

Section 09700 - Special Coatings Silikal Product Specification: **Silikal Concrete Sealing System**

PART 1 - GENERAL

1.03 SYSTEM DESCRIPTION

- A. The sealing/coating system shall consist of 2 roller applied coats of solvent-free, 100% reactive, methyl methacrylate (MMA) acrylic based liquids. Silikal R41 Primer/R71 Topcoat is a transparent, solvent-free, 100% reactive, MMA based liquid to which a urethane modifier and curing agent are added at the job site. It may be pigmented.
- B. The coating system shall cure and be available to normal traffic in no more than 90 minutes at 68°F. after application of the final roller coat. It shall have a maximum water absorption value of 0.04 weight percent in accordance with ASTM D570. It shall be chemically resistant to a wide range of acids, alkalis, salts, fats, oils, and other chemicals.

PART 2 - PRODUCTS

2.02 MATERIALS

A. Methyl Methacrylate (MMA) Acrylic Coating System:

- 1. Saturating Primer/Sealer:
Silikal R41 Primer
- 2. Sealer/Topcoat:
Silikal R71 Topcoat
- 3. Non Skid Aggregate (If Required):
Aluminum Oxide (#24 minimum size) size and broadcast rate to be determined by owner.

2.02.01 PRODUCT PERFORMANCE CRITERIA

A. Silikal R41 Primer

- 1. Percentage Reactive Resin.....100%
- Percentage Solids.....100%
- 2. Water Absorption, Wt. % (ASTM D570):.....less than 0.6
- 3. Tensile Strength, psi (ASTM D638).....3,550 psi.
- 4. Tensile Modulus, psi X 10 to the 5th (ASTM D638):2.1
- 5. Coefficient of Thermal Expansion, in./in./deg. F (ASTM D696):0.000035
- 6. Electrical Resistivity (ASTM D257):

Volume Resistance, ohm-cm:
1015
 Surface Resistance,
 ohm:.....1012
 7. Water Vapor Transmission (DIN 53122), g/cm-hr-mm Hg X 10-9: 1.4

B. Silikal R71 Topcoat

1. Percentage Reactive
 Resin:.....100%
 Percentage
 Solids:.....100%
 2. Water Absorption, Wt. % (ASTM D570):0.5
 3. Tensile Strength, psi (ASTM
 D638):.....3,555 psi.
 4. Tensile Modulus, psi (ASTM
 D638):.....210,000 psi.
 5. Coefficient of Thermal Expansion (ASTM D696) in./in./deg.
 F:.....0.000035
 6. Electrical Resistivity (ASTM D257):
 Volume Resistance, ohm-cm:
1015
 Surface Resistance,
 ohm:.....1012
 7. Water Vapor Transmission (DIN 53122) g/cm-hr-mm Hg X 10-
 9:.....1.43
 8. Chemical Resistance, ASTM D543:
 Effect of weak
 acids:.....none
 Effect of strong acids:
slight
 Effect of
 alkalis:.....none
 Effect of salt
 solutions:.....none
 Effect of oil, grease:
none
 Effect of sunlight (UV radiation):
 none

PART 3 - EXECUTION

3.04 INSTALLATION

A. Application of Silikal Coating System consists of:

1. Applying the Primer/Sealer: Silikal R41 to be applied by rollers at a rate of

90 square feet per batch.

2. Applying the Sealer/Topcoat: Pigmented Silikal R71 to be applied by rollers at a rate of 90 square feet per batch.
 3. Time for curing (60 minutes) shall be allowed between each coat
- B. Open only the containers of component materials to be used in each specific application as needed. Refer to Manufacturer's data sheets for pot-life/temperature relationship to determine size of batches and mix ratios for each respective coat of the system.
- C. Measure, add, and mix the initiator (Silikal Powder Hardener) into the respective resin components in the proportions recommended by the Material Manufacturer. Pot life is short, so mix only as much material at a time as can be easily and efficiently applied.

3.04.01 PRIME COAT

- A. Pour the mixture batches onto the floor surface and use a 9" or 18" wide, 1/2" - 3/4" thick-napped, solvent-resistant paint roller to roll out the material at a rate of 90 sq.ft./batch to form a uniform, continuous film, ensuring that all crevices, cracks, other surface discontinuities have been saturated and coated. Use a paint brush to reach areas inaccessible to the roller. Work quickly and deliberately; the pot life is short (10 -15 minutes). Do not leave any "puddles"; roll out any such accumulations.
- B. Allow the primer/sealer coat to cure.
- C. If any of the concrete has absorbed all of the primer or if the concrete still has a dry look, reprime these areas.

3.04.02 TOP COAT

- A. Apply with clean rollers at a rate of 90 sq. ft./batch. in the same way as the Primer/Sealer was applied as described in Paragraph 3.04.01.
- B. Allow topcoat to cure.