

Protectosil® CHEM-TRETE® PB VOC

WATER REPELLENT

Product Data and Test Information



PRODUCT NAME

Protectosil® CHEM-TRETE® PB VOC

High performance penetrating water repellent for porous substrates.

MANUFACTURER

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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 concrete, brick, concrete masonry units and some natural stones. Prevents water and water borne contaminants from entering the substrate and causing premature deterioration. Penetrates into the substrate and chemically bonds with silica to form a permanent attachment of the water repellent molecule. **Protectosil CHEM-TRETE PB VOC** 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 water borne contaminants from entering the substrate, **Protectosil CHEM-TRETE PB VOC** reduces problems such as efflorescence, leaching, acid rain deterioration, scaling, dirt buildup, staining, corrosion of reinforcing steel, and mildew. **Protectosil CHEM-TRETE PB VOC** will not cause an adverse surface appearance to the substrate. Treated surfaces are fully breathable because the natural moisture vapor transmission is not affected. This will eliminate problems which entrapped moisture causes, 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 width wall construction, can be treated to prevent moisture from entering and damaging interior walls.

To provide resistance against water and waterborne contaminants to reduce staining.

Other substrates which can be protected include sandstone, terra-cotta, handmolded bricks, and natural stones.

ADVANTAGES

Protectosil CHEM-TRETE PB VOC is a proprietary mixture of alkyltrialkoxo silanes in a special carrier system. The **Protectosil CHEM-TRETE PB VOC** 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. The Protectosil CHEM-TRETE 40 VOC can be incorporated into your integrated design to earn you 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 wind-driven rain
- Excellent resistance to chloride ion ingress
- Reduced efflorescence
- Breathable system
- Penetration into the substrate
- Long service life
- No blushing, peeling or yellowing
- Resistance to alkali attack
- Keeps substrate cleaner

LIMITATIONS

Not intended for below-grade waterproofing. Will leave a residue on non-porous 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 temperatures are below 20 °F (-10 °C) or above 100 °F (40 °C), if rain is expected within four 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 at least 48 hours.

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TECHNICAL DATA

Protectosil CHEM-TRETE PB VOC is a clear colorless liquid composed of alkyltrialkoxo silanes with activator in denatured alcohol.

Color	water white
Active Substance	alkyltrialkoxo silane
Active Content	> 40%
Solvent	denatured ethyl alcohol
Flash Point	54 °F
Density	6.7 lbs./gal.
VOC	580 g/l

TEST DATA

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

24 hour submersion test – **99.4%** effective in reducing water intrusion

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

24 hour submersion test – **99.8%** effective in reducing moisture intrusion

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

24 hour immersion – **97.5%** effective

ASTM D 1653 "Moisture Vapor Permeability of Organic Coatings"

68 grams/ft²/24 hours – **97%** breathability

ASTM E 514 "Water Permeance of Masonry" Concrete Block Wall

Untreated leakage	6.47	liters/hr
Treated leakage	0	liters/hr
Reduction in leakage	100%	

Brick Wall

Untreated leakage	1.00	liters/hr
Treated leakage	0	liters/hr
Reduction in leakage	100%	

INSTALLATION

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

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 chemical cleaners. Check with your Evonik Degussa Corporation representative to verify that surface preparation is adequate.

Protectosil CHEM-TRETE PB VOC should be applied using low pressure (15 to 25 psi) pumping equipment with a wet fan type spray nozzle. Alternate methods include power roller with a 1" nap or by brush. Do not alter or dilute the material. Do not apply to a wet or damp substrate. A test patch should be applied to the substrate to verify coverage rate, application conditions and desired results.

On vertical surfaces apply the **Protectosil CHEM-TRETE PB VOC** in a flooding application, from the bottom up so the material runs down 6 to 8 inches below the spray pattern. On horizontal surfaces the liquid material should pond on the surface at least 5 seconds before being absorbed. Coverage rates on vertical surfaces depend on the type of material to be treated. Typical application rates are from 50-125 sq. ft/gallon. Your Evonik Degussa Corporation representative can give an exact coverage rate for your particular project.

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

Precautions: Protectosil CHEM-TRETE PB VOC is a flammable liquid and should be kept away from heat, sparks, open flame or other sources of ignition. The **Protectosil CHEM-TRETE PB VOC** containers should be kept closed when not in use and should be stored at temperatures between 0 °F and 120 °F and away from rain and standing water. When working in an enclosed area, an air respirator should be used. Please refer to Material Safety Data Sheet for more detailed information.

AVAILABILITY

Protectosil CHEM-TRETE PB VOC is available in 5 and 55 gallon drums through authorized distributors throughout the United States and Canada. Contact Evonik Degussa Corporation at 1-800-828-0919 for the Sales Representative in your area for specific cost information.

TECHNICAL SERVICE

Technical service engineers and chemists are available to answer questions on product performance, application methods and compatibility with other building materials.

For more information, MSDS, the most updated product information and to find your local representative go to www.protectosil.com

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