-76, Sealing Compound, One Component, Butyl-Polyisobutylene Polymer Base, Solvent Curing.
 - .7 CAN/CGSB-19.17-M90, One Component Acrylic Emulsion Base Sealing Compound.
 - .8 CAN/CGSB-19.18-M87, Sealing Compound, One Component, Silicone Base, Solvent Curing.
 - .9 CAN/CGSB-19.21-M87, Sealing and Bedding Compound Acoustical.
 - .10 CAN/CGSB-19.22-M89, Mildew Resistant Sealing Compound for Tubs and Tiles.
 - .11 CAN/CGSB-19.24-M90, Multi-Component, Chemical Curing Sealing Compound.
- 1.2 Samples
- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- 1.3 Delivery, Storage And Handling
- .1 Deliver, Handle, store and protect materials in accordance with Section 01 61 00 – Product Requirements.
 - .2 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels intact. Protect from freezing, moisture, water and contact with ground or floor.
- 1.4 Environmental And Safety Requirements
- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials and regarding labelling and provision of material safety data sheets acceptable to Labour Canada.
 - .2 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.
 - .3 Ventilate Work areas as directed by Contract Administrator by use of approved portable supply and exhaust fans.

PART 2 PRODUCTS

- 2.1 Sealant Materials
- .1 Sealants and caulking compounds must:
 - .1 Meet or exceed all applicable governmental and industrial safety and performance standards.

- .2 Be manufactured and transported in such a manner that all steps of the process, including the disposal of waste products arising there from, will meet the requirements of all applicable governmental acts, bylaws and regulations including, for facilities located in Canada, The Fisheries Act and the Canadian Environmental Protection Act (CEPA).
 - .2 Sealant and caulking compounds must not be formulated or manufactured with aromatic solvents, fibrous talc or asbestos, formaldehyde, halogenated solvents, mercury, lead, cadmium, hexavalent chromium, barium or their compounds, except barium sulfate.
 - .3 Sealant and caulking compounds must not contain a total of volatile organic compounds (VOC) in excess of 5% by weight as calculated from records of the amounts of constituents used to make the product.
 - .4 Sealant and caulking compounds must be accompanied by detailed instructions for proper application so as to minimize health concerns and maximize performance, and information describing proper disposal methods.
 - .5 Caulking that emits strong odours, contains toxic chemicals or is not certified, as mould resistant shall not be used in air handling units.
 - .6 When low toxicity caulks are not possible, confine usage to areas which off-gas to the exterior, are contained behind air barriers, or are applied several months before occupancy to maximize off-gas time.
 - .7 In the selection of the products and materials of this section preference will be given to those with the following characteristics: non-flammable, low Volatile Organic Compound (VOC) content, manufactured without compounds which contribute to ozone depletion in the upper atmosphere, does not contain methylene chloride, does not contain chlorinated hydrocarbons.
 - .8 Sealants acceptable for use on this project except CAN/CGSB-19.1 and CAN/CGSB-19.18 must be listed on CGSB Qualified Products List issued by CGSB Qualification Board for Joint Sealants. Where sealants are qualified with primers, use only these primers.
- 2.2 Sealant Material Designations
- .1 Neoprene or Butyl Rubber.
 - .1 Round solid rod, Shore hardness 70.
 - .2 High Density Foam
 - .1 Extruded closed cell polyvinyl chloride (PVC), extruded polyethylene, closed cell, Shore A hardness 20, tensile strength 140 to 200kPa, extruded polyolefin foam, 32 kg/m³ density, or neoprene foam backer, size as recommended by manufacturer.
 - .3 Bond Breaker Tape
 - .1 Polyethylene bond breaker tape, which will not bond to sealant.
 - .4 Polyurethane Sealant
 - .1 CAN 19.13-M87; single component, high performance, non-sagging, low modulus, non-staining and non-bleeding. To be used at all exterior and interior control/expansion joints and on the exterior side of all window/door frames perimeters. Colour as selected by the Contract Administrator. Standard of acceptance: Tremco Dymonic or approved equal.
 - .5 Latex Sealant
 - .1 CGSB19GP-17M; single component, non-sagging, non-bleeding, moisture curing. To be used on the interior side of all exterior window/door frame

perimeters and at all interior window/door frame perimeters. Colour as selected by the Contract Administrator. Standard of acceptance: Tremco 200 latex or approved equal.

.6 Silicone Sealant

- .1 CGSB 19-GP-9M; single component, fungus resistant, non-sagging, non-staining, non-bleeding, moisture curing. To be used in all sloped glazing, skylights, and at all joints between vanities, countertops, backsplashes, and adjacent wall materials and at the joint between bathtubs and finish flooring in washrooms. Colour as selected by the Contract Administrator. Standard of acceptance: Tremco Proglaze or approved equal.

2.3 Joint Cleaner

- .1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant recommended by sealant manufacturer.
- .2 Primer: as recommended by manufacturer.

PART 3 EXECUTION

3.1 Protection

- .1 Protect installed Work of other trades from staining or contamination.

3.2 Preparation Of Joint Surfaces

- .1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.
- .2 Clean bonding joint surfaces of harmful matter substances including dust, rust, oil, grease and other matter, which may impair Work.
- .3 Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.
- .4 Ensure joint surfaces are dry and frost free.
- .5 Prepare surfaces in accordance with manufacturer's directions.

3.3 Priming

- .1 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.
- .2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

3.4 Backup Material

- .1 Apply bond breaker tape where required to manufacturer's instructions.
- .2 Install joint filler to achieve correct joint depth and shape, with approximately 30% compression.

3.5 Mixing

- .1 Mix materials in strict accordance with sealant manufacturer's instructions.

3.6 Application

- .1 Sealant
- .1 Apply sealant in accordance with manufacturer's written instructions.

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- .2 Mask edges of joint where irregular surface or sensitive joint border exists to provide neat joint.
 - .3 Apply sealant in continuous beads.
 - .4 Apply sealant using gun with proper size nozzle.
 - .5 Use sufficient pressure to fill voids and joints solid.
 - .6 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, and embedded impurities.
 - .7 Tool exposed surfaces before skinning begins to give slightly concave shape.
 - .8 Remove excess compound promptly as Work progresses and upon completion.
- .2 Curing
- .1 Cure sealants in accordance with sealant manufacturer's instructions.
 - .2 Do not cover up sealants until proper curing has taken place.
- .3 Clean Up
- .1 Clean adjacent surfaces immediately and leave Work neat and clean.
 - .2 Remove excess and droppings, using recommended cleaners as Work progresses.
 - .3 Remove masking tape after initial set of sealant.