

SECTION 099600 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metal Primers.
2. Polyurethane coatings.

B. Related Requirements:

1. Section 051200 "Structural Steel Framing" for galvanizing and preparation of galvanized steel prior to field painting with primers specified in this Section.
2. Section 099300 "Staining and Transparent Finishing" for general field staining.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of specified product.

1. Include preparation requirements and application instructions.
2. Indicate VOC content.

B. Samples for Verification: For each type of coating system and each color and gloss of topcoat. Submit actual paint drawdowns as specified below for verification Samples.

1. Apply coats on Samples in steps to show each coat required for system.
2. Label each coat of each Sample.

1.3 MAINTENANCE MATERIAL SUBMITTALS

A. Extra Stock Material: Furnish extra materials, from the same production run (batch number), that match coating system products applied 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.

1.4 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 FIELD CONDITIONS

- A. Apply coatings only when temperature of surfaces to be coated and ambient 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 SOURCE LIMITATIONS

- A. Obtain each coating system product from single source from specified manufacturer.

2.2 HIGH-PERFORMANCE COATING PRODUCTS, GENERAL

- A. High-Performance Coating Products: Subject to compliance with requirements, provide product listed in product types below and applicable exterior and interior high-performance coating schedule articles for the coating category indicated.
- B. Material Compatibility:
 - 1. Materials for use within each coating system must be 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 topcoat manufacturer for use in system and on substrate indicated.
- C. Colors: As selected by Architect from manufacturer's full range .

2.3 METAL PRIMERS

- A. Vinyl Wash Primer: Two-component, vinyl butyral/phosphoric acid-wash primer formulated for use over cleaned ferrous metal substrates and zinc-rich primers as a tie coat for subsequent corrosion-resistant primers or finish coatings.
 - 1. Basis-of-Design Product: Provide Pro Industrial DTM Wash Primer as manufactured by Sherwin Williams. A comparable product may be considered subject to the approval of the Owner's Veterinary staff. Any decision by the Owner's Veterinary staff regarding proposed alternative comparable products is to be considered final, no exceptions:

2.4 POLYURETHANE COATINGS

- A. Pigmented Polyurethane: Solvent-based, two-component coating formulated for resistance to abrasion, weathering, and chemical and solvent exposure; for use on interior or exterior substrates.
 - 1. Basis-of-Design Product: Provide Sher-Loxane 800 as manufactured by Sherwin

Williams. A comparable product by one of the following may be considered subject to the approval of the Owner's Veterinary staff. Any decision by the Owner's Veterinary staff regarding proposed alternative comparable products is to be considered final, no exceptions:

- a. Benjamin Moore & Co.
- b. PPG Industries
- c. Tnemec Company, Inc.

- 2. Gloss Level: Manufacturer's standard semigloss.

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.
- B. Verify suitability of substrates, including surface conditions and compatibility, with finishes and primers. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions applicable to substrates and coating systems 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 coating operations, 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. Steel Substrates: Remove loose rust, loose mill scale, loose shop primer, and other foreign matter. Clean using methods recommended in writing by coating manufacturer but not less than the following:
 - 1. SSPC-SP 6/NACE No. 3.
- E. Galvanized Metal Substrates: Remove grease and oil residue from galvanized metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied coatings.

3.3 APPLICATION OF HIGH-PERFORMANCE COATINGS

- A. Apply coating system products in accordance with manufacturer's written instructions.
 - 1. Use applicators and techniques suited for coating and substrate indicated.
- 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 CLEANING

- A. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- B. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

3.5 PROTECTION

- A. Protect work of other trades against damage from coating operation. Correct damage to work of other trades by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.

3.6 EXTERIOR HIGH-PERFORMANCE COATING SCHEDULE, METAL SUBSTRATES

- A. Galvanized Metal Substrates:
 - 1. Pigmented Polyurethane over Vinyl Wash Primer and Epoxy Primer System:
 - a. Prime Coat: Vinyl wash primer.
 - b. Intermediate Coat: Epoxy, anticorrosive primer.
 - c. First and Second Topcoat: Pigmented polyurethane.

END OF SECTION 099600