

ITEM 06555.0194 M - STAINING CONCRETE SURFACES

DESCRIPTION:

This work shall consist of furnishing and applying concrete penetrating stain of the color specified on the plans and at the locations shown on the plans or as directed by the Engineer.

MATERIALS:

Concrete Penetrating Stain

The concrete penetrating stain shall be a single component, waterbased, thermoplastic acrylic emulsion which carries its color and water repellent protection into the concrete. The stain shall be delivered in original, sealed containers, clearly labeled with the manufacturer's name and batch number of the material. The stain color shall conform to the Federal Standard 595 B. The color shall be as indicated on the plans or as directed by the Engineer.

The penetrating stain shall conform to the following performance requirements:

PHYSICAL PROPERTIES		
CONDITION	RESULTS	TEST METHOD
Dry-through Time	25 Minutes Max.	ASTM D 1640
Dry-to-Recoat Time	1 Hour Max.	ASTM D 1640
Oil, Wax & Silicon Content	None	
Adhesion to Concrete-Elcometer Test (Average of 5 Tests) Gloss Flat	1.4 MPa	ASTM D 4541
Weather-O-Meter Test (500 Hours)	No Visible Degradation	ASTM G 23 Atlas Carbon Arc
Solids by Weight	57% (Plus or Minus 2%)	
Viscosity	70-75 KU	ASTM D 562

The concrete penetrating stain shall comply with New York State Laws regulating the use of volatile organic compounds and solvents.

CONSTRUCTION DETAILS:

Staining Concrete

Surfaces to receive the concrete penetrating stain shall be fully cured, clean, dry and free from dust, curing agents, oil, grease, efflorescence and any other contaminants that could prevent proper adhesion. If necessary the surfaces to be stained shall be pressure washed until all surface contamination has been

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completely removed. In addition, glazed or glossy surfaces must be chemically or mechanically abraded to remove gloss to allow adhesion.

Prior to any staining operations, the contractor shall be required to complete a test staining program for color acceptance and surface area coverage. The finished color of the penetrating stain treated areas shall be as indicated on the plans or as directed by the Engineer. Viewing shall be under North Standard Daylight. The Contractor shall apply the stain according to the manufacturer's recommendations. The stain test sample must be submitted to and approved by the Engineer prior to ordering the complete stain batch. When approved, the sample areas shall serve as a standard of acceptance for all further work.

Accompanying the sample shall be the manufacturer's literature which shall include materials specifications, physical properties, including ASTM test methods utilized, manufacturer's recommended application rates for the various surface textures and porosity, current application instructions and Material Safety Data Sheets. The Contractor must comply with all safety instructions during all applications.

All concrete stain shall be of the same batch and lot and shall be delivered to the spraying site in original sealed containers clearly marked with the manufacturer's name, brand name, type of material, batch and lot numbers, date of manufacture, and color.

Prior to use, the stain shall be thoroughly mixed using the appropriate mechanical means and shall be mixed during spraying operations as required to maintain uniformity.

Two coats of concrete penetrating stain shall be applied to the locations shown on the Contract Plans or as directed by the Engineer.

At the time of stain application, both the concrete and air temperatures must be between 8 degrees C and 32 degrees C and the concrete shall be completely dry. Stain shall not be applied unless weather conditions will permit complete drying of material prior to rain, fog, dew or temperatures beyond the prescribed limits.

Areas not to receive stain shall be masked. The concrete penetrating stain shall be spray applied using conventional or airless spray. The stain shall be applied in two thin coats to provide a uniform appearance and shall be consistent with the quality and appearance of the approved sample.

If unevenness in color, lines of work termination, etc. exist, the Engineer may have all such surfaces resprayed at the Contractor's expense. Respraying, if

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required, shall be carried to a natural break-off point. Stain may be brushed or roller applied only at locations where overspray would affect adjacent materials and where not practical for spray application.

METHOD OF MEASUREMENT:

Staining Concrete Surfaces will be measured by the total number of square meters of projected plane area of concrete surfaces stained.

BASIS OF PAYMENT:

The unit price bid per square meter of Staining Concrete Surfaces shall include the cost of all labor, materials and equipment necessary to perform the work. No additional payment will be made for the required samples.

Spec DisApproved. Use 555.0194-07