

**SECTION 09 96 00A**

**HIGH-PERFORMANCE COATING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Work Included: Provide and install multi-part high-performance coatings, complete, as shown on Drawings and as specified, including:
  - 1. Locations: Area(s) as indicated by the Plan finish schedule.
  - 2. Provide preparation and priming of substrate as recommended by the high-performance coatings manufacturer.
  - 3. Provide and install multi-part high-performance coating as specified in this Section.
- B. Related Work Specified Elsewhere:
  - 1. Division 01 81 13 – Sustainable Design Requirements

**1.2 SUBMITTALS**

- A. Comply with provisions of Section 01 33 00 – Submittal Procedures.
- B. Product Data: Submit manufacturer's technical data, installation instructions, and general recommendations for each high-performance coatings material required.
  - 1. Include certification that indicates compliance of materials with requirements.
- C. Samples: Submit, for verification purposes, 5-inch square samples of each type of high-performance coatings required, applied to a rigid backing, in color and finish indicated.
  - 1. For initial selection of colors and finishes, submit manufacturer's color charts showing full range of colors and finishes available.
- D. Certificates: By manufacturer of high-performance coatings; upon completion of Work, written statement that technical support to applicator and field supervision was sufficient to assure proper application of materials and that installation is acceptable.
- E. Maintenance Instructions: Submit manufacturer's written instructions for recommended maintenance practices.

**1.3 QUALITY ASSURANCE**

- A. Qualifications of the Applicator: Licensed or approved by the manufacturer of the coating system and has successfully completed 5 projects of similar size and complexity.
- B. Single Source Responsibility: Obtain primary high-performance coatings materials including primers, resins, hardening agents, finish or sealing coats from a single manufacturer with not less than ten years of successful experience in manufacturing and installing principal materials described in this Section.
- C. Special Requirements: Regulatory Agencies: Use materials for Work of this Section which comply with volatile organic compound limitations and other regulations of local Air Quality Management District and other local, state, and federal agencies having jurisdiction.

- D. ISO 9001:2008: All materials, including primers, resins, curing agents, finish coats, aggregates and sealants are manufactured and tested under an ISO 9001:2008 registered quality system.

#### **1.4 PRE-INSTALLATION CONFERENCE**

- A. Comply with requirements of Section 01 31 19 – Project Meetings.
- B. Arrange a conference at the job site to coordinate high-performance coatings and critical finish systems, to be attended by the General Contractor, Architect/Owner's Representative and personnel involved in the actual manufacture as well as the installation of the Work in this Section and of the following Sections:
  - 1. Section 09 67 23 – Resinous Flooring

#### **1.5 PROJECT CONDITIONS**

- A. Utilities, including electric, water, heat (air temperature between 60 and 85oF/16 and 30oC and finished lighting to be supplied by General Contractor.
- B. Job area to be free of other trades during, and for a period of 24 hours, after floor installation.
- C. Protection of finished wall from damage by subsequent trades shall be the responsibility of the General Contractor.

#### **1.6 DELIVERY, STORAGE AND HANDLING**

- A. Material shall be delivered to job site and checked by high-performance coatings contractor for completeness and shipping damage prior to job start.
- B. All materials used shall be factory pre-weighed and pre-packaged in single, easy to manage batches to eliminate on site mixing errors.
  - 1. No on site weighing or volumetric measurements allowed.
- C. Material shall be stored in a dry, enclosed area protected from exposure to moisture.
  - 1. Temperature of storage area shall be maintained between 60 and 85-degrees F.

#### **1.7 WARRANTY**

- A. Manufacturer shall furnish a single, written warranty covering both material and workmanship for a period of one (1) one full years from date of installation, or provide a joint and several warranty signed on a single document by material manufacturer and applicator jointly and severally warranting the materials and workmanship for a period of (1) one full year from date of installation. A sample warranty letter must be included with bid package or bid may be disqualified.
  - 1. High-performance coatings manufacturer representative shall return to project within 6 months to conduct inspection of installation area.

### **PART 2 - PRODUCTS**

#### **2.1 HIGH PERFORMANCE COATINGS**

- A. Colors:

1. As selected by Architect from manufacturer's standard colors.
- B. High-performance coatings
1. Basis of Design: HT Primer and Stonkote HT4 at 4 mils DFT thickness as manufactured by Stonhard, [www.stonhard.com](http://www.stonhard.com), Contact: Jeremy Mendelson (619) 886-4265 or [gmendelson@stonhard.com](mailto:gmendelson@stonhard.com).
- C. System Components: Manufacturer's standard components that are compatible with each other and are as follows:
- 1) Epoxy Primer (HT Primer): A two-component epoxy primer applied at 4-5 mils DFT.
  2. Finish Coat (Stonkote HT4):
    - a. Resin: EpoxyDelete first subparagraph below if unnecessary.
    - b. Formulation Description: Two-component, consisting of pigmented epoxy resin and curing agent.
    - c. Type: Pigmented
    - d. Application Method: Roller
    - e. Application thickness: 4-5 mils
    - f. Number of Coats: 1

### **PART 3 - EXECUTION**

Test above provides a more accurate indication as to whether or not a concrete slab has dried sufficiently to allow finish flooring application than the tests below.

