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MOISTUREBLOC® VAPOR REDUCTION SYSTEM
FAST TRACK PROTECTION OF ADHESIVES LOW ODOR
A PROCEDURE TO REDUCE MOISTURE VAPOR TRANSMISSION THROUGH CONCRETE
CONCRETE PREPARATION FOR APPLICATION OF TILE ADHESIVE TO SLABS
WITH HIGH WATER VAPOR TRANSMISSION

DESCRIPTION

The following is a fast track method for reducing moisture vapor transmission through concrete slabs as measured by ASTM F1869 Calcium Chloride Test. The reduced moisture transmission protects the adhesive, which is bonded to a tile adhesive compatible to an ASTM C-1315 Sealer.

A concrete slab, which exhibits high moisture emission, results per ASTM F-1869 Calcium Chloride Test (greater than 3.0#/1000 sq. ft./24 hrs.) is coated with MoistureBloc System Primer Step 1. Step 1 is followed with MoistureBloc Adhesive Topcoat Step 2, an ASTM C-1315 sealer, which improves tile adhesion. For re-active adhesives, use MoistureBloc Step 3 in place of Step 2, see data sheet #CP116C.

Ask for TN178.

The MoistureBloc Vapor Reduction System protects tile adhesives from moisture vapor emission and alkali degradation.

SURFACE PREPARATION

Use CERTI-VEX® CONCRETE STRIPPER to remove all previously applied coatings cut back adhesives, curing compounds and other materials prior to application of the moisture reduction system. The floor shall be cleaned with soap and water to remove any dust or debris and allowed to dry for a minimum of 24 hours after cleaning. There should be no freestanding water on the surface when the moisture reduction system is applied.

APPLICATION

Vapor reduction system shall consist of the following products applied in accordance with the following procedures and methods.

The concrete shall be coated with Vexcon MoistureBloc Primer Step 1, applied by sprayer or 1/4" nap roller, at a rate not to exceed 150-160 sq. ft. per gallon, ensure that all pinholes and voids are filled. Allow to dry for a minimum of 12 hours.

After 12 hours, the concrete shall be roller coated with MoistureBloc Topcoat Step 2 applied at a rate not to exceed 240-250 sq. ft. per gallon.

The entire system shall be allowed to fully cure out and dry for a minimum of 6 hours prior to the application of floor tile, sheet goods or F1869 testing.

Many water-based adhesives require a portion of the water to go into the concrete to help achieve quick tack time; this water will not go through the MoistureBloc System. The tack time of each adhesive should be determined prior to applying the tile; this can vary as much as 100% vs. application of the adhesive on concrete.

ANALYSIS

The above recommendation is made based on the following calculations, independent laboratory results and data MoistureBloc, when tested in accordance with TT-P-001411, will withstand greater than 576 # / sq./ft. of Hydrostatic pressure and without allowing water to come through the film and breathe through 1.5 metric perms of water vapor or 1.4 #/1000sq.ft./24 hrs. As an ASTM C-1315, Type 1 Sealer at a 250 sq. ft./gal. will breathe through less than 1.06 # water per 1000 sq.ft./24 hrs.

LABORATORY TESTS

Independent Laboratory test results by Bee Laboratories on mortar and cured concrete samples, coated with the MoistureBloc system and tested by ASTM F1869, while the bottom of the block is immersed in water, show a reduction on average of 75% in the water vapor. See test report #TN178.

It is required that ASTM F1869 test be rerun on the MoistureBloc coated concrete prior to applying tile to confirm that the water vapor levels have been reduced to an acceptable level. Vexcon will provide additional material if required free of charge if the initial application does not reduce the vapor to less than 3 #/1000 sq.ft./24 hrs.

MOISTUREBLOC WARRANTY

MoistureBloc Vapor Reduction Primer System is covered by a five-year material replacement warranty. Contact Vexcon for complete warranty information.

**KEY PROPERTIES OF MOISTUREBLOC VAPOR REDUCTION SYSTEM
DATA SHEET #CP116A**

DATA SHEET #CP116B

PRIMER STEP 1	TOPCOAT STEP 2
PHYSICAL PROPERTIES See Data Sheet #CP116A for complete data. Meets TTC-555 B and TTP 001411 VOC 296 grams/liter or 2.47 #/gallon Volume solids - 53% Dry time – 4 hours Weight-solids – 75% Wt/Gal. – 12.1±.1	PHYSICAL PROPERTIES See Data Sheet #CP116B for complete data. Meets ASTM C-1315 Type I Class B VOC 671 grams/liter or 5.60 #/gallon Color: Water white Dry to Touch: 25 minutes Tack Free: 65 minutes Solids: 25 ± 1 Solvent Carrier: Mineral Spirits/Aromatic Pounds/Gallon: 7.04
BENEFITS Breathable 1.5 metric perms • Alkali Blocker Withstands 576 #/sq.ft. of hydrostatic pressure Apply directly to fresh concrete (< 28 days old) Waterproof and protect, Excellent weathering resistance Resistant to acids, alkalis, Resistant to mold and fungus Moisture retentive (aids curing of new concrete) Cover most surface defects One coat single component application, Cost effective protection No primer required, Highly durable Suitable for low temperature. Application (consult VEXCON)	BENEFITS Breathable and Alkali Blocker Slip Resistant Meets Section 8.9 ASTM C-1315 Adhesion of tile cements. Excellent protection against attack by alkali, oil, and common industrial chemicals Low moisture transmission rate Quick drying Re-coatable and paintable Water Resistant
SPECIFICATIONS Concrete will be coated with MoistureBloc Vapor Reduction System Primer Step 1 as manufactured by Vexcon Chemicals, Inc., a modified acrylic texture paint that meets the requirements of Federal Spec. TTC-555B, VOC requirements and TT-P-001411. Surface will be coated at 150-160 sq.ft./gallon in accordance with manufacturers recommendation in data sheet #CP116A to provide a water-resistant and weatherproofing coating.	SPECIFICATIONS Apply one coat of MoistureBloc Vapor Reduction System Topcoat Step 2 at 240 -250sq.ft/gal. over dried Step 1 manufactured by Vexcon Chemicals Inc., an ASTM C-1315 Cure and Seal per manufacturers directions in product data sheet #CP116B.
PACKAGING STEP 1 MoistureBloc Vapor Reduction System Primer Step 1 is available in 50-gallon drums and 5-gallon pails.	PACKAGING STEP 2 and STEP 3 MoistureBloc Vapor Reduction System Topcoat is available in 50-gallon drums and 5-gallon pails.

REFERENCE DOCUMENT

ASTM C-1315 100 Barr Harbor Drive
ASTM F-1869 West Conshohocken, PA
 19428-2959

Federal Specification TTP 1411-Government
Printing Office
4 Research Place
Suite 200
Rockville, MD 20850
For additional supplemental reading
The Construction Specifier March 2000
Resilient Flooring Failures – Scott Parish