

SECTION 099726 - CEMENTITIOUS COATINGS

PART 1 - GENERAL

1.1 STIPULATIONS

- A. The specifications sections “General Conditions of the Construction Contract”, “Special Conditions”, and “Division 1 – General Requirements” form a part of this Section by this reference thereto and shall have the same force and effect as if printed herewith in full.

1.2 SUMMARY

- A. Section includes surface preparation and application of cementitious coating systems on the following substrates:
 - 1. Interior concrete floors (for repair or leveling purposes).

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. LEED Submittal:
 - 1. Product Data for Credit IEQ 4.2: For interior paints and coatings, documentation including printed statement of VOC content.
- C. Samples for Initial Selection: For each finish coat indicated.

1.4 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For each cementitious coating, from manufacturer.
- B. 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.

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.

1.7 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.

1.8 PROJECT 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. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Bonsal American, an Oldcastle company; ProSpec Blender and Resurfacer.
 - b. Or Approved Equal
- B. Performance Requirements: Comply with the following:

1. Compressive Strength: Not less than 3500 psi at 28 days according to ASTM C 109/C 109M.
 2. Tensile Strength: Not less than 350 psi at 28 days according to ASTM C 109/C 109M.
 3. Flexural Strength: Not less than 1000 psi at 28 days according to ASTM C 348.
- C. 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.
- D. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction.
- E. Colors: As selected by Government Design Professional from manufacturer's full range.

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.
- 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.
- B. Apply each material at not less than manufacturer's recommended spreading rate. Provide total cured material thickness indicated or as recommended in writing by manufacturer.

3.4 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.

3.5 COATING SCHEDULE

- A. General: Apply additional coats when undercoats or other conditions show through final coat until cured film is of uniform coating finish, color, and appearance.
- B. Above-Grade Concrete and Masonry: Two finish coats with total cured thickness not less than 40 mils.
 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.

END OF SECTION 099726