SP-155069
(New)

SPECIAL PROVISIONS
FOR
HIGH PERFORMANCE COATINGS

Des Moines County
EDP-0977(653)--7Y-29

Effective Date
June 15, 2021

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

155069.01 DESCRIPTION.

A. Summary.

1. Section includes surface preparation and the application of high-performance coating systems on galvanized metal.

2. Related Requirements: Special Provisions for Structural Steel Framing and Special Provisions for Architecturally Exposed Structural Steel Framing for shop priming of structural steel with primers specified in this special provision.

B. Action Submittals.

1. Product Data: For each type of product. Include preparation requirements and application instructions.
   - **a.** Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
   - **b.** Indicate VOC content.

2. Samples for Verification: For each type of coating system and each color and gloss of topcoat indicated.
   Submit Samples on rigid backing, 8 inches **(**200 mm**)** square.
   - **a.** Apply coats on Samples in steps to show each coat required for system.
   - **b.** Label each coat of each Sample.
   - **c.** Label each Sample for location and application area.

3. Product List: Cross-reference to coating system and locations of application areas. Use same designations indicated on Plans and in schedules. Include color designations.

C. Maintenance Material Submittals.

1. 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.

2. Coatings: 5%, but not less than 1 gallon of each material and color applied.

D. Delivery, Storage, And Handling.

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

2. Maintain containers in clean condition, free of foreign materials and residue.

3. Remove rags and waste from storage areas daily.

E. Field Conditions.

1. Apply coatings only when temperature of surfaces to be coated and ambient air temperatures are between 50°F and 95°F.

2. Do not apply coatings when relative humidity exceeds 85%; at temperatures less than 5°F above the dew point; or to damp or wet surfaces.

3. Do not apply exterior coatings in snow, rain, fog, or mist.

155069.02 MATERIALS.

A. Manufacturers.

1. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Benjamin Moore & Co.
   b. PPG Paints - PPG Architectural Coatings, Inc.
   c. Sherwin-Williams Company (The).
   d. Tnemec Company, Inc.

2. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include but are not limited to products listed in the Exterior High-Performance Coating Schedule for the coating category indicated.

B. High-Performance Coatings, General.

1. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists." Provide products from manufacturer's premium or professional product line.

2. Material Compatibility: Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
   a. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
   b. Products shall be of same manufacturer for each coat in a coating system.

3. Colors: As selected by Engineer from manufacturer's full range.

C. Exterior High-Performance Coating Schedule.
Fluoropolymer over Acrylic Polyurethane on Zinc-Rich Primer System:

1. Total Applied Thickness: Minimum 6.5.

2. Prime Coat: Sand blast to create a minimum 1.5-mil angular anchor profile.
Basis-of-Design Product: TNEMEC; Series N69F Hi-Build Epoxoline II applied at 2.0 to 4.0 dry mils.

3. Intermediate Coat: Aliphatic acrylic polyurethane; apply at 2.0 to 3.0 DFT.
Basis-of-Design Product: TNEMEC; Series 73 Endura-Shield.

4. Topcoat: Advanced thermoset solution fluoropolymer; apply at 2.0 to 3.0 DFT.
Basis-of-Design Product: TNEMEC; Series 1071 (Semi-gloss) Fluoronar.

D. Source Quality Control.
Contracting Authority reserves the right to invoke the following procedure:

1. Contracting Authority 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. Contracting Authority may direct Contractor to stop applying coatings 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.

155069.03 CONSTRUCTION.

A. Examination.

1. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

2. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

3. Proceed with coating application only after unsatisfactory conditions have been corrected. Application of coating indicates acceptance of surfaces and conditions.

B. Preparation.

1. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and coating systems indicated. 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. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

2. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.

3. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer.

4. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

5. 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.

C. Application.

1. Apply high-performance coatings according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."

2. Use applicators and techniques suited for coating and substrate indicated.
   a. Coat backsides to match exposed surfaces.
   b. Do not apply coatings over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

3. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.

4. 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.

D. Field Quality Control.

1. Dry Film Thickness Testing: Contracting Authority may engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.

2. Contractor shall touch up and restore coated surfaces damaged by testing.

3. 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.

E. Cleaning and Protection.

1. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

2. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

3. 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 Engineer, and leave in an undamaged condition.

4. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

155069.04 METHOD OF MEASUREMENT.
High Performance Coating will not be measured for payment.

155069.05 BASIS OF PAYMENT.
Payment for this item will be incidental to bid item Shade Structure.