

SPECIFICATION FOR GHOSTSHIELD SILOXA-TEK® 8500

SECTION 071900

IMPREGNATING WATER-REPELLENT CONCRETE MASONRY SEALER

Specifier Notes: This specification is written according to the Construction Specifications Institute (CSI) Master Format'04. The section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project. Coordinate this section with other specification sections and the drawings.

Specifier Notes: Ghostshield Siloxa-Tek® 8500 is an industrial-grade, water-based, silane/siloxane engineered to reduce water and moisture intrusion and protect concrete from deicing salts and chlorides.

Ghostshield Siloxa-Tek® 8500 meets maximum VOC content limits of <250 g/L for Concrete Protective Coatings as required by the U.S. EPA Architectural Coatings Rule. Concrete properly treated with Siloxa-Tek 8500 is USDA-accepted.

Ghostshield Siloxa-Tek® 8500 is recommended for use wherever a water repellent and salt repellent surface is required. Ideal applications include floors in industrial plants and warehouses, parking garages, bridges, shop floors, driveways, basements, garages and patios.

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

- A. Surface Preparation
- B. Application of clear, water-based water repellent sealer for concrete and masonry.

1.02 RELATED SECTIONS

Specifier Notes: Edit the list of related sections as required for the project. List other sections dealing with work directly related to this section.

- A. Section 03 35 00 – Concrete Floor Finishes

1.03 SUBMITTALS

- A. Submit the following specific items in time to allow for review by the Architect and resubmittals, if needed, without delaying the work.

1. Manufacturer' literature for all materials specified for use on this project, each properly labeled and referenced to appropriate Specification Section, in time to prevent delay of the project.
2. Safety Data Sheets (SDS) for all materials to be used.
3. Manufacturer's requirements and testing procedures for moisture conditions (moisture vapor emission rate, relative humidity, etc.) of the concrete or masonry at time of installation necessary to ensure proper bond.

1.04 REFERENCE STANDARDS

- A. In general, follow all requirements, recommendations and procedures of the following standards and publications:
 1. ASTM International (ASTM) standards as specified or referenced herein.
 2. Manufacturer's product data, written instructions and recommendations.
- B. The contractor shall follow the material standards included in the manufacturer's technical literature.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. All materials to be new. Handle all materials to prevent damage. Place materials on pallets. Use waterproof and fire-retardant tarpaulins to cover all stored materials top to bottom.
- B. Store all materials in original, unopened, labeled containers and packaging in compliance with manufacturer's directions. Comply with manufacturer's recommendations for minimum and maximum time and temperature limits for storage.
- C. Store unopened and sealed containers in a dry place and protect from direct sunlight or frost and any sources of fire or ignition. Do not store containers once they are opened or when the seal has been broken. Unopened and sealed containers can be stored up to twelve months in a dry location at a temperature between 45°F and 90°F.
- D. Promptly remove from the site all materials rejected by the Architect or exposed to any moisture anywhere, at any time, during transportation, storage, handling and installation.

- E. Materials shall be marked with the date of manufacture and shelf life. Do not use products beyond the expiration of their shelf life. Store flammable materials in a cool, dry, protected area away from sparks and open flames.

1.06 PROJECT CONDITIONS

- A. Do not install water-repellent sealer if:
 - 1. Ambient or substrate temperatures are less than 45°F or more than 90°F or if the substrate temperature is less than 5°F above the dew point at the time of application.
 - 2. Rain is forecasted within 24 hours.
- B. The primary concrete or masonry surface must be cured a minimum of twenty-eight days before the application of the water-repellent sealer.
- C. Prior to and during application of the water-repellent sealer, the concrete or masonry surface must be completely dry with a minimum moisture content of 4%, as tested with a moisture meter.
- D. Protect adjacent building surfaces (e.g.; window frames, glass) and landscaping by masking to protect from overspray. Any product spilled or dripped on an unwanted surface should be immediately removed by wiping with a clean cloth dipped in detergent solution and rinsed with clean water.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Water-Repellent Sealer: Thin coat, liquid applied, hydrophobic, impregnating water-repellent clear sealer consisting of a silane/siloxane aqueous emulsion designed for use on concrete or masonry substrates with 0.5% maximum water absorption with 48 hrs exposure as tested in accordance with ASTM C642; Ghostshield Siloxa-Tek® 8500 as manufactured by KreteTek Industries, Inc.

