

SECTION 099123  
INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following interior substrates:
  - 1. Concrete (vertical and overhead).
  - 2. Concrete masonry units (CMU).
  - 3. Steel.
  - 4. Galvanized metal.
  - 5. Aluminum (not anodized or otherwise coated).
  - 6. Wood.
  - 7. Gypsum board.
  - 8. Cotton or canvas insulation covering.
  - 9. Wood stain and transparent finishes.
  - 10. Concrete floors.
- B. This Section includes surface preparation and the application of wood finishes on the following interior substrates:
  - 1. Exposed dimension lumber (rough carpentry).
  - 2. Dressed lumber (finish carpentry).
  - 3. Exposed wood panel products.
- C. Related Sections include the following:
  - 1. Division 05 Sections for shop priming of metal substrates with primers specified in this Section.
  - 2. Section 099113 "Exterior Painting" for surface preparation and the application of paint systems on exterior substrates.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Sustainable Design (LEED) Submittals: Refer to Section 018113.14 and comply with requirements when applicable.
- C. Samples for Verification: For each type of paint system and in each color and gloss of topcoat indicated.

1. Submit Samples on rigid backing, 8 inches square.
2. Step coats on Samples to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

D. Product List: For each product indicated, include the following:

1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

#### 1.5 PROJECT CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

#### 1.6 EXTRA MATERIALS

A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.

1. Quantity: Furnish an additional 5 percent, but not less than 1 gal. of each material and color applied.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

A. Basis of Design: Subject to compliance with requirements provide paints by the Sherwin Williams Company or comparable products by the following:

1. Benjamin Moore & Co.
2. Pratt and Lambert.

#### 2.2 PAINT, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Colors: As indicated on the Drawings.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
1. Concrete: 12 percent.
  2. Masonry (Clay and CMU): 12 percent.
  3. Wood: 15 percent.
  4. Gypsum Board: 12 percent.
  5. Plaster: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

#### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
  2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.

- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
  - 1. Concrete Floors: Remove oil, dust, grease, dirt, and other foreign materials. Comply with SSPC-SP-13/NACE 6 or ICRI No. 310.2. Perform the following minimum preparation. Perform additional methods if the following does not produce the adequate profile and porosity.
    - a. Use floor buffing machine or power tool with 60 to 80 Grit pads for sanding concrete surfaces. Vacuum clean surfaces of materials removed by sanding.
- E. Clay Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content of surfaces or alkalinity of mortar joints to be painted exceed that permitted in manufacturer's written instructions.
- F. Concrete Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- G. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.
- H. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- I. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- J. Aluminum Substrates: Remove surface oxidation.
- K. Wood Substrates (Paint):
  - 1. Scrape and clean knots and apply coat of knot sealer before applying primer.
  - 2. Sand surfaces that will be exposed to view and dust off.
  - 3. Prime edges, ends, faces, undersides, and backsides of wood.
  - 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.
- L. Wood Substrates (Staining and Transparent Finishes):
  - 1. Clean and prepare surfaces to be finished according to manufacturer's written instructions for each particular substrate condition and as specified.
    - a. Remove surface dirt, oil, or grease by washing with a detergent solution; rinse thoroughly with clean water and allow to dry. Remove grade stamps and pencil marks by sanding lightly. Remove loose wood fibers by brushing.
    - b. Remove mildew by scrubbing with a commercial wash formulated for mildew removal and as recommended by stain manufacturer.
    - c. Countersink steel nails, if used, and fill with putty tinted to final color to eliminate rust leach stains.
  - 2. Apply wood filler paste to open-grain woods, as defined in "MPI Architectural Painting Specification Manual," to produce smooth, glasslike finish.

- M. Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth.
  - 1. Existing painted gypsum board substrates must be thoroughly cleaned to remove all dirt, oils and mold or mildew. Lightly sand surfaces after cleaning. Primer is to still be applied as part of the scheduled paint system.
- N. Cotton or Canvas Insulation Covering Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.

### 3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
  - 1. Use applicators and techniques suited for paint and substrate indicated.
  - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  - 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
  - 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
  - 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces including, but not limited to, the following:
  - 1. Mechanical Work:
    - a. Uninsulated metal piping.
    - b. Uninsulated plastic piping.
    - c. Pipe hangers and supports.
    - d. Tanks that do not have factory-applied final finishes.
    - e. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
    - f. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
    - g. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
  - 2. Specific Mechanical Item Paint Colors:
    - a. Fire Protection metal piping to be painted red.

