



Vapourproofing Concrete. Strengthening Foundations.

## **MOXIE SHIELD 1500 CONCRETE SEALER APPLICATION PROCEDURES**



### **INDICATIONS OF MOISTURE MIGRATION**

- Spalling, dusting, structural joints, and cracks.
- Mats or boxes left on floor become wet or damp in a short period of time.
- Indications of moisture migration in concrete where flooring materials have been installed: Efflorescence or alkali salts present at flooring joints, chemical attack on the adhesive bond, warping, curling, cracking, seam separation, discoloration, mold or mildew, rusty nails in tack strips, bubbling, peeling, lumpy surface or cracks visible through coatings or flooring materials.

### **CONCRETE SUBSTRATE PREPARATION**

Substrate preparation is the most important factor when applying Moxie Shield 1500 Concrete Sealer. If the concrete is nonabsorptive, it must be properly and aggressively abraded to expose a surface that will allow static absorption of our water-based product. [NOTE: Perform the Water Absorption Test\* to verify absorption.] On existing slabs, remove any flooring materials, finishes, waxes, grease, surface sealers, paints, flooring adhesives, or any other materials that could impede the absorption and penetration of Moxie Shield 1500 Concrete Sealer. If the concrete is nonabsorptive, bead blast, scarify, or grind with a diamond blade to expose an absorptive surface equal to a CSP 3 or 4, equivalent to 60 grit sandpaper. Acid etching is neither acceptable nor effective.

### **CRACKS/CUTS & JOINTS**

Cracks, structural cracks, saw cuts and expansion joints must be sealed. Refer to the Moxie Shield 2000 Concrete Patch Technical Specifications sheet. Cracks less than 1/4" in width must be 'V' grooved, or a "crack chaser" must be used, to provide an adequate bond.

### **APPLICATION PROCEDURES**

1. DO NOT APPLY IF THE AMBIENT TEMPERATURE IS BELOW 50°F OR ABOVE 85°F ON EXISTING CONCRETE. IDEAL AMBIENT TEMPERATURE IN CONTROLLED ENVIRONMENTS IS 68°F-78°F. DO NOT APPLY IN THE RAIN.
2. Perform the Water Absorption Test.
3. Mist surface to dampen the substrate.
4. Apply the first coat of Moxie Shield 1500 penetrating sealer using a low pressure sprayer or by pouring and brooming evenly over the concrete substrate.
5. Do not leave any puddling in low areas of the concrete. Product must absorb evenly and be dry to the touch within 30 to 45 minutes of application. Moxie Shield 1500 Concrete Sealer will dry on the surface and become difficult to remove if allowed to cure in low areas. Spread product evenly, using a stiff bristle broom to ensure even absorption, and begin brooming low areas before moving to high areas.
6. Apply second coat when application surface area appears to be 90% dry (two or more applications may be necessary, depending on the porosity). Regulate the absorption of product on areas where it is absorbing slowly while touching up areas where absorption is occurring rapidly until the surface appears to be drying evenly. [NOTE: When absorption takes 30 minutes or longer, no further applications are necessary.]
7. After the final application has absorbed and appears dry, mist surface with clean water. Proper and complete absorption will result in the appearance of an even, dry look.

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### **\*WATER ABSORPTION TEST:**

Surface is properly abraded when two to three tablespoons of water poured onto the concrete spreads out and absorbs within 15 to 20 minutes. If the water beads up on the surface and shows no absorptive qualities, then expose an absorptive surface. It is the Contractor's responsibility to provide an absorptive surface to allow proper penetration of Moxie Shield 1500 Concrete Sealer.

### ***NEED MORE HELP?***

Please contact our technical experts at [tech@moxieshield.com](mailto:tech@moxieshield.com) or call 888-550-7998.

8. After 16-24 hours, saturate thoroughly with water to allow further penetration of product and to neutralize the surface. Broom water from low spots to avoid any puddling during drying period. Broom off any efflorescence until no more appear. When dry and no efflorescence are present, sealing process is complete. If flooring is to be installed wait 48 hours after last saturation to install flooring materials or coatings. Refer to the testing procedures listed below and proceed with ASTM D4263 Plastic Sheet Test and ASTM E1907 Relative Humidity Test.

### **APPLICATION FOR NEW CONCRETE INSTALLATION**

Moxie Shield 1500 Concrete Sealer can be sprayed onto the surface of the fresh concrete as soon as the concrete surface is "set" enough to walk on without marring the finish.

1. Apply the first coat of Moxie Shield 1500 penetrating sealer using a low-pressure sprayer.
2. Apply the second coat as soon as first coat has absorbed. Typically, no more than 10 minutes.
3. No additional preparation is needed before or after the two-coat application.

### **ASTM F710 MOISTURE TESTING PROCEDURE**

For the recommended procedure to verify the readiness of Moxie Shield 1500 impermeable concrete to receive resilient flooring, refer to ASTM F710 Mat Test section for "Bond" testing.

### **MOXIE WARRANTY ASTM E1907 TESTING PROCEDURE**

For over 40 years Moxie International has followed a tried and true method of surface moisture emission, described in ASTM E1907, to determine moisture emission by measuring relative humidity of atmosphere confined adjacent to concrete floor. If flooring materials, epoxies, or coatings of ANY type are to be installed, only this test is to be performed. Always comply with adhesive manufacturer's requirements for proper trowel notch depth, width, spacing and pH levels. Make sure adhesive to be used is suitable for use over a non-porous, impermeable, and nonabsorptive surface. Contact the Moxie Technical Department for further details.

### **ASTM F1869**

The Calcium Chloride Test is not acceptable, as it removes approximately 50% of the moisture from the top inch of the concrete, thereby creating an area that is void of the necessary moisture to complete the chemical process. Moisture from these gels will give an erroneously high reading.

### **ASTM F2170**

An Electrical Conductivity or In Situ Probe Test is not acceptable. Problematic moisture is initially converted into a colloidal gel, which will indicate a flow of current. In many cases, this colloidal gel may indicate an erroneously high reading.