

## Product Data and Test Information

**PROTECTOSIL® CHEM-TRETE® PB 100**

## Water Repellent

**PRODUCT DESCRIPTION**

**Protectosil® CHEM-TRETE® PB 100** is a clear, penetrating, breathable water repellent 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 100** is especially suited for making porous substrates, such as split-face block, water repellent. This water repellent effect protects the substrate from wind-driven rain.

By preventing water and waterborne contaminants from entering the substrate, **Protectosil® CHEM-TRETE® PB 100** reduces problems such as efflorescence, leaching, acid rain deterioration, scaling, dirt buildup, staining, corrosion of reinforcing steel and mildew. It will not cause adverse surface appearance of the substrate.

Treated surfaces are fully breathable because the natural moisture vapor transmission is not affected, which 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 substrate.

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 100** is a proprietary mixture of alkyltrialkoxysilanes. The **Protectosil® CHEM-TRETE® PB 100** 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 material 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 100** 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 100** 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.

(continued)

## TECHNICAL DATA

**Protectosil® CHEM-TRETE® PB 100** is a clear, colorless liquid containing pure alkyltrialkoxysilanes with activator.

Color	clear
Active Substance	pure silane
Active Content	100% by weight
Solvent	none
Flash point	122°F
Density	7.3 lb/gal
VOC	375 g/l max

## TEST DATA

<b>ASTM C140 "Sampling and Testing Concrete Masonry Units, Absorption"</b>	
24- hr submersion test	99.7% effective in reducing water intrusion
<b>ASTM C67 "Sampling and Testing Brick and Structural Clay Tile, Part 7 Absorption"</b>	
24- hr submersion test	99.7% effective in reducing moisture intrusion
<b>ASTM C642 "Specific Gravity, Absorption and Voids in Hardened Concrete"</b>	
24- hr submersion test	99.7% effective in reducing moisture intrusion
<b>ASTM E514 "Specific Gravity, Absorption and Voids in Hardened Concrete"</b>	
Concrete Masonry Unit Wall	
Untreated leakage	1.00 l/hr
Treated leakage	0.0 l/hr
Reduction in leakage	100%
<b>ASTM D 1653 "Water Vapor Transmission"</b>	
72.5 g/ft <sup>2</sup> /24 hours, 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 7 days. Concrete repair and replacement must be completed prior to application of **Protectosil® CHEM-TRETE® PB 100**. Patching materials, caulking and sealing materials must be fully cured before applying **Protectosil® CHEM-TRETE® PB 100**.

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 100** 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 100** 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<sup>2</sup>/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 100** 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. 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.

**Precautions: Protectosil® CHEM-TRETE® PB 100** is a combustible liquid and should be kept away from heat, sparks, open flame and other sources of ignition.

**Protectosil® CHEM-TRETE® PB 100** 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 100** 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.

(continued)

### 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.

### 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 [www.protectosil.com](http://www.protectosil.com)

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

Protectosil® = registered trademarks of Evonik Industries. This information and all technical and other advice are based on Evonik Corporation ("Evonik") present knowledge and experience. However, Evonik assumes no liability for such information or advice, including the extent to which such information or advice may relate to third party intellectual property rights. Evonik reserves the right to make any changes to information or advice at any time, without prior or subsequent notice. EVONIK DISCLAIMS ALL REPRESENTATIONS, WHETHER EXPRESSED OR IMPLIED, AND SHALL HAVE NO LIABILITY FOR MERCHANTABILITY OF THE PRODUCT OR ITS FITNESS FOR A PARTICULAR PURPOSE (EVEN IF EVONIK IS AWARE OF SUCH PURPOSE), OR OTHERWISE. EVONIK SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. It is the customer's sole responsibility and obligation to arrange for inspection and testing of all products by qualified experts. Reference to trade names used by other companies is neither a recommendation nor an endorsement of the corresponding product, and does not imply that similar products could not be used.