- b. Natural Gas metal piping to be painted safety yellow

3. Electrical Work:

- a. Electrical equipment that is indicated to have a factory-primed finish for field painting.
- b. Electrical conduit that is surface mounted on painted walls.

3.4 FIELD QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when paints are being applied:

- 1. Owner may engage the services of a qualified testing agency to sample paint materials being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
- 2. Testing agency will perform tests for compliance with product requirements.
- 3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying-paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

A. Concrete Substrates (Vertical and overhead):

- 1. Latex System.
  - a. Prime Coat: One coat Loxon Concrete & Masonry Primer/Sealer, 5.3 - 8.0 mils WFT/2.1 - 3.2 mils DFT.
  - b. Topcoats: Two coats Pro Mar 200 Latex Zero VOC eggshell, 4 mils WFT/1.6 mils DFT per coat.
- 2. Water Based Epoxy Latex System (Where indicated):
  - a. Prime Coat: One coat Loxon Concrete & Masonry Primer/Sealer, 5.3 - 8.0 mils WFT/2.1 - 3.2 mils DFT.

- b. Topcoat: Two coats Pro Industrial Water Based Catalyzed Epoxy B73-360 Series Eg-Shel, 5-12 mils WFT/2-5 mils DFT per coat.

B. CMU Substrates:

1. Latex System (Standard for CMU walls):

- a. Prime Coat: One coat Prep Rite Block Filler B25W25, 4 mils WFT/1.6 mils DFT.
- b. Topcoats: Two coats Pro Mar 200 Latex Zero VOC eggshell, 4 mils WFT/1.6 mils DFT per coat.

1. Water Based Epoxy System (Where indicated):

- a. Prime Coat: One coat Heavy Duty Block Filler B42W46, 18 mils WFT/10 mils DFT.
- b. Topcoat: Two coats Pro Industrial Water Based Catalyzed Epoxy B73-360 Series Eg-Shel, 5-12 mils WFT/2-5 mils DFT per coat.

C. Steel Substrates:

1. Prime Finish General Note: Manufacturer of products will typically have standard primer applied. Primer to be compatible to final coatings listed or match the listed primers.

- a. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

2. Water Based Dry-Fall System (Overhead steel structure):

- a. Prime Coat: One coat Pro-Cryl Universal Primer B66-310 Series 6.5 mils WFT / 2.5 mils DFT.
- b. Topcoat: Two coats Waterborne Acrylic Dry Fall Eggshell, B42W00082-White, 5 mils WFT/ 3 mils DFT per coat.

3. Latex Over Acrylic Primer System: (Miscellaneous metal, metal doors and frames (including coated/galvannealed base metal), access doors and frames, metal light frames in wood doors and other):

- a. Prime Coat: One coat Pro-Cryl Universal Primer B66-310 Series 6.5 mils WFT/2.5 mils DFT.
- b. Topcoat: Two coats Pro Industrial Acrylic B66-650 Semi-Gloss, 2.5-4.0 mils DFT.

4. Water Based Epoxy Coating System, Two Component Epoxy (Handrails, guardrails and other items indicated to be epoxy painted):

- a. Prime Coat: One coat Pro-Cryl Universal Primer B66-310 Series 6.5 mils WFT/2.5 mils DFT.
- b. Topcoat: Two coats Pro Industrial Water Based Catalyzed Epoxy B73-360 Series Eggshell, 6.5 mils WFT/2.5 mils DFT.

D. Galvanized and Galvannealed-Metal Substrates:

1. Water-Based Dry Fall System (Metal decking and other):

- a. One coat primer per manufacturer's recommendations.

