

SECTION 09 97 26 - CEMENTITIOUS COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes surface preparation and application of cementitious coating systems on the following substrates:
 - 1. Exterior concrete masonry units.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of topcoat product.
- C. Samples for Verification: In each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, not less than 4 by 8 inches.
 - 2. Apply coats on Samples in steps to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency or by a qualified testing agency, for each product formulation certifying materials comply with specified requirements.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that are from same production run (batch mix) as materials applied and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Quantity: Furnish an additional 5 percent of each color applied.

1.6 QUALITY ASSURANCE

- A. Source Limitations: Obtain cementitious coating materials from single source from single manufacturer.

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- B. Mockups: Apply mockups of coating system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Architect will select one actual substrate of each type to represent surfaces and conditions for application of coating.
 - a. Wall Surfaces: Prepare Samples of at least 100 sq. ft.
 - 2. Apply mockups after permanent lighting and other environmental services have been activated.
 - 3. Final approval of color selections will be based on mockups.
 - a. If preliminary color selections are not approved, apply additional mockups of colors selected by Architect at no added cost to Owner.

1.7 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at project site.
 - 1. Review specification requirements.
 - 2. Review installation procedures.
 - 3. Inspect project conditions.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, new, unopened packages and containers bearing manufacturer's name and label, and the following information:
 - 1. Product name or title of material.
 - 2. Manufacturer's stock number and date of manufacture.
 - 3. Contents by volume, for pigment and vehicle constituents.
 - 4. Application instructions.
 - 5. Color name and number.
 - 6. Handling instructions and precautions.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain containers used in storage of coatings in a clean condition, free of foreign materials and residue.
 - 1. Protect cementitious coating materials from freezing. Keep materials dry and storage area neat and orderly. Remove waste daily. Take necessary measures to ensure that workers and work areas are protected from health hazards resulting from handling, mixing, and applying the coating.

1.9 FIELD CONDITIONS

- A. Apply coatings only when temperature of surfaces to be painted 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.

PART 2 - PRODUCTS

2.1 CEMENTITIOUS COATINGS

- A. Polymer-Modified Cementitious Coating: Containing portland cement, polymer, and hydrated lime or aggregates.
 - 1. Basis of Design: Subject to compliance with requirements, polymer-modified cementitious coatings incorporated into the project shall be based on systems as follows:
 - a. BASF Building Systems: "Thoroseal with Acryl 60."
- B. Acceptable Manufacturers: Subject to compliance with requirements, in lieu of the Basis of Design manufacturer, Contractor may provide products from the following manufacturers that meet or exceed the published data of the specified Basis of Design product:
 - a. Bonsal American, an Oldcastle company; "Sure-Coat."
 - b. Euclid Chemical Company, Tamms Industries; "Tamoseal."
 - c. Gemite Products, Inc.; "Cem-Kote ST."
- C. Performance Requirements: Comply with the following:
 - 1. Compressive Strength: Not less than 6000 psi at 28 days according to ASTM C 109/C 109M.
 - 2. Tensile Strength: Not less than 400 psi at 28 days according to ASTM C 109/C 109M.
 - 3. Flexural Strength: Not less than 1,000 psi at 28 days according to ASTM C 348.
 - 4. Adhesion: Not less than 400 psi tensile bond.
 - 5. Permeance: 12 per ASTM E 96.
 - 6. Salt-Spray Resistance: At 300 hours, no defects per ASTM B 117.
- D. Colors: As selected by Architect from manufacturer's full range.
- E. Other Materials: Provide crack fillers, block fillers, and related materials that are compatible with cementitious finish-coat materials and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements and other conditions affecting performance of the Work.
- B. Verify suitability of substrates, including surface conditions and compatibility.
- C. 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 for mixing and preparing materials and as applicable to substrates indicated.

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- B. Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.
 - 1. After completing coating operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of coatings, including dirt, oil, grease, incompatible coatings, and loose substrate materials.
- D. Cementitious and Masonry Surfaces: 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.
- E. Crack Repair: Fill cracks according to manufacturer's written instructions before coating surfaces.
 - 1. Cracks Larger Than 1/32 Inch: Cut out static cracks, voids, or honeycombing larger than 1/32 inch and patch with materials recommended in writing by coating manufacturer. Identify dynamic cracks and treat according to manufacturer's written instructions before beginning application.

3.3 APPLICATION

- A. Apply coatings according to manufacturer's written instructions. Use applicators and techniques suited for coating and substrate indicated.
 - 1. Dampen substrate of surfaces to receive cementitious coatings one hour before beginning application to prevent surface drag. Immediately before applying coatings, redampen substrate. Substrates shall be saturated surface dry at time of application.
 - 2. Brushes: Use tampico or masonry brushes best suited for material being applied.
 - 3. Spray Equipment: Use spray equipment recommended in writing by manufacturer for material and texture required.
- B. Apply coating to achieve material thickness as recommended in writing by manufacturer, but not less than the following:
 - 1. First Coat: Apply polymer-modified cementitious coating material at the rate of 2 lb/sq. yd. to achieve a total cured thickness of 25 mils.
 - 2. Second Coat: Apply polymer-modified cementitious coating material at the rate of 1 lb/sq. yd. to achieve a total cured thickness of 15 mils.
 - 3. Apply additional coats when undercoats or other conditions show through final coat until cured film is of uniform coating finish, color, and appearance.
- C. On previously coated surfaces, apply coating to achieve material thickness as recommended in writing by manufacturer, but not less than the following:
 - 1. Apply polymer-modified cementitious coating material at the rate of 1 lb/sq. yd. to achieve a total cured thickness of 15 mils.
 - 2. Apply additional coats when undercoats or other conditions show through final coat until cured film is of uniform coating finish, color, and appearance.
- D. Brush Application: Brush-out and work brush coats into surfaces in an even film, filling all pores and voids at rate recommended in writing by manufacturer to achieve cured material thickness indicated. Finish coat with smooth, horizontal strokes.

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- E. Spray Application: Apply each coat according to manufacturer's written instructions to provide the equivalent hiding of brush-applied coats. Follow spray application with a general light brooming of coated surface to impart a slight texture.

3.4 FIELD QUALITY CONTROL

- A. Testing of Coating Materials: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when coating operations are being conducted:
 - 1. Owner will engage the services of a qualified testing agency to sample coating 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 the following product requirements.
 - a. Quantitative material analysis.
 - b. Compressive strength.
 - c. Tensile strength.
 - d. Flexural strength.
 - e. Permeance.
 - f. Accelerated weathering.
 - 3. Owner may direct Contractor to stop coating application if test results show materials being used do not comply with requirements. Contractor shall remove noncomplying 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.

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 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 coated surfaces.

END OF SECTION 09 97 26