Protectosil®

Product Data and Test Information

# PROTECTOSIL® CHEM-TRETE® PB 350

Water Repellent

## PRODUCT DESCRIPTION

**Protectosil® CHEM-TRETE® PB 350** is a clear, reactive, penetrating sealer for use on exterior above-grade concrete masonry units, brick masonry and most natural stones. This product provides resistance against water, alkali attack, acid rain and waterborne staining by penetrating into the substrate and chemically bonding with siliceous materials to form a permanent attachment of the water repellent molecule. **Protectosil® CHEM-TRETE® PB 350** is especially suited for making porous substrates, such as split-face block, water repellent. This water repellent effect stands up against wind-driven rain.

By penetrating the surface and creating a covalent chemical bond, **Protectosil® CHEM-TRETE® PB 350** will prevent waterborne contaminants from entering the substrate, reducing problems such as efflorescence, leaching, acid rain deterioration, scaling, dirt buildup, staining, corrosion of reinforcing steel and mildew. **Protectosil® CHEM-TRETE® PB 350** will not cause adverse surface appearance of the substrate.

Treated surfaces are fully breathable because the natural moisture vapor transmission is not affected. This will eliminate problems caused by entrapped moisture, including blushing of the sealer and freeze-thaw damage to the masonry.

## APPROPRIATE APPLICATIONS

Protects materials such as concrete masonry units (split-face, fluted or ground-faced blocks) from the ingress of wind-driven rain. Prevents moisture from entering and damaging interior walls and treated brick masonry, especially single wythe wall construction. Keeps masonry cleaner by reducing the amount of dirt and other pollutants that may absorb into the concrete.

Other substrates that can be protected include sandstone, terra-cotta, Saint Joe brick, hand-molded bricks and most natural stones.

## ADVANTAGES

**Protectosil® CHEM-TRETE® PB 350** is a proprietary mixture of alkyltrialkoxysilanes. The **Protectosil® CHEM-TRETE® PB 350** is designed to provide a high level of surface beading with penetration, to protect against wind-driven rain. The silane components are unique because they chemically bond to the siliceous materials in the substrate and set up a hydrophobic layer of protection. Because of the silane's unique chemistry, a long service life is possible. By incorporating **Protectosil® CHEM-TRETE® PB 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:

- High resistance to wind-driven rain
- Excellent resistance to chloride ion ingress
- Reduced efflorescence
- Breathable system
- Deep penetration into substrate
- High resistance to alkali attack
- Long service life
- Substrates already treated with **Protectosil® CHEM-TRETE® PB 350** can be painted over
- Keeps substrates cleaner

## LIMITATIONS

Not intended for below-grade waterproofing. Will leave a residue on nonporous materials such as glass, metal and painted surfaces. Asphalt-based materials such as roofing materials or plastic products, shrubbery and plant life should be protected from overspray.

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.

## TECHNICAL DATA

**Protectosil® CHEM-TRETE® PB 350** is a clear, colorless liquid containing pure alkyltrialkoxysilanes.

| | |
|---|---|
| Color | clear |
| Active Substance | alkyltrialkoxysilanes |
| Active Content | 100% by weight |
| Solvent | none |
| Flash point | 113°F |
| Density | 7.6 lb/gal |
| VOC | <350 g/l max |

(continued)

## TEST DATA

| | |
|---|---|
| **ASTM C140 "Sampling and Testing Concrete Masonry Units, Absorption"** | |
| 24- hr submersion test | 99.7% effective in reducing water intrusion |
| **ASTM C67 "Sampling and Testing Brick and Structural Clay Tile, Part 7 Absorption"** | |
| 24- hr submersion test | 99.6% effective in reducing moisture intrusion |
| **ASTM E514 "Water Permeance of Masonry"** | |
| Concrete Masonry Unit Wall | |
| Untreated leakage | 1.00 l/hr |
| Treated leakage | 0.0 l/hr |
| Reduction in leakage | 100% |
| **ASTM D 6489 "Water Vapor Transmission"** | |
| 100% breathable | |

## INSTALLATION

Concrete masonry must be allowed to cure for a minimum of 28 days. All repointing must be completed and allowed to cure for at least 3 days. Concrete repair and replacement must be completed prior to application of **Protectosil® CHEM-TRETE® PB 350**. Patching materials, caulking and sealing materials must be fully cured before applying **Protectosil® CHEM-TRETE® PB 350**.

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 sandblasting, waterblasting and using chemical cleaners. Check with your local representative to verify that surface preparation is adequate.

**Protectosil® CHEM-TRETE® PB 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, desired results and application conditions. On vertical surfaces, apply **Protectosil® CHEM-TRETE® PB 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. Application rates are typically from 50 to 80 $ft^2$/gal. Your Protectosil® representative can give an exact coverage rate for your particular project.

Protect glass, metal, plastic and other nonporous substrates from overspray. **Protectosil® CHEM-TRETE® PB 350** will not etch glass but will leave a residue on nonporous surfaces. Check that pump equipment is clean and has no water in lines, nozzles or pump. Please refer to the "**Protectosil® CHEM-TRETE® PB 350** Application Instructions" for more detailed information.

**Precautions: Protectosil® CHEM-TRETE® PB 350** is a combustible liquid and should be kept away from heat, sparks, open flame and other sources of ignition. **Protectosil® CHEM-TRETE® PB 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.

## AVAILABILITY

**Protectosil® CHEM-TRETE® PB 350** is available in 5-gallon pails and 55-gallon drums. Shipped F.O.B. throughout the United States and Canada. Contact your local Protectosil® representative or your regional manager for specific cost information. You can obtain their contact information on our website, silanes.evonik.com/en, or by calling us at 1 (800) 828-0919.

## TECHNICAL SERVICE

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, 1 (800) 828-0919, and selecting option 1.

(continued)

## MANUFACTURER

Evonik Corporation
2 Turner Place
Piscataway, NJ 08854
1 (800) 828-0919
protectosil@evonik.com
silanes.evonik.com/en

**PROTECTOSIL® PRODUCTS ARE MANUFACTURED AT THE EVONIK CORPORATION THEODORE, ALABAMA, PLANT UNDER A QUALITY SYSTEM CERTIFIED TO ISO-9001 ISO-14001 AND ISO-50001 REQUIREMENTS.**

**For more information, SDS and the most updated product information, and to find your local representative, go to silanes.evonik.com/en**



EVONIK
Leading Beyond Chemistry