2.02 MANUFACTURER

- B. KreteTek Industries, Inc. 1000 N West St Wilmington, DE 19801 (855) 573-8383
Website: <http://ghostshield.com>

PART 3 – EXECUTION

3.01 GENERAL WORKMANSHIP FOR WATER-REPELLENT SEALER

- A. Comply with all recommendations of the manufacturer of the water-repellent sealer for surface preparation and installation of the sealer.
- B. Perform a test application on each type of surface prior to full-scale application to determine suitability and final appearance.
- C. Measure and record site conditions immediately before (as applicable) and periodically during the installation of the water-repellent sealer. Measurements must include air and substrate temperatures, air and substrate relative humidities, application rate, and record general notes on product uptake and performance.

3.02 PREPARATION OF CONCRETE OR MASONRY SURFACES FOR WATER REPELLENT

- A. Check concrete or masonry surfaces to ensure that they are suitable for application of water-repellent sealer. Treat unsuitable surfaces (too smooth, too rough, not dry, or contaminated by dirt, oil or any coating or other impurities) as required to make them suitable for application of sealer.
 - 1. Remove all dirt, dust, or other foreign matter from the surface of the concrete or masonry prior to the application of the water-repellent sealer using methods described in this section and approved by Architect based on surface preparation mockups.
 - 2. After cleaning, if a wet method such as power washing is used, the concrete or masonry surface must be allowed to dry for not less than 24 hrs before the application of the water-repellent sealer. If good weather conditions conducive to drying are not present, a longer drying time should be allowed and the sealer should not be applied until the concrete or masonry is completely dry as described in this section. Use a moisture meter if necessary to monitor drying of the concrete or masonry.
- B. Concrete or masonry substrates must be structurally sound, thoroughly dry, clean, and cured at least twenty-eight days.
- C. If acid or chemical cleaning agent is used to clean the concrete, make sure to neutralize before sealing.

3.03 WATER-REPELLENT SEALER APPLICATION

- A. Apply water-repellent sealer to prepared substrates within three days after completion of the surface preparation.

- B. Stir and mix materials thoroughly to ensure uniformity and in accordance with the manufacturer's recommendations.
- C. Apply water-repellent sealer with a sprayer or roller.
 - 1. Application rate depends on the density of the concrete or masonry and the depth of penetration required. Apply the sealer, liberally to the surface of the concrete or masonry to achieve high penetration depth but no more than what can stay on the surface without run off.
 - 2. For typical first coat applications, apply one coat of sealer at a rate of approximately 250 sq ft per gallon; application rate specific to the project determined by the mockup.
 - 3. Apply a second coat wet-on-wet, or immediately after the first coat. Take care to avoid the product running or dripping off the substrate. Broom out puddles until they soak in. Do not over apply.
- D. It may take up to 2 or more hours for the sealer to completely penetrate if the substrate is of high density. The treated surface may remain dark for up to twenty-four hours before it returns to normal appearance.
- E. Do NOT apply the sealer to concrete or masonry surfaces:
 - 1. That are damp or have damp repairs. If rain suddenly begins during installation, immediately stop application of sealer and cover the newly impregnated areas.
 - 2. If the conditions (e.g.; weather or surface conditions) do not meet the requirements of Para. 1.06 above or are not expected to meet the requirements for any time within a 24 hr period after installation.
- F. Do not disturb sealed surfaces for a minimum of 6 hrs after the application of the product. Early water repellence will be developed after 24 hrs; however, full curing of the sealer may take up to seven days or longer. Do not install concrete or masonry repairs for a minimum of 72 hrs after application of the sealer.

END OF SECTION