702.4.11.3 Application of Final Finish Coating

1 Allow the concrete to cure for 28 days before application of finial finishing coat. A shorter cure time may be allowed by the RCE if it is recommended by the manufacturer of the material. After the surface is cleaned, apply the coating before contamination occurs. If adverse weather or other obstacles prevent a timely coating application, re-clean the surface as determined by the RCE. Make certain that the surface is clean and surface dry in accordance with the manufacturer's recommendations before application of the coating. If the coating is sprayed, use application equipment recommended by the manufacturer of the coating. Make certain the spray procedure is as approved by the coating manufacturer. Ensure that the coverage per gallon of the coating is in accordance with these specifications and does not exceed 60 square feet per gallon.

702.4.11.4 Sprayed Final Finish

1 Use a material for the high-build spray finish coat that is a factory mixed coating applied as a single spray coat at the rate of 55(± 5) square feet per gallon of coating. Ensure that the finish coat is uniform in color, coverage, and texture. The uniform coverage may vary in dry mil thickness depending on the properties of the product being used, but minimize variation by strict control of the application rate. Apply the spray coat uniformly to dry and clean surfaces that have received the initial surface finish. Allow the concrete to cure 28 days before application of the final finish coating. A shorter cure time may be allowed by the RCE if it is recommended by the manufacturer of the material. Apply the sprayed finish strictly in accordance with the written instruction of the product manufacturer. Ensure that the actual application of the material is done by an operator specially trained for this work and is skilled in the application of the sprayed finish.

2 Ensure that the spray material is for exterior coating. Use the color Near White (Federal Shade No. 37778) with smooth texture. The spray coating material may be solventborne or waterborne. Make certain that it meets the following requirements:

A. Durability by accelerated weathering testing is 5000 hours minimum in accordance with ASTM G 153.

B. Durability by freeze thaw testing is 50 cycles minimum without detrimental effect. Conduct the test procedure by means of a test chamber capable of maintaining a -15°F temperature for 1 hour and a +70°F temperature for 1 hour, which constitutes one freeze thaw cycle.

C. Durability by salt spray testing is 300 hours minimum in accordance with ASTM B 117 without loss of adhesion or deterioration of the coating.

D. Moisture vapor permeability is 0.4 metric perms minimum in accordance with ASTM E 96.

3 Make certain that the solventborne coating complies with the following requirements:

A. The resin is a vinyl toluene acrylic copolymer resin having a sward hardness of 48 minimum when tested at 33.3% solids.

B. The solvent is mineral spirits (aliphatic).

C. The pigment is 55% minimum by weight.

D. The non-volatile vehicle (% by weight of vehicle) is 35% minimum.

E. VOC is 3.5 pounds/gallon maximum.

F. The coating total solids is a minimum 68% by weight.

4 Ensure that waterborne coating complies with the following requirements:

A. The resin is 100% pure acrylic copolymer emulsion. Monomers are Butyl acrylate or methyl methacrylate. Vinyl acetates and styrene-modified copolymers are not allowed.

B. The solvent is water.

C. The pigment is 55% minimum by weight.

D. The non-volatile vehicle (% by weight of vehicle) is 20% minimum.

E. The coating total solids is a minimum 62% by weight.

F. The pH is 9.0 to 10.5.