

Product Specifications and Data Sheet

Product Name:
B-1 Topical System

Manufacturer:
Barrier-1 Inc.
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Product Description:

Barrier-1 Topical System is comprised of 2 separate components. One is a water based, non-toxic, premixed liquid that is designed to penetrate deep into the concrete slab and stop moisture vapor emission. The second is a cementitious self leveling or troweled coating. The first component works independently of the other to waterproof a concrete structure.

The system will stop hydrostatic pressure, capillary action and micro silica alkali attack. The system has zero volatile organic compounds (VOC) and requires no special handling or equipment

Basic Use:

Barrier-1 Topical System specifically protects floor-covering materials such as resilient, epoxies, carpeting, rubber tile,

wood, cement toppings, and other sheet materials from de-bonding due to moisture.

After installation, the topical system becomes an integral part of the slab providing maximum protection. The topical system will form a capillary break deep enough to prohibit moisture intrusions positive, negative and horizontally.

Limitations:

Do not apply the product at temperatures below 40°F. Surface must be properly prepared before product can be applied. Do not apply to concrete with standing water on the surface.

Composition:

Barrier-1 Topical System is comprised of inorganic chemicals that are directly inherent to concrete. This topical system will have a natural chemical reaction with the elements pre-existing inside the concrete. The chemical reaction forms a permanent barrier (capillary break) which will become integral to the concrete and irremovable.

Technical Data:

Part A:

Appearance: Colorless
Odor: None
Toxicity: None
Flammability: None
Ph: 11.3
Shelf Life: Indefinite
Weight: 9lbs 2oz per gallon
Freeze Temp: 32°F
Solvent: Water
Acid Resistance:
Excellent
Hazardous Vapors: None
Capillary Break: Calcium Silicate Hydrate
Installation: All grades

Part B:

Portland based
cementitious
underlayment and/or self leveling compound

Moisture Testing

Prior to shot blasting, perform an ASTM F1869-03 Calcium Chloride test or, an ASTM F2170-02 Insitu RH test. The results of these tests must be registered with Barrier-1 Inc.

Substrate Preparation:

Prior to the installation of the Barrier-1 Topical System, the concrete surface must be shot blasted to ensure the concrete surface is porous enough to allow **Part A** to be absorbed into the capillary system of the concrete. When the larger aggregate is visible, the concrete substrate is ready for installation. International Concrete Repair Institute (ICRI) #4 profile.

Cracks:

All cracks, saw cuts, and control joints must be filled with a backer rod and a quality polyurethane based joint filler, such as Sika 1c. Filling the cracks will prohibit moisture from migrating through these voids. Use a V-shaped diamond crack chasing blade to enlarge fine cracks to a minimum ¼" wide X ½" deep.

Application:

The concrete slab should be lightly watered down prior to the application of **Part A**. Use a low pressure sprayer to apply **Part A** to the surface. Spray in an even manner after the pre-wet application of water has been absorbed but not fully dried. Constantly broom out any puddles that may have formed until **Part A** has been

absorbed into the concrete slab. **Part A** will yield approximately 250 square feet per gallon. Allow to dry 1 to 3 hours.

***NOTE:** If the surface of the substrate reveals a glass-like glaze, the concrete is not absorbing **Part A** adequately.

Apply a second coat in the same manner as above without pre-wetting.

Part B is applied using a pump or drum mixing method. Minimum thickness is 1/4" for self leveling and 1/8" for troweled applications.

Mixing:

Part A: No mixing required.

Installation of Floor Covering:

Floor covering may be installed when **Part B** has hardened and is dry (minimum 16 hours).

Test Results:

Adhesion ASTM C952:
155 PSI
Tensile: 280 PSI
Flexural Strength ASTM C580: 472 PSI
Permeability CRD-48-73:
1.6 x 10⁻⁸ (0.20 inch/year)*

*-cm/sec converted to inches/year

Warranty:

Barrier-1 Topical System offers a 10 year warranty against any moisture related failures.

Maintenance:

None.

Installation:

Barrier-1 Topical System is installed by factory trained personnel only. For technical assistance contact Richard A. Koon, Barrier-1 Inc., 1901 Tumblewater Blvd., Ocoee, Florida 34761
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