

## **Part 1 General**

### **1.1 SUMMARY**

- .1 Work under this contract includes, but is not necessarily limited to:
  - .1 Surface preparation of substrates as required for acceptance of painting, and making good surfaces to limits defined under Master Painters Institute (MPI) preparation requirements.
  - .2 Painting of exposed to view mechanical (heating, ventilating and plumbing) ductwork and equipment, and electrical work, unless pre-finished.
- .2 Contractor to do all work of this Section in a professional manner and clean all areas affected by painting and coating. All work is to pass the inspection of the Contract Administrator.

### **1.2 RELATED SECTIONS**

- .1 Section 08 11 00 – Metal Doors and Frames.
- .2 Section 09 29 00 – Gypsum Board.
- .3 Section 23 05 53.01 – Mechanical Identification.
- .4 Electrical Sections.

### **1.3 REFERENCES**

- .1 Master Painters Institute (MPI).
  - .1 MPI Architectural Painting Specification Manual, including Identifiers, Evaluation, Systems, Preparation and Approved Product List (hereafter referred to as MPI Painting Manual).

### **1.4 SUBMITTALS**

- .1 Samples.
  - .1 Submit samples in accordance with Section 01 33 00.
  - .2 Provide 300 mm x 300 mm sample of each paint colour specified in gloss/sheen required to MPI Painting Manual standards for review and approval.
  - .3 Once approved, samples become acceptable standard of finish quality and workmanship for similar on-site work.
- .2 Quality Assurance/Control Submittals.
  - .1 Submit 2 sets of Material Safety Data Sheets (MSDS) prior to commencement of work for review and for posting at job site as required.

## **1.5 QUALITY ASSURANCE**

- .1 Qualifications.
  - .1 Contractor to have minimum of 5 years proven satisfactory experience and show proof before commencement of work that he will maintain qualified crew of painters throughout duration of work.
  - .2 Engage only qualified journeypersons, as defined by local jurisdiction. Apprentices may be employed provided they work under direct supervision of qualified journeyperson in accordance with trade regulations.

## **1.6 DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver all painting products in sealed, original labeled containers bearing manufacturer's name, brand name, type of paint or coating and colour designation, standard compliance, materials content as well as mixing and/or reducing and application requirements.
- .2 Store all paint materials in original labeled containers in secure (lockable), dry, heated and well ventilated single designated area meeting minimum requirements of both paint manufacturer and authorities having jurisdiction and at minimum ambient temperature of 7 degrees C. Only material used on this project to be stored on site.
- .3 Where toxic and/or volatile/explosive/flammable materials are being used, provide adequate fireproof storage lockers and take all necessary precautions and post adequate warnings (e.g. no smoking) as required.
- .4 Take all necessary precautionary and safety measures to prevent fire hazards and spontaneous combustion and to protect environment from hazard spills. Store materials that constitute fire hazard (paints, solvents, drop clothes, etc.) in suitable closed and rated containers and removed from site on daily basis.
- .5 Comply with requirements of authorities having jurisdiction, in regard to use, handling, storage and disposal of hazardous materials.
- .6 Cleaning and Waste Management in accordance with Section 01 74 00.

## **1.7 SITE CONDITIONS**

- .1 Apply paint only to dry, clean, properly cured and adequately prepared surfaces in areas where dust is no longer generated by construction activities such that airborne particles will not affect quality of finished surfaces.

## **1.8 MAINTENANCE MATERIALS**

- .1 At project completion provide 1 liter of each type and colour of paint from same production run (batch mix) used in unopened cans, properly labeled and identified for later use in maintenance. Store where directed.

## **Part 2 Products**

### **2.1 MANUFACTURERS**

- .1 Acceptable Products.
  - .1 Galvanized Metal (doors, frames, pipes): INT 5.3N, Institutional Low Odor/VOC (MPI Gloss Level 5).
    - .1 Primer, Rust-Inhibited, Water Based – MPI #107.
      - .1 Sherwin Williams Pro-Industrial Pro-Cryl Universal Acrylic Primer B66-310 Series.
    - .2 Light Industrial Coating, Interior, Water Based, Semi-Gloss (MPI Gloss Level 5) – MPI #147 (2 coats).
      - .1 Sherwin Williams Pro-Industrial 0 VOC Acrylic (G5).
  - .2 Gypsum Board (gypsum board wall surfaces at entries): INT 9.2F, Epoxy-Modified Latex (gloss level as specified).
    - .1 Primer Sealer, Latex, Interior – MPI #50.
      - .1 Sherwin Williams ProGreen 200 Primer B28WQ8600.
    - .2 Epoxy-Modified Latex, Interior, Semi-Gloss (MPI Gloss Level 5) – MPI #115.
      - .1 Sherwin Williams Waterbased Catalyzed Epoxy B70W211, B60V15 & V25.

