MVB Moisture Vapor Barrier

DS-053.0-0312

1. PRODUCT NAME

DRYTEK® MVB Moisture Vapor Barrier

2. MANUFACTURER

LATICRETE International, Inc.
1 LATICRETE Park North
Bethany, CT 06524-3423 USA

Telephone: +1.203.393.0010, ext. 235
Toll Free: 1.800.243.4788, ext. 235
Fax: +1.203.393.1684
Internet: **www.laticrete.com**

3. PRODUCT DESCRIPTION

DRYTEK MVB Moisture Vapor Barrier is a three component system made of special epoxies and fillers to ensure adhesion and bond strength. Designed specifically to reduce moisture vapor emission rate from concrete prior to floor covering installations.

Uses

- Used over concrete substrates to reduce vapor to below 3 lbs/1000 ft^2/24hr (170 µg/(s • m^2) when tested in accord with ASTM F1869 "Standard Test Method for Moisture Vapor Emission Rate using Anhydrous Calcium Chloride".
- Ideal for slab-on-grade construction.
- Allows for the installation of vinyl, wood, epoxy, ceramic tile, stone and other floor coverings. Can be used under DRYTEK Self-Leveling products when primed with DRYTEK Multi-Purpose Primer.

Advantages

- Easy to use- rolls on like paint
- Cures in 24 hours
- Can be applied over green concrete (min. 7 days old)

Suitable Substrates

- Concrete slabs (Interior use only)

Packaging

- 3-1/2 gallon (13.2 ℓ) bucket (used for mixing)
- 2 part A @ 2.0 lb (0.9 kg)
- 1 part B @ 2.6 lb (1.2 kg)
- 7 lb (3.2 kg) part C powder
- 13.6 lb (6.2 kg) per unit
- 48 units per pallet

Approximate Coverage

Yield/Coverage may very slightly depending on the amount of water, mixing equipment, temperature & field conditions.
Each full unit will yield approximately 180–220 ft^2 (16.7–20.4 m^2) per unit.

Shelf Life

Factory sealed containers of this product are guaranteed to be of first quality for two (2) years if stored at temperatures >32°F (0°C) and <110°F (43°C).

Limitations

- Interior use only
- Adhesives/mastics, mortars and grouts for ceramic tile, pavers, brick and stone are not replacements for waterproofing membranes. When a waterproofing membrane is required, use a LATICRETE Waterproofing Membrane (see Section 10 FILING SYSTEM).
- **Note:** Surfaces must be structurally sound, stable and rigid enough to support vinyl, wood, epoxy, ceramic tile, stone and other floor coverings. Substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/360 for thin bed ceramic tile/brick installations or L/480 for thin bed stone installations where L=span length.
- Not for use over any other substrate besides concrete slabs Cured for a minimum of 7 days at 70°F (21°C)
- Water based, do not allow to freeze.
- LATICRETE is not responsible for moisture emissions from expansion and isolation joints, existing cracks, or new cracks that may develop after the system has been installed.
- Not for use in areas subject to negative hydrostatic pressure.
- DRYTEK self-leveling, skim coat and patch products should not be installed over any moving joints or structural cracks (cracks greater than 1/16" {1.5 mm} in width or any crack that experiences any vertical displacement). All existing expansion joints, cold joints and control joints must be brought up through the underlayment and the finish. Failure to honor movement joints will result in cracking and/or loss of bond.

- Note: Surfaces must be structurally sound, stable and rigid enough to support ceramic/stone tile, thin brick and similar finishes. Substrate deflection under all live, dead and impact loads, including concentrated loads, must not exceed L/360 for thin bed ceramic tile/brick installations or L/480 for thin bed stone installations where L=span length (except where local building codes specify more stringent deflection requirements).

Cautions

- Conduct Calcium Chloride tests per ASