

SECTION 09 96 00 - HIGH-PERFORMANCE COATINGS

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.
- B. The Contractor's attention is specifically directed, but not limited, to the following documents for additional requirements:
 - 1. *Uniform General Conditions for Construction Contracts, State of Texas, 2010 (UGC).*
 - 2. *The University of Houston's Supplemental General Conditions and Special Conditions for Construction.*

1.2 SUMMARY

- A. Section includes surface preparation and application of high-performance coating systems.
- B. Related Requirements:
 - 1. Section 05 12 00 "Structural Steel Framing" for shop priming of metal substrates with primers specified in this Section.
 - 2. Section 09 91 13 "Exterior Painting" for special-use coatings and general field painting.
 - 3. Section 09 91 23 "Interior Painting" for special-use coatings and general field painting.

1.3 DEFINITIONS

- A. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- B. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include preparation requirements and application instructions.
- B. LEED Submittals (Projects authorized for LEED certification):
 - 1. Product Data for Credit EQ 4.2: For interior coatings, documentation including printed statement of VOC content.
 - 2. Laboratory Test Reports for Credit EQ 4: For interior coatings, documentation indicating that products comply with the testing and product requirements of the California

Department of Health Services "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

- C. Samples for Verification: For each type of coating 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.
 - 2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.
 - 3. VOC content.
 - 4. Include the above information in the project closeout Operation and Maintenance Manuals.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Coatings: 5 percent, but not less than 1 gal. of each material and color applied.

1.6 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.

1.7 FIELD CONDITIONS

- A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 and 95 deg F.
- B. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
- C. Do not apply exterior coatings in snow, rain, fog, or mist.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following :
1. **PPG Architectural Finishes, Inc.**
 2. **Tnemec Company, Inc..**
 3. **Substitutions:** see section 01 25 00 – Substitution Procedures.
- B. **Products:** Subject to compliance with requirements, provide one of the products listed in other Part 2 articles for the paint category indicated.

2.2 HIGH-PERFORMANCE COATINGS, GENERAL

- A. **MPI Standards:** Provide products that comply with MPI standards indicated and are listed in "MPI Approved Products List."
- B. **Material Compatibility:**
1. Provide materials for use within each coating 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 coating system, provide products recommended in writing by manufacturers of topcoat for use in coating system and on substrate indicated.
 3. Provide products of same manufacturer for each coat in a coating system.
- C. **VOC Content:** Products shall comply with VOC limits of authorities having jurisdiction and, for interior coatings applied at project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
1. Flat Paints and Coatings: 50 g/L.
 2. Nonflat Paints and Coatings: 150 g/L.
 3. Primers, Sealers, and Undercoaters: 200 g/L.
 4. Anti-Corrosive and Anti-Rust Paints Applied to Ferrous Metals: 250 g/L.
 5. Zinc-Rich Industrial Maintenance Primers: 340 g/L.
 6. Pre-Treatment Wash Primers: 420 g/L.
 7. Floor Coatings: 100 g/L.
 8. Shellacs, Clear: 730 g/L.
 9. Shellacs, Pigmented: 550 g/L.
- D. **Low-Emitting Materials:** Interior coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- E. **Colors:** As selected by Architect from manufacturer's full range .

2.3 BLOCK FILLERS

- A. Block Filler, Latex, Interior/Exterior: MPI #4.

2.4 INTERIOR PRIMERS/SEALERS

- A. Primer Sealer, Latex, Interior: MPI #50.
- B. Wood-Knot Sealer: White shellac or other sealer recommended in writing by manufacturer for this purpose.

2.5 METAL PRIMERS

- A. Primer, Zinc-Rich, Inorganic: MPI #19.
- B. Primer, Zinc-Rich, Epoxy: MPI #20.
- C. Primer, Rust-Inhibitive, Water Based: MPI #107.
- D. Primer, Epoxy, Anti-Corrosive, for Metal: MPI #101.

2.6 EPOXY COATINGS

- A. Epoxy, Gloss: MPI #77.
- B. Epoxy-Modified Latex, Interior, Gloss (Gloss Level 6): MPI #115.
- C. Epoxy, High-Build, Low Gloss: MPI #108.
- D. Epoxy Deck Coating (Slip-Resistant): MPI #82.

2.7 SOURCE QUALITY CONTROL

- A. Testing of Coating Materials: Owner reserves the right to invoke the following procedure:
 1. Owner will engage the services of a qualified testing agency to sample coating materials. Contractor will be notified in advance and may be present when samples are taken. If coating materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
 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 coating materials from Project site, pay for testing, and recoat surfaces coated with rejected materials. Contractor will be required to remove rejected materials from previously coated surfaces if, on recoating with complying materials, the two coatings are incompatible.

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 the Work.
 - 1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - a. Concrete: 12 percent.
 - b. Masonry (Clay and CMU): 12 percent.
 - c. Wood: 15 percent.
 - d. Gypsum Board: 12 percent.
- B. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- C. Plaster Substrates: Verify that plaster is fully cured.
- D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- E. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 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 hardware, covers, plates, and similar items already in place that are removable and 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.
- C. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.

1. Clean surfaces with pressurized water. Use pressure range of 1500 to 4000 psi at 6 to 12 inches.
 2. Abrasive blast clean surfaces to comply with SSPC-SP 7/NACE No. 4, "Brush-Off Blast Cleaning."
- E. Masonry Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions.
1. Clean surfaces with pressurized water. Use pressure range of 100 to 600 psi at 6 to 12 inches.
- F. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer[.] but not less than the following:
1. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."
 2. SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
 3. SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning."
- G. 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.
- H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied coatings.
- I. Aluminum Substrates: Remove loose surface oxidation.
- J. Wood Substrates:
1. Scrape and clean knots. Before applying primer apply coat of knot sealer recommended in writing by topcoat manufacturer for coating system indicated.
 2. Sand surfaces that will be exposed to view and dust off.
 3. Prime edges, ends, faces, undersides, and back sides of wood.
 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

- A. Apply high-performance coatings according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."
1. Use applicators and techniques suited for coating and substrate indicated.
 2. Coat surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, coat surfaces behind permanently fixed equipment or furniture with prime coat only.
 3. Coat back sides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.

4. Do not apply coatings over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- B. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.
- C. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner will engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.
 1. Contractor shall touch up and restore coated surfaces damaged by testing.
 2. If test results show that dry film thickness of applied coating does not comply with coating manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with coating manufacturer's written recommendations.

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 coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, 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 coated surfaces.

3.6 EXTERIOR HIGH-PERFORMANCE COATING SCHEDULE

- A. Concrete Substrates, Vertical Surfaces:
 1. Epoxy System:
 - a. Prime Coat: Epoxy, gloss[, **MPI #77**].
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Epoxy, gloss, MPI #77.
- B. Concrete Substrates, Horizontal Surfaces:

1. Epoxy Slip-Resistant Deck Coating System:
 - a. Topcoat: Epoxy deck coating (slip-resistant), MPI #82.
- C. Clay-Masonry Substrates:
 1. Epoxy System:
 - a. Prime Coat: Epoxy, gloss, MPI #77.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 2. Pigmented Polyurethane over Epoxy System:
 - a. Prime Coat: Epoxy, gloss, MPI #77.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 3. Pigmented Polyurethane System:
 - a. Prime Coat: As recommended in writing by topcoat manufacturer.
 - b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
- D. CMU Substrates:
 1. Epoxy System:
 - a. Block Filler: Block filler, epoxy, MPI #116.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 2. Pigmented Polyurethane over High-Build Epoxy System:
 - a. Block Filler: Block filler, epoxy, MPI #116.
 - b. Intermediate Coat: Epoxy, high-build, low gloss, MPI #108.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
- E. Steel Substrates:
 1. High-Build Epoxy System:
 - a. Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - b. Intermediate Coat: Epoxy, high-build, low gloss, MPI #108.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 2. Pigmented Polyurethane over Epoxy System:

