

Protectosil® AQUA-TRETE® EM

WATER REPELLENT Product Data and Test Information



PRODUCT DESCRIPTION

A penetrating, waterborne, vapor-permeable water repellent for use on concrete, brick, concrete masonry units and some natural stones. A ready-to-use, low-VOC, silane/siloxane emulsion. Reduces the ingress of water and waterborne contaminants into the substrate and thereby prevents premature deterioration. Penetrates the substrate and chemically bonds with silica to form a permanent attachment of water repellent molecule. **Protectosil AQUA-TRETE EM** water repellent is especially suited for applications where solvent-borne products are not acceptable, such as states that have VOC regulations for AIM coatings. **Protectosil AQUA-TRETE EM** is VOC compliant in all 50 states, including California's SCAQMD.

By reducing the ingress of water and waterborne contaminants into the substrate, **Protectosil AQUA-TRETE EM** reduces such problems as efflorescence, leaching, acid rain deterioration, scaling, dirt buildup, staining, corrosion of reinforcing steel and mildew. Treated surfaces are fully breathable because their natural moisture-vapor transmission is not affected. This will reduce problems that entrapped moisture can cause, including blushing of the sealer and freeze-thaw damage to the masonry.

APPROPRIATE APPLICATIONS

Brick masonry, especially single wythe wall construction, can be treated to prevent moisture absorption.

Concrete masonry units (medium- to normal-weight split-face, fluted or ground-faced blocks) can be protected from the ingress of wind-driven rain.

For use on concrete to protect from the effects of water, deicing salts and other waterborne chemicals. Keeps the substrate clean by reducing the amount of dirt and other pollutants that may be absorbed.

Other substrates that can be protected include stucco, sandstone, terra-cotta, hand molded bricks and some natural stones.

ADVANTAGES

Protectosil AQUA-TRETE EM is a silane/siloxane mixture in a proprietary emulsion system. Unlike some other silane or siloxane emulsion systems, **Protectosil AQUA-TRETE EM** is ready to use and is suitable for brick and concrete, without the need to blend oils, silicones, stearates or acrylates into the

system. **Protectosil AQUA-TRETE EM** is designed to provide a high level of surface beading with penetration to protect against wind-driven rain. The active components are unique because they chemically bond to the silica in the substrate and set up a hydrophobic layer of protection. Because of this unique chemistry, **Protectosil AQUA-TRETE EM** has a long service life. By incorporating **Protectosil AQUA-TRETE EM** 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:

- Non flammable
- High resistance to wind-driven rain
- Reduced efflorescence
- Breathable system
- Good penetration into substrate
- High resistance to alkali attack
- Keeps substrates cleaner

LIMITATIONS

Not intended for below-grade waterproofing. Will leave a residue on nonporous materials such as glass, metal and painted surfaces. Shrubby and plant life should be protected from overspray.

Should not be applied if the surface temperature is below 40°F (5°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 AQUA-TRETE EM is composed of a silane/siloxane emulsion in water.

Color	milky white
Active Substance	silane/siloxane
Active Content	10%
Solvent	water
Flash Point	>200°F
Density	8.34 lb/gal
VOC	90 g/l

(continued)

TEST DATA

ASTM C 140 "Water Absorption Concrete Masonry Units"

24-hour submersion test

97.3% effective in reducing water intrusion

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

24-hour submersion test

98.1% effective in reducing moisture intrusion

ASTM C 642 "Water Absorption of Concrete"

24 hours 0.49%

48 hours 0.68%

ASTM C 672 "Deicer Scaling"

60 cycles (non-air-entrained concrete) 0 rating

TT-C-555B "2500 hours of Accelerated Weathering"

No change

ASTM D 1653 "Moisture Vapor Permeability of Organic Coatings"

64 g/ft²/24 hours, 92% water vapor transmission

ASTM E 514 "Water Leakage of Masonry"

Untreated leakage 5.50 l/hr

Treated leakage 0 l/hr

Reduction in leakage 100%

INSTALLATION

Concrete 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 AQUA-TRETE EM**. Patching materials, caulking, sealing materials and traffic paint must be fully cured before applying **Protectosil AQUA-TRETE EM**.

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 Protectosil representative to verify that surface preparation is adequate.

Protectosil AQUA-TRETE EM should be applied using low-pressure (15 to 25 psi) pumping equipment with a wet fan type spray nozzle. Alternate methods include using a power roller with a 1" nap or a 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, desired results and application conditions.

Substrate, air and product temperatures should be between 40°F and 100°F (5°C and 40°C) during application. Do not apply product if temperatures are expected to fall below 40°F (5°C) within 12 hours after application. Do not apply

material if rain is predicted within 4 hours after application. On vertical surfaces, apply the **Protectosil AQUA-TRETE EM** using 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 for at least 5 seconds before being absorbed. Coverage rates on masonry surfaces depend on the type of material to be treated. Your Protectosil representative can give an exact coverage rate for your particular project.

Protect glass, metal, plastic and other nonporous substrates from overspray. **Protectosil AQUA-TRETE EM** will not etch glass but will leave a residue on nonporous surfaces. **Protectosil AQUA-TRETE EM** should not darken or discolor the substrate if used at the recommended coverage rates, but due to variations in substrate porosity and environmental conditions, applying a test patch is advised to verify desired results.

Precautions: Protectosil AQUA-TRETE EM product containers should be kept closed when not in use and should be stored at temperatures between 40°F (5°C) and 110°F (45°C), away from rain and standing water. Please read the material safety data sheet for more detailed information

AVAILABILITY

Protectosil AQUA-TRETE EM 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, www.protectosil.com, 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.

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

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