

## Product Data and Test Information

# PROTECTOSIL® CHEM-TRETE® BSM 350

Formerly Protectosil® Chem-Trete® BSM 400 BA

## PRODUCT DESCRIPTION

**Protectosil® CHEM-TRETE® BSM 350** brings you the next generation in silane technology. Our chemists have developed a pure, reactive, clear, penetrating sealer that yields a water repellent with the longest service life available, unsurpassed performance on concrete and brick masonry, as well as the lowest possible levels of volatile organic compounds. **Protectosil® CHEM-TRETE® BSM 350** can be applied in the most extreme temperature conditions without changing the surface appearance of the substrate. By penetrating the surface and creating a covalent chemical bond, **Protectosil® CHEM-TRETE® BSM 350** permanently attaches to the naturally occurring minerals in the substrate. It is ideal for use on exterior above-grade brick masonry, concrete and most natural stones. By reducing the amount of water entering the substrate, **Protectosil® CHEM-TRETE® BSM 350** reduces the intrusion of waterborne contaminants such as acid rain, salt and dirt, and reduces the deteriorating effects of these contaminants including spalling, scaling, efflorescence, leaching and staining. The Protectosil® product line has an unprecedented track record as structures treated in the 1970s are still protected, with these results documented by state, federal and private agencies.

## APPROPRIATE APPLICATIONS

For use on concrete, to protect the reinforcing steel from corrosion due to the effects of water, deicing salts and other waterborne chemicals. For use on brick masonry, to protect against the ingress of wind-driven rain. For use on concrete pavement for highways, parking decks and airport runways, to reduce scaling due to deicer chemicals. Reduces the effects of mildew, efflorescence and stains on vertical concrete and masonry buildings. Imparts water repellency to a substrate for an extended time.

## ADVANTAGES

**Protectosil® CHEM-TRETE® BSM 350** is composed of pure alkyltrialkoxysilanes. The silanes are designed to penetrate deep into the substrate and impart a high level of water and chloride ion screening. This provides the substrate with long-lasting protection. Because of the purity of **Protectosil® CHEM-TRETE® BSM 350**, it will

not leave a residue on nonporous substrates such as glass windows, metal frames or painted surfaces. By incorporating **Protectosil® CHEM-TRETE® BSM 350** into your integrated design, you can earn vital Leadership in Energy & Environmental Design (LEED) credits for both new and existing construction projects.

The main benefits of the product are:

- Low VOC formula
- Excellent resistance to water intrusion
- High resistance to wind-driven rain
- Breathable system
- Deep penetration into the substrate
- Reduces efflorescence
- No change in surface appearance
- No masking of windows necessary
- No blushing, peeling or yellowing
- High resistance to alkali attack
- Does not contain exempt solvents (such as 1,1,1 trichloroethane) that may be hazardous
- Substrates already treated with **Protectosil® CHEM-TRETE® BSM 350** can be painted over (tech bulletin available)

## TECHNICAL DATA

**Protectosil® CHEM-TRETE® BSM 350** is a clear, colorless liquid containing 100% alkyltrialkoxysilanes.

Color	water white
Active Substance	alkyltrialkoxysilane
Active Content	100% pure by weight
Solvent	none
Flash Point	102°F
Density	7.8 lb/gal
VOC	<350 g/l max

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## TEST DATA

### NHCRP #244 (@200 ft<sup>2</sup>/gal)

Series II 85% reduction in water absorption

Series II 86% reduction in chloride absorption

Series IV 99% reduction in chloride absorption

### ASTM E 514 "Water Permeance of Masonry"

Reduction in leakage 100%

Reduction in dampness 100%

### ASTM D 1653 "Water Vapor Transmission"

72.5 g/ft<sup>2</sup>/24 hours, 100% breathable

### ASTM C 67 "Brick and Structural Clay Tile Part 7 Water Absorption"

98% reduction in water absorption

## LIMITATIONS

Not intended for below-grade waterproofing. Should not be applied if the surface temperature is below 20°F (-7°C) or above 100°F (40°C), if rain is expected within 4 hours following application, or if high winds or other conditions prevent proper application. If rain has preceded the application, the surface should be allowed to dry for at least 24 hours. Protect from spillage or overspray with specialty coated glass, plastic windows, bituminous roofing products and asphalt. Check compatibility before application.

## APPLICATION

All surfaces must be cleaned to remove all traces of dirt, dust, efflorescence, mold, salt, grease, oil, asphalt, laitance, curing compounds, paint, coatings and other foreign materials. Acceptable surface cleaning methods include shotblasting, sandblasting, waterblasting and using chemical cleaners. Check with your local representative to verify that surface preparation is adequate. New masonry and concrete must be allowed to cure for a minimum of 28 days. All repointing must be completed and allowed to

cure for at least 7 days prior to application of **Protectosil® CHEM-TRETE® BSM 350**. Precast concrete may be treated sooner; please contact a Protectosil® representative for details. **Protectosil® CHEM-TRETE® BSM 350** should be applied using low-pressure (15 to 25 psi) pumping equipment with a wet fan type spray nozzle. Alternate methods include using either a power roller with a 1" nap or a brush. Do not alter or dilute the material. A test patch should be applied to the substrate to verify coverage rate, application conditions and desired results. On vertical surfaces, apply **Protectosil® CHEM-TRETE® BSM 350** in a flooding application from the bottom up, so the material runs down 6 to 8 inches below the spray pattern. Using this method, coverage rates on vertical surfaces will depend on the type of material to be treated. Your Protectosil® representative can give an exact coverage rate for your particular project. Please refer to the "**Protectosil® CHEM-TRETE® BSM 350** Application Instructions" for more detailed information.

## Precautions: Protectosil® CHEM-TRETE® BSM 350

is a combustible liquid and should be kept away from heat, sparks, open flame and other sources of ignition. **Protectosil® CHEM-TRETE® BSM 350** containers should be kept closed when not in use and should be stored at temperatures between 0°F and 120°F (-18°C and 50°C), away from rain and standing water. When working in an enclosed area, an air respirator should be used. Please refer to the material safety data sheet for more detailed information.

## PRICING, AVAILABILITY & TECHNICAL SERVICE

**Protectosil® CHEM-TRETE® BSM 350** is available in 5-gallon pails and 51-gallon drums to approved applicators, F.O.B. to various warehouses throughout the United States. Contact your local Protectosil® representative or your regional manager for specific cost information. You can obtain their contact information on our website, [www.protectosil.com](http://www.protectosil.com), or by calling us at 1 (800) 828-0919.

Technical service engineers and scientists are available to answer questions about product performance, application methods and compatibility with other building materials. You can speak to one of our engineers or scientists directly by calling our toll-free number.

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**MANUFACTURER**

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**PROTECTOSIL® PRODUCTS ARE MANUFACTURED AT THE EVONIK CORPORATION THEODORE, ALABAMA, PLANT UNDER A QUALITY SYSTEM CERTIFIED TO ISO-9001 AND ISO-14001 REQUIREMENTS.**

**For more information, SDS and the most updated product information, and to find your local representative, go to [silanes.evonik.com/en](https://silanes.evonik.com/en)**

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