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**EVONIK**  
INDUSTRIES

# Protectosil® CHEM-TRETE® PB 100

## WATER REPELLENT

### Product Data and Test Information



#### PRODUCT NAME

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

Concrete masonry sealer for porous substrates.

#### MANUFACTURER

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

#### PRODUCT DESCRIPTION

A clear, penetrating, breathable water repellent for use on exterior above-grade concrete masonry units, brick masonry and most natural stones. Provides resistance against water, alkali attack, acid rain and waterborne staining. Penetrates into the substrate and chemically bonds with silica 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 stands up against 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. **Protectosil CHEM-TRETE PB 100** 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

Materials such as concrete masonry units (split-face, fluted or ground-faced blocks) can be protected from the ingress of wind-driven rain.

Brick masonry, especially single wythe wall construction, can be treated to prevent moisture from entering and damaging interior walls.

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 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 silica 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:

- Excellent resistance to water intrusion
- High Resistance to wind-driven rain
- Breathable system
- Deep penetration into the substrate
- Reduced efflorescence
- No change in surface appearance
- Resistance to UV deterioration
- No blushing, peeling or yellowing
- High resistance to alkali attack
- Keeps substrate 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 silanes
Active Content	100% by weight
Solvent	None
Flash Point	122°F
Density	7.3 lb/gal
VOC	375 g/l

## TEST DATA

ASTM C 140 "Sampling and Testing Concrete Masonry Units, Absorption"

24-hour submersion test—99.7% effective in reducing water intrusion

ASTM C 67 "Sampling and Testing Brick and Structural Clay Tile, Part 7 Absorption"

24-hour submersion test—99.6% effective in reducing moisture intrusion

ASTM C 642 "Specific Gravity, Absorption and Voids in Hardened Concrete"

24-hour immersion—97.5% effective

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 1653 Water Vapor Transmission

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 3 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 125 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. Please refer to the "**Protectosil CHEM-TRETE PB 100** Application Instructions" for more detailed information.

**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 (-18°C) and 120°F (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- and 55-gallon drums by authorized distributors 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, [www.protectosil.com](http://www.protectosil.com) or by calling our toll-free number, 1 (800) 828-0919.

## TECHNICAL SERVICE

Technical service engineers and chemists are available to answer questions about product performance, application methods and compatibility with other building components. You can speak to one of our chemists directly by calling our toll-free number, 1 (800) 828-0919, and selecting option 4.

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For more information, MSDS and the most updated product information, and to find your local representative, go to [www.protectosil.com](http://www.protectosil.com).

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