- b. Topcoat: Two coats Waterborne Acrylic Dryfall Eggshell, B42W00082-White, 5 mils WFT/3 mils DFT per coat.
      - c. Test patch for adhesion to be approved by Architect before installation.
    2. Water Based Epoxy Coating System Two Component Epoxy (Galvanized steel items indicated to be epoxy painted):
      - a. Prime Coat: One coat Pro-Cryl Universal Primer B66-310 Series 6.5 mils WFT/2.5 mils DFT.
      - b. Topcoat: Two coats Pro Industrial Water Based Catalyzed Epoxy B73-360 Series Eggshell, 6.5 mils WFT/2.5 mils DFT.
  - E. Aluminum Substrate (Not anodized or otherwise coated.):
    1. Water Based, Light Industrial Coating System:
      - a. Prime Coat: One coat Pro-Cryl Universal Primer B66-310 Series, 6.5 mils WFT / 2.5 mils DFT.
      - b. Topcoat: Two coats Pro Industrial Water Based Catalyzed Epoxy B73-360 Series Eggshell, 6.5 mils WFT/2.5 mils DFT.
  - F. Wood Substrates (Dimension lumber, finish lumber, panel products):
    1. Latex System:
      - a. Prime Coat: One coat Premium Wall & Wood Primer B28W8111, 1.8 mils DFT.
      - b. Topcoat: Two coats Pro Industrial Acrylic Semi-Gloss, 4 mils WFT/1.4 mils DFT per coat.
  - G. Gypsum Board Substrates:
    1. Latex System One (Standard for walls):
      - a. Prime Coat: One coat ProMar 200 Zero VOC Latex Primer, 4 mils WFT/1.3 mils DFT.
      - b. Topcoats: Two coats ProMar 200 Zero VOC Latex Eggshell. 4 mils WFT/1.6 mils DFT per coat.
    2. Latex System Two (Standard for soffits and ceilings):
      - a. Prime Coat: One coat ProMar 200 Zero VOC latex Primer, 4 mils WFT/1.3 mils DFT.
      - b. Topcoats: Two coats Pro Mar 200 Zero VOC Latex Flat, 4 mils WFT/1.6 mils DFT per coat.
    3. Latex System Three (Standard for walls/soffits/ceilings at wet areas and toilet rooms not indicated to be Epoxy):
      - a. Prime Coat: One coat ProMar 200 Zero VOC Latex Primer, 4 mils WFT/1.3 mils DFT.
      - b. Topcoats: Two coats ProMar 200 Zero VOC Latex Semi-Gloss. 4 mils WFT/1.8 mils DFT per coat.

4. Water Based Epoxy Coating System: (Where indicated):
    - a. Prime Coat: One coat ProMar 200 Zero VOC Latex primer 4 mils WFT/1.3 mils DFT.
    - b. Topcoats: Two coats Pro Industrial Water Pre-Catalyzed Water Based Epoxy K45-150 Series Eg-Shel [K46-150 Series Semi-Gloss], 6.5 mils WFT/2.5 mils DFT per coat.
  5. Latex System Four (Primer for Wall Coverings):
    - a. Prime Coat: One coat Multi-Purpose Latex Primer 4 mils WFT/ 1.4 mils DFT.
  6. Latex System Five (Gypsum Board Finish Level 5):
    - a. Prime Coat: One coat Builders Solution System Interior Latex Primer/Surfacers A63W100, 4 mils WFT/1.8 mils DFT.
    - b. Topcoats: Two coats Pro Mar 200 Zero VOC Latex eggshell. 4 mils WFT/1.8 mils DFT per coat.
- H. Cotton or Canvas Insulation Covering Substrates:
1. Latex System:
    - a. Prime Coat: One coat DTM Primer/Finish B66W1 5 mils WFT/2.5 mils DFT.
    - b. Topcoats: Two coats DTM Acrylic semi-gloss B66-200 6.5 mils WFT/2.5 mils DFT.
- I. Wood Substrates Stain and Transparent Finishes:
1. Waterborne Clear Acrylic Over Stain System:
    - a. Stain coat: Minwax Performance Series Tintable Wood Stain 250.
    - b. Two Finish coats: SW Minwax Water Based Oil-Modified Polyurethane, Satin, 4 mils WFT/1.7 mils DFT per coat.
  2. Waterborne Clear Acrylic.
    - a. Two Finish coats: SW Minwax Water Based Oil-Modified Polyurethane, Satin, 4 mils WFT/1.7 mils DFT per coat.
- J. Concrete Floor Substrates, Nontraffic and Traffic Surfaces (SC):
1. See substrate preparation required for concrete surfaces in Part 3, 3.2 Preparation.
  2. Water Based Concrete Floor Clear Sealer System: Basic clear concrete sealer.
    - a. First Coat: Sealer, matching topcoat.
    - b. Topcoat: Sealer, Water based, for concrete floors.
      - 1) Manufacturer/Product: Sherwin-Williams, H & C Products Group, H & C Clarishield Water Based Wet Look Sealer.
      - 2) H & C Sharkgrip Slip Resistant Additive shall be added to the final coat per manufacturer's instructions.

END OF SECTION