



## SECTION 09 91 00

### STRUCTURAL CONCRETE COATING

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. This WORK shall consist of furnishing and applying two (2) coats of a semi-opaque pure acrylic water repellent and colored coating to all designated concrete surfaces in accordance with the DRAWINGS and SPECIFICATIONS.

##### 1.02 RELATED SECTIONS

- A. The following is a list of SPECIFICATIONS which may be related to this section:
  - 1. Section 03 35 00, Concrete Finishing.

##### 1.03 SUBMITTALS

- A. Submit color mixture to be used in a color block for approval by OWNER.

##### 1.04 QUALITY ASSURANCE

- A. Mock-ups:
  - 1. Three (3) two-foot by two-foot (2' x 2') samples showing the designated colors and texture shall be prepared for initial approval. The coating shall be applied by the same method to be used in the final field application to a surface similar in pattern and texture to the surfaces to be coated on the PROJECT.
  - 2. A final sample for the chosen color and texture measuring at least four feet by four feet (4' x 4') shall be prepared as specified above and shall be set at the PROJECT site for a period of three (3) days for review by ENGINEER. The final samples shall receive ENGINEER's written approval before the coating can be incorporated into the WORK.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

- A. The coating shall be self-priming, semi-opaque colored toner containing only methyl methacrylate ethyl acrylate copolymer resins. The toning pigments shall be suspended in solution at all times by a chemical suspension agent and solvent. The toning pigments shall be laminar silicates, titanium dioxide, and inorganic oxides. There shall be no settling or color variation. Use of vegetable or marine oils, paraffin materials, stearates, or organic pigments in any part of the coating formulation shall not be permitted.



<b>Physical Properties</b>	
Weight by Gallon	8.3 lbs, min.
Solids by Weight	30% min.
Sand (Silicone)	3.2 to 3.8 lbs/gallon (exclude at retaining walls with form liner finish)

### **PART 3 EXECUTION**

#### **3.01 PREPARATION**

- A. All concrete finishing shall be completed in accordance with the SPECIFICATIONS. The concrete shall be at least fourteen (14) days old before the bonding agent and coating may be applied.
- B. Prior to application of the coating material, all voids and irregularities shall be pointed and trued with a mortar consisting of cement and fine sand aggregate. Only minor voids, which can be completely filled with the coating material, may remain.
- C. Within twenty-four (24) hours before the coating is applied, the concrete surfaces to be coated shall be hot water blasted at a minimum of three thousand (3,000) psi followed by a cold-water rinse to remove dirt, curing agents, form release agents, or other foreign substances that would be detrimental to the coating penetration or color.
- D. All surfaces to be coated shall be clean, dry, and free of frost or other foreign substances at the time of application.

#### **3.02 APPLICATION**

- A. The coatings shall be applied to all exposed concrete elements above the ground line and shall extend a minimum of one (1) foot below the ground line or as shown on the DRAWINGS.
- B. The coating shall be applied only when the ambient temperature is between forty degrees Fahrenheit (40°F) and ninety degrees Fahrenheit (90°F).
- C. The coating shall be mixed by a mechanical mixer and shall be applied by spraying. A roller shall be used immediately after the spray application to obtain texture and fill minor voids as approved by ENGINEER. A brush may be used to apply coating to form liner finishes as approved by ENGINEER.
- D. The process shall be applied uniformly in the following sequences:
  - 1. Application of the first coat applied at a rate of forty-five (45) square feet per gallon, and eighty (80) square feet per gallon for the second coat.
  - 2. The second coat shall not be applied until at least twelve (12) hours after application of the first coat, but not to exceed ninety six (96) hours, or as recommended by the manufacturer.
  - 3. Workmanship shall be such that the final coated surface is colored uniformly and presents a pleasing appearance.

**END OF SECTION**