

Water Repellent Coatings

Brick

These recommendations are applicable to all face brick and Atlas® brick manufactured by Interstate® Brick or H.C. Muddox, conforming to ASTM C-216 or ASTM C-652.

Water Repellents

Water repellents react with the brick and the humidity to transform the surface into a highly water repellent membrane to provide protection against moisture intrusion, efflorescence, leaching, mildew, freeze/thaw spalling and atmospheric staining. The water repellents specified are clear, penetrating, VOC compliant (environmentally safe) and have high vapor transmission rates thus allowing moisture trapped within a wall to pass through the repellent surface.

1. **Sure Klean® Weather Seal Siloxane WB** is water based and **Weather Seal Siloxane** is a solvent-based water repellent. Both have a 10 – 12 year service life, are not affected by high alkaline substances, chemically bond to the masonry, and have a vapor transmission rate in excess of 95 percent.
2. **Hydrozo Enviroseal™ Double 7 For Brick** is water-based, silane with a vapor transmission rate in excess of 85 percent.
3. **Protectosil® CHEM-TRETE® BSM 350** and **Aqua-Trete® Concentrate** are, silane water repellents. **Chem-Trete® BSM 350** is solvent based and will not leave a residue on glass, metal, or other non-porous surfaces. **Aqua-Trete® Concentrate** is water based water repellent.

Application

1. Mortars and grout shall have been allowed to cure a minimum of 28 days.
2. Remove and repoint any damaged mortar or cracks in the mortar joints exceeding .02" (approximate thickness of a business card).
3. Allow repointed mortar to cure 7 days prior to application.
4. All caulking and sealant work must be done and allowed to cure completely before application of water repellents. (Refer to manufacturer's recommendations.)
5. Assure that all surfaces are clean and dry.
6. All materials, along with the surrounding air, must be maintained above 45° F during application.
7. Test a small area of surface to insure compatibility with existing conditions, and to establish proper coverage rates.
8. Do not dilute or alter water repellents.
9. Apply water repellent from the bottom of the wall up.

10. Initially fog the wall down with a fine mist, followed by flooding the wall with a minimum 8" rundown using a manual-pump low-pressure sprayer. Roll or brush out excessive drip areas.

Coverage

Normal coverage of both products is recommended between 100 to 200 square feet per gallon dependent on density and absorption of brick. The test panel will help to identify actual coverage rate required.

Precautions

1. Brick surface shall be clean and surface dry prior to application.
2. Neutralize alkalis and remove efflorescence salts prior to application.
3. Protect surfaces to remain uncoated.
4. Provide adequate ventilation.
5. Avoid prolonged inhalation of vapors and contact with skin or eyes.
6. Weather shall be clear and no precipitation expected before or following application for at least 24 hours.
7. Keep materials away from fire or flames.
8. The suggested sealers perform very well in preventing moisture from entering a wall through the brick face provided that application procedures are followed. As there are other means for water to enter a wall, the designer must properly detail all potential avenues of water penetration. Proper flashing, expansion joint, window, parapet and other details must be considered.
9. Water repellents should not be applied to walls undergoing efflorescence. Efflorescence is a sign of moisture trapped within a wall. Application of water repellents to efflorescing walls may trap these salts behind the coating resulting in salt concentrations which may cause spalling.

Specifications

1. The above products comply with the following:
2. ASTM C-67 for Water Repellent.
3. ASTM D-1653 and E-96 Moisture Vapor Transmission Rate.
4. Accelerated Weathering (Q.U.V.) Test — 2500 hours.
5. Efflorescence NBS-883 Highly Resistant.
6. Dry time 24 Hours.
7. Surface appearance after application unchanged to slightly darken.