

Technical Information

Protectosil® CHEM-TRETE® BSM 400



WATER REPELLENT

Product Data and Test Information

PRODUCT NAME

Protectosil® CHEM-TRETE® BSM 400

High performance water repellent for brick masonry, concrete, and most natural stones.

MANUFACTURER

Degussa Corporation
Aerosil & Silanes
379 Interpace Parkway, P.O. Box 677
Parsippany, NJ 07054-0677
1 (800) 828-0919
info.protectosil@degussa.com
www.chem-trete.com

PROTECTOSIL PRODUCTS ARE MANUFACTURED AT THE DEGUSSA CORPORATION THEODORE, ALABAMA PLANT UNDER A QUALITY SYSTEM CERTIFIED TO ISO-9001 REQUIREMENTS.

PRODUCT DESCRIPTION

Protectosil CHEM-TRETE BSM 400 brings to you the next generation in silane technology. Our chemists have developed a pure silane to yield a water repellent with the longest service life, unsurpassed performance on brick masonry, and the lowest levels of volatile organic compounds. **Protectosil CHEM-TRETE BSM 400** can be applied in the most extreme temperature conditions without changing the surface appearance of the substrate.

By penetrating the surface and bonding chemically to the substrate **Protectosil CHEM-TRETE BSM 400** permanently attaches to the substrate. It is ideal for use on exterior above grade brick masonry, concrete, and most natural stones.

By reducing the amount of water entering the substrate, **Protectosil CHEM-TRETE BSM 400** reduces the intrusion of water carrying contaminants such as salt and dirt, and reduces the deteriorating effects of these contaminants such as rebar corrosion, spalling, scaling, efflorescence, leaching and staining.

APPROPRIATE APPLICATIONS

For use on brick masonry to protect against the ingress of wind-driven rain. For use on vertical structures to protect the reinforcing steel from corrosion due to the effects of water and other water borne contaminants.

To reduce the effects of mildew, efflorescence, and stains on vertical concrete and masonry buildings.

To impart water repellency to a substrate for an extended time.

ADVANTAGES

Protectosil CHEM-TRETE BSM 400 is pure alkyltrialkoxo silanes. The silanes are designed to penetrate deep into the substrate and impart a high level of water and chloride ion screening. This provides the substrate with long lasting protection. Because of the purity of the **Protectosil CHEM-TRETE BSM 400**, it will not leave a residue on non porous substrates such as glass windows, metal frames or painted surfaces.

Protectosil CHEM-TRETE BSM 400 complies with all State and Federal volatile organic content regulations. This includes the more stringent state regulations of California and the Northeastern States. In addition, **Protectosil CHEM-TRETE BSM 400** does not contain exempt solvents such as 1,1,1 trichloroethane which may be hazardous. For the proper VOC regulations in your specific location contact your Chem-Trete representative or reference our brochure on VOC regulations which is available for download at website www.chem-trete.com.

The **Protectosil CHEM-TRETE BSM 400** product line has an unprecedented track record in protecting brick masonry, concrete, and natural stone structures from deterioration due to water and water borne contaminants. Structures treated in the 1970s are still protected and these results are documented by state, federal, and private agencies.

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
- Excellent resistance to chloride ion ingress
- No masking of windows necessary
- No blushing, peeling, or yellowing
- High resistance to alkali attack

LIMITATIONS

Not intended for below-grade waterproofing. Should not be applied if the surface temperature is below 20°F or above 100°F, if rain is expected within two 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 24 hours. Caution should be taken with specialty coated glass, plastic windows, or asphalt. Check compatibility before application.

TECHNICAL DATA

Protectosil CHEM-TRETE BSM 400 is a clear, colorless, liquid containing pure alkyltrialkoxo silanes.

Color	water white
Active Substance	pure silanes
Active Content	100% by weight
Solvent	None
Flash Point	145°F
Density	7.3 lbs/gal
VOC	383 g/l

TEST DATA

NHCRP #244 (@200 ft³/gallon)

Series II	85% Reduction in Water Absorption
Series II	86% Reduction in Chloride Absorption
Series IV	99% Reduction in Chloride Absorption

ASTM E514 “Water Permeance of Masonry”

Reduction in Leakage	100%
Reduction in Dampness	100%

ASTM G 53 “Accelerated Weathering (2000 hours)
>99% water repellency

ASTM D 1653 Water Vapor Transmission
72.5 g/ft²/24hours, 100% Breathable

ASTM C 67 “Brick and Structural Clay Tile” Part 7 Water Absorption”
98% reduction in water absorption

INSTALLATION

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 local Chem-Trete representative to verify that surface preparation is adequate.

New masonry and concrete must be allowed to cure a minimum of 28 days. All repointing must be completed and allowed to cure at least 3 days prior to application of **Protectosil CHEM-TRETE BSM 400**. Precast concrete may be treated sooner, please contact a Chem-Trete representative for details.

Protectosil CHEM-TRETE BSM 400 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. A test patch should be applied to the substrate by a Chem-Trete representative to verify coverage rate and application conditions.

On vertical surfaces apply **Protectosil CHEM-TRETE BSM 400** in a flooding application, from the bottom up so the material runs down 6 to 8 inches below the spray pattern. Using this method, cover rates on vertical surfaces will depend on the type of material to be treated. Your Chem-Trete representative can give an exact coverage rate for your particular project. Please refer to “**Protectosil CHEM-TRETE BSM 400** Application Instructions” for more detailed information.

Precautions: Protectosil CHEM-TRETE BSM 400 is a combustible liquid and should be kept away from heat, sparks, open flame, or other sources of ignition. The **Protectosil CHEM-TRETE BSM 400** 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 Degussa Corporation Material Safety Data Sheet for more detailed information.

AVAILABILITY

Protectosil CHEM-TRETE BSM 400 is available in 5 and 55 gallon drums to approved applicators F.O.B. to various warehouses throughout the United States. Contact your local Chem-Trete representative or your regional manager for specific cost information. You can obtain their contact information on our website www.chem-trete.com or by calling our toll free number at 1-800-828-0919.

TECHNICAL SERVICE

Technical service engineers and chemists are available to answer questions on 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 at 1-800-828-0919 select Option 4.

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