### **2.2 MATERIALS**

- .1 Only materials (primers, paints, etc.) listed in latest edition of MPI Approved Product List (APL) are acceptable for use on this project. Supply all such material from single manufacturer for each system used.
- .2 Other materials such as thinners, solvents, etc. to be highest quality product of MPI listed manufacturer and compatible with paint materials being used as required.
- .3 All paint materials to have good flowing and brushing properties and dry or cure free of blemishes, sags, air entrapment, etc. Refer to Field Quality Control/Standard of Acceptance requirements specified in this Section.
- .4 Paints and coatings to meet flame spread and smoke developed ratings designated by local Code requirements and/or authorities having jurisdiction.

### **2.3 MIXING AND TINTING**

- .1 Supply all paint ready-mixed and pre-tinted. Re-mix all paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and colour and gloss uniformity.

## 2.4 GLOSS/SHEEN RATINGS

- .1 Paint gloss: defined as sheen rating of applied paint in accordance with following MPI values:

<b>Gloss Level</b>	<b>Description</b>	<b>Units @ 60 degrees</b>	<b>Units @ 85 degrees</b>
<b>G1</b>	Matte or Flat finish	0 to 5	10 max.
<b>G2</b>	Velvet finish	0 to 10	10 to 35
<b>G3</b>	Eggshell finish	10 to 25	10 to 35
<b>G4</b>	Satin finish	20 to 35	35 min.
<b>G5</b>	Semi-Gloss finish	35 to 70	
<b>G6</b>	Gloss finish	70 to 85	
<b>G7</b>	High-Gloss finish	> 85	

## Part 3 Execution

### 3.1 PREPARATION OF SURFACES

- .1 Cover or remove such items as grills, lights, smoke and heat detectors, fire pull stations, temperature sensors, etc, to ensure that no paint is applied to these items.
- .2 Remove all dust, dirt, and other surface debris by vacuuming or wiping with dry clean clothes.
- .3 Protect all adjacent interior surfaces and areas, including rating and instruction labels on doors, frames, equipment, piping, etc., from painting operations and damage by drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.
- .4 Move and cover all furniture and portable equipment as required to carry out painting operations. Replace as painting operations progress.

### 3.2 APPLICATION

- .1 Apply paint in workmanlike manner using skilled and trade qualified applicators as noted under Quality Assurance.
- .2 Painting coats specified are intended to cover surfaces satisfactorily when applied at proper consistency and in accordance with manufacturer's recommendations.
- .3 Sand and dust between each coat to provide anchor for next coat and to remove defects visible from distance up to 1000 mm.

- .4 Do not apply finishes on surfaces that are not sufficiently dry. Unless manufacturer's directions state otherwise, ensure each coat is sufficiently dry and hard before following coat is applied.

### **3.3 MECHANICAL/ELECTRICAL EQUIPMENT AND RELATED SURFACES**

- .1 Mechanical Identification: in accordance with Section 23 05 53.01.
- .2 Electrical Identification: in accordance with Electrical Sections.

### **3.4 FIELD QUALITY CONTROL/STANDARD OF ACCEPTANCE**

- .1 Inspect all surfaces, preparation and paint applications.
- .2 Painted interior surfaces: considered to lack uniformity and soundness if any of the following defects are apparent:
  - .1 Brush/roller marks, streaks, laps, runs, sags, drips, heavy stippling, hiding or shadowing by inefficient application methods, skipped or missed areas, and foreign materials in paint coatings.
  - .2 Evidence of poor coverage at rivet heads, plate edges, lap joints, crevices, pockets, corners and re-entrant angles.
  - .3 Damage due to touching before paint is sufficiently dry or any other contributory cause.
  - .4 Damage and/or contamination of paint due to blown contaminants (dust, spray paint, etc.).
- .3 Painted surfaces: considered unacceptable if any of the following are evident under final lighting source (including daylight) for interior surfaces:
  - .1 Visible defects are evident on vertical and horizontal surfaces when viewed at normal viewing angles from a distance of not less than 1000 mm.
  - .2 When the final coat on any surface exhibits a lack of uniformity of color, sheen, texture, and hiding across full surface area.
- .4 Make good painted surfaces rejected by Contract Administrator. Small affected areas may be touched up. Repaint large affected areas or areas without sufficient dry film thickness of paint. Remove runs, and sags of damaged paint by scraper or by sanding prior to application of paint.

### **3.5 PROTECTION**

- .1 Protect all interior surfaces and areas, including all adjacent building surfaces and equipment and any labels and signage from painting operations and damage by drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.
- .2 As painting operations progress, place "Wet Paint" warning signs in occupied areas to approval of Contract Administrator.

### **3.6 CLEANING**

- .1 Remove all paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
- .2 Remove combustible rubbish materials and empty paint cans each day and safely dispose of same in accordance with requirements of authorities having jurisdiction.
- .3 Clean equipment and dispose of wash water/solvents as well as all other cleaning and protective materials (e.g. rags, drop cloths, masking papers, etc.), paints, thinners, etc. in accordance with safety requirements of authorities having jurisdiction.

END OF SECTION