



DIVISION 7 - THERMAL & MOISTURE PROTECTION
Section 07190 Water Repellents

Part 1 - General

1.01 Summary

- A. This specification describes the sealing of absorptive substrates with a non-vapor-barrier penetrant to reduce water and chloride ion intrusion.

1.02 Quality Assurance

- A. Manufacturing qualifications: The manufacturer of the specified product shall be ISO 9001:2008 certified and have in existence a recognized ongoing quality assurance program independently audited on a regular basis.
- B. Contractor qualifications: Contractor shall be qualified in the field of concrete repair and protection with a successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received product training by a manufacturer's representative.
- C. Install materials in accordance with all safety and weather conditions required by manufacturer or as modified by applicable rules and regulations of local, state and federal authorities having jurisdiction. Consult Material Safety Data Sheets for complete handling recommendations.

1.03 Delivery, Storage, and Handling

- A. All materials must be delivered in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers. Damaged material must be removed from the site immediately.
- B. Store all materials off the ground and protect from rain, freezing or excessive heat until ready for use.
- C. Condition the specified product as recommended by the manufacturer.

1.04 Job Conditions

- A. Environmental Conditions: Do not apply material if it is raining or snowing or if such conditions appear to be imminent. Minimum application temperature 45°F (7°C) and rising.
- B. Protection: Precautions should be taken to avoid damage to any surface near the work zone due to mixing and handling of the specified material.

1.05 Submittals

- A. Submit two copies of manufacturer's literature, to include: Product Data Sheets and appropriate Material Safety Data Sheets (MSDS).

1.06 Warranty

- A. Provide a written warranty from the manufacturer against defects of materials for a period of one (1) year, beginning with date of substantial completion of the project.

Part 2 - Products

2.01 Manufacturer

- A. **Sikagard 701W**, as sampled for Sika Corporation, 1682 Marion Williamsport Road, Marion, Ohio, 43302 is considered to conform to the requirements of this specification.

2.02 Materials

- A. Modified siloxane penetrating sealer:
1. A concentrated compound, mixed with water and forming a water-based siloxane penetrating sealer.
 2. The material shall not contain any solvents.
 3. The material shall not contain any silicates, fluosilicates, or stearates.

2.03 Performance Criteria

- A. Typical Properties of the modified siloxane penetrating sealer:
1. Color: white/opaque liquid
 2. Solids: 50% concentrated (silane modified siloxane polymer)
 3. Viscosity: 5- 20 cps.
 4. VOC: 211g/l
 - a. 46 g/l as diluted
 5. Flash point: 212 F
 6. NCHRP 244 REPORT SERIES 2 TEST

Reduction in Water Absorption:	91%
Water Vapor Transmission:	100%
Reduction in Cl ion intrusion:	90%
Federal Spec SSW-110C	
Water Absorption	.97%

Note: Tests above were performed with the material and curing conditions @ 71°F – 75°F and 45-55% relative humidity.

Part 3 – Execution

3.01 Surface Preparation

- A. Substrate must be clean, sound, and free of surface contaminants. Remove dust, laitance, grease, oils, curing compounds, form release agents and all foreign particles by mechanical means. Substrate shall be in accordance with ICRI Guideline No. 03732 for sealers.

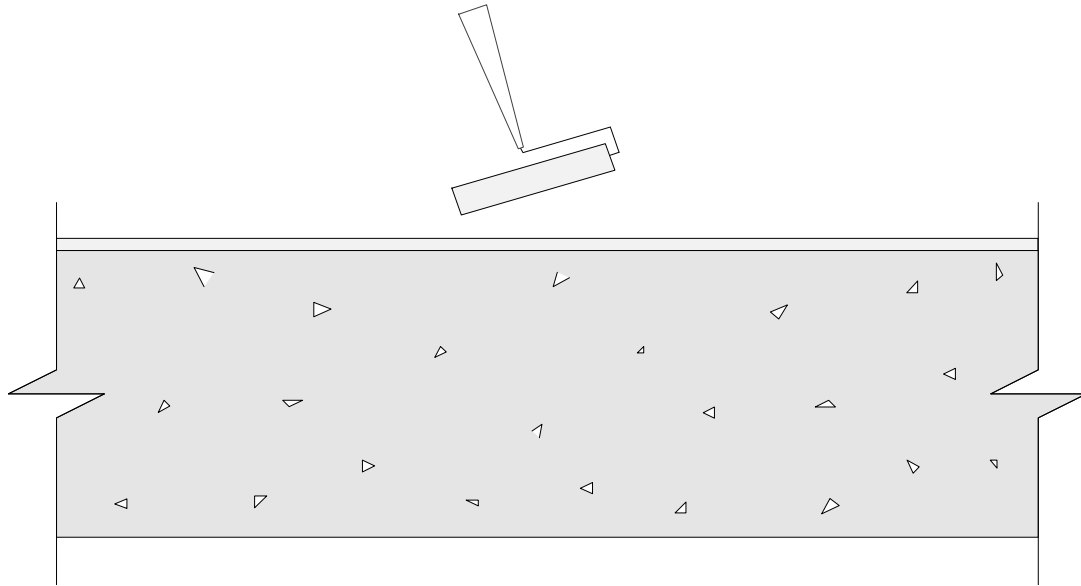
3.02 Mixing and Application

- A. Mixing: Dilute Sikagard 701W concentrated with up to 4(gal.) of tap water in a appropriate size container. Mix with a low speed (400-600 rpm) drill with a Sika paddle or comparable drum mixer until uniformly blended.
- B. Placement Procedure: The penetrating sealer should be applied liberally and allowed to soak into the substrate. This shall be accomplished by the use of brushes, rollers, or hand-pressure spray equipment. Depending on porosity of the substrate, coverage rates will range from 100-250 sq.ft./gal (diluted concentrate). On dense substrates, two coats of the diluted concentrate may be required to obtain the recommended application rate. They should be applied in a wet on wet fashion so as to completely saturate the surface. For proven results against chloride-ion intrusion, a 125 sq. ft./gal. coat is recommended.
- C. Adhere to all limitations and cautions for the solvent-free silxolane emulsion concentrate as stated in the manufacturers printed literature.

3.03 Cleaning

- A. The modified silxoane penetrating sealer can be cleaned from tools with water.
- B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

SC 066 Sikagard 701 W



1. Surface must be clean, sound and free of standing water.

Note: While residual moisture does not affect the treatment, the drier the substrate the better the penetration and protection.

2. Apply Sikagard 701W laterally by roller, brush (horizontal surface) or spray.

Note: When spraying, it is advisable to use hand-pressure equipment rather than compressed-air drive.

Concrete Restoration Systems by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071

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