For applying impermeable resinous flooring systems, 2 lb of water/1000 sq. ft. (1.36 kg of water/92.9 sq. m) of slab in 24 hours is generally considered a safe moisture-vapor-emission rate. Consult manufacturers for appropriate rates for permeable systems that will allow moisture vapor to continue through them once cured.

#### **3.1 EXAMINATION**

- A. General: Examine substrate to receive high-performance coating; give written notification of deficiencies. Do not proceed until unsatisfactory conditions are corrected.
1. Substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance.
    - a. Laitance and unbonded cement particles must be removed by mechanical means including the use of planetary grinders, metal shot blasting or similar methods.
    - b. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent, "Stonkleen DG9", or equal; and rinsing with clean water.
    - c. The surface must show open pores throughout and have a sandpaper texture.

#### **3.2 PREPARATION**

- A. Surface Preparation: Concrete preparation shall be by mechanical means and include use of a planetary grinder, diamond wheel grinders or metal- shot blast machine for removal of bond inhibiting materials such as curing compounds or laitance.

- B. Moisture Testing: Test horizontal substrates to determine acceptable dryness.
  - 1. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with application only after substrates have maximum moisture-vapor-emission rate of 3 lb per 1,000 sq. ft. per 24 hours.
  - 2. Perform additional moisture tests recommended by manufacturer. Proceed with application of resinous flooring only after substrates pass testing and/or directed by manufacturer in writing.
  - 3. Provide and install Osmotic Pressure Resistant membrane/grout only if moisture-vapor-emission rates exceed 3 lb per 1,000 sf. ft. per 24 hours.

### **3.3 MIXING**

- A. General: Mix components only in amounts that can be applied within recommended application life.
  - 1. Discard materials not used within application life.

### **3.4 SYSTEM APPLICATION**

- A. General: Apply each component of high-performance coatings system in compliance with manufacturer's written directions to produce a uniform monolithic wearing surface of thickness indicated, uninterrupted except at divider strips, sawn joints or other types of joints (if any), indicated or required.
- B. High-performance coatings:
  - 1. Primer: Mix and apply primer over properly prepared substrate with strict adherence to manufacturer's installation procedures and coverage rates.
  - 2. Finish Coat: Mix material according to manufacturer's recommended procedures. Please note that solvent reduction of any kind is strictly prohibited. Apply material immediately after mixing using high quality rollers or an airless sprayer. Strict adherence to manufacturer's coverage rates is imperative.

### **3.5 FIELD QUALITY CONTROL**

- A. The right is reserved to invoke the following material testing procedure at any time, and any number of times during period of high-performance coating application.
  - 1. The Owner will engage service of an independent testing laboratory to sample materials being used on the job site. Samples of material will be taken, identified and sealed, and certified in presence of Contractor.
  - 2. Testing laboratory will perform tests for any of characteristics specified, using applicable testing procedures referenced herein, or if none referenced, in manufacturer's product data.
  - 3. If test results show materials being used do not comply with specified requirements, Contractor may be directed by the Owner to stop work; remove non-complying materials; pay for testing; reapply coating materials to properly prepared surfaces which had previously been coated with unacceptable materials.

### **3.6 PROTECTION OF ADJACENT WORK**

- A. General: Resinous floor system will be installed in locations where other adjacent finish materials, including ornamental metal, lath and plaster, and other finish assemblies may already be in place. Protect all adjacent surfaces during installation and finishing.
  - 1. Installed adjacent finishes shall be completely isolated from epoxy coating system installation. Provide Plastic ("Visqueen") wrap and mask all edges.
  - 2. Provide constant supervision and immediate clean up throughout resinous floor system installation.
  - 3. After resinous floor system has fully cured, remove protection from adjacent surfaces and wipe down surfaces using clean, cotton towels.

### **3.7 CURING, PROTECTION AND CLEANING**

- A. Cure high-performance coatings materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of curing process.
  - 1. Close area of application for a minimum of 24 hours.
- B. Protect high-performance coatings materials from damage and wear during construction operation.
  - 1. Where temporary covering is required for this purpose, comply with manufacturer's recommendations for protective materials and method of application.
  - 2. General Contractor is responsible for protection and cleaning of surfaces after final coats.
- C. Cleaning:
  - 1. Remove temporary covering and clean high-performance coatings just prior to final inspection.
  - 2. Use cleaning materials and procedures recommended by high-performance coatings manufacturer.

**END OF SECTION**