- a. Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. First Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - d. Second Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
3. Pigmented Polyurethane over Epoxy Zinc-Rich Primer System:
- a. Prime Coat: Primer, zinc-rich, epoxy, MPI #20.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. First Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
4. Pigmented Polyurethane over High-Build Epoxy System:
- a. Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - b. Intermediate Coat: Epoxy, high-build, low gloss, MPI #108.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
5. Pigmented Polyurethane over Epoxy Zinc-Rich Primer and High-Build Epoxy System:
- a. Prime Coat: Primer, zinc-rich, epoxy, MPI #20.
 - b. Intermediate Coat: Epoxy, high-build, low gloss, MPI #108.
 - c. First Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - d. Second Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
6. Pigmented Polyurethane over Inorganic Zinc-Rich Primer and High-Build Epoxy System:
- a. Prime Coat: Primer, zinc-rich, inorganic, MPI #19.
 - b. Intermediate Coat: Epoxy, high-build, low gloss, MPI #108.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
- F. Galvanized-Metal Substrates:
1. Epoxy System:
 - a. Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 2. Pigmented Polyurethane System:
 - a. Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.

- b. Intermediate Coat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - 3. Pigmented Polyurethane over Vinyl Wash and Epoxy Primer System:
 - a. Prime Coat: Primer, vinyl wash, MPI #80.
 - b. Intermediate Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - c. First Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - d. Second Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
- G. Aluminum (Not Anodized or Otherwise Coated) Substrates:
 - 1. Epoxy System:
 - a. Prime Coat: Primer, vinyl wash, MPI #80.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 - 2. Pigmented Polyurethane System:
 - a. Prime Coat: Primer, vinyl wash, MPI #80.
 - b. Intermediate Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - c. First Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - d. Second Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - 3. Pigmented Polyurethane System:
 - a. Prime Coat: Primer, vinyl wash, MPI #80.
 - b. Intermediate Coat: Primer, epoxy, as recommended in writing by topcoat manufacturer.
 - c. First Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - d. Second Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
- H. Wood Substrates:
 - 1. Pigmented Polyurethane System:
 - a. Prime Coat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - b. Intermediate Coat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.

- c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.

3.7 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. Concrete Substrates, Vertical Surfaces:

1. Epoxy System:

- a. Prime Coat: Epoxy, gloss, MPI #77.
- b. Intermediate Coat: Epoxy, gloss, MPI #77.
- c. Topcoat: Epoxy, gloss, MPI #77.

2. Epoxy-Modified Latex System:

- a. Prime Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
- b. Intermediate Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
- c. Topcoat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.

B. Concrete Substrates, Horizontal Surfaces.

1. Epoxy System:

- a. Prime Coat: Epoxy, gloss, MPI #77.
- b. Intermediate Coat: Epoxy, gloss, MPI #77.
- c. Topcoat: Epoxy, gloss, MPI #77.

2. Pigmented Polyurethane System:

- a. Prime Coat: Epoxy, gloss, MPI #77.
- b. Intermediate Coat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
- c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.

3. Clear Two-Component Polyurethane System:

- a. Prime Coat: Varnish, aliphatic polyurethane, two-component (Gloss Level 6 or 7), MPI #78.
- b. Intermediate Coat: Varnish, aliphatic polyurethane, two-component (Gloss Level 6 or 7), MPI #78.
- c. Topcoat: Varnish, aliphatic polyurethane, two-component (Gloss Level 6 or 7), MPI #78.

C. Clay-Masonry Substrates:

1. Epoxy System:

- a. Prime Coat: Epoxy, gloss, MPI #77.

- b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 - 2. Epoxy-Modified Latex System:
 - a. Prime Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
 - b. Intermediate Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
 - c. Topcoat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
 - 3. Clear Two-Component Polyurethane System:
 - a. Prime Coat: Varnish, aliphatic polyurethane, two-component (Gloss Level 6 or 7), MPI #78.
 - b. Intermediate Coat: Varnish, aliphatic polyurethane, two-component (Gloss Level 6 or 7), MPI #78.
 - c. Topcoat: Varnish, aliphatic polyurethane, two-component (Gloss Level 6 or 7), MPI #78.
- D. CMU Substrates:
 - 1. Epoxy System:
 - a. Block Filler: Block filler, latex, interior/exterior, MPI #4.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 - 2. Epoxy-Modified Latex System:
 - a. Block Filler: Block filler, latex, interior/exterior, MPI #4.
 - b. Intermediate Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
 - c. Topcoat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
- E. Steel Substrates:
 - 1. High-Build Epoxy System:
 - a. Prime Coat: Primer, zinc-rich, epoxy, MPI #20.
 - b. Intermediate Coat: Epoxy, high-build, low gloss, MPI #108.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 - d. Topcoat: Epoxy, high-build, low gloss, MPI #108.
 - 2. Epoxy System:
 - a. Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 - 3. Epoxy-Modified Latex System:

- a. Prime Coat: Primer, rust-inhibitive, water based, MPI #107.
 - b. Intermediate Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
 - c. Topcoat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
4. Pigmented Polyurethane System:
- a. Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - b. Intermediate Coat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
5. Pigmented Polyurethane over Inorganic Zinc-Rich Primer System:
- a. Prime Coat: Primer, zinc-rich, inorganic, MPI #19.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
6. Pigmented Polyurethane over Epoxy Zinc-Rich Primer System:
- a. Prime Coat: Primer, zinc-rich, epoxy, MPI #20.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
7. Pigmented Polyurethane over High-Build Epoxy System:
- a. Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - b. Intermediate Coat: Epoxy, high-build, low gloss, MPI #108.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
- F. Galvanized-Metal Substrates:
1. Epoxy System:
 - a. Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101.
 - b. Intermediate Coat: Epoxy, gloss, MPI #77.
 - c. Topcoat: Epoxy, gloss, MPI #77.
 2. Pigmented Polyurethane System:
 - a. Prime Coat: Primer, epoxy, as recommended in writing by topcoat manufacturer.
 - b. Intermediate Coat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
 - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.

G. Aluminum (Not Anodized or Otherwise Coated) Substrates:

1. Epoxy System:

- a. Prime Coat: Primer, vinyl wash, MPI #80.
- b. Intermediate Coat: Epoxy, gloss, MPI #77.
- c. Topcoat: Epoxy, gloss, MPI #77.

2. Pigmented Polyurethane System:

- a. Prime Coat: Primer, vinyl wash, MPI #80.
- b. Intermediate Coat: Epoxy, gloss, MPI #77.
- c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.

H. Wood Substrates:

1. Epoxy System:

- a. Prime Coat: Epoxy, gloss, MPI #77.
- b. Intermediate Coat: Epoxy, gloss, MPI #77.
- c. Topcoat: Epoxy, gloss, MPI #77.

2. Pigmented Polyurethane System:

- a. Prime Coat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
- b. Intermediate Coat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.
- c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72.

I. Gypsum Board Substrates:

1. Epoxy System:

- a. Prime Coat: Primer sealer, latex, interior, MPI #50.
- b. Intermediate Coat: Epoxy, gloss, MPI #77.
- c. Topcoat: Epoxy, gloss, MPI #77.

2. Epoxy-Modified Latex System:

- a. Prime Coat: Primer sealer, latex, interior, MPI #50.
- b. Intermediate Coat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.
- c. Topcoat: Epoxy-modified latex, interior, gloss (Gloss Level 6), MPI #115.

END OF SECTION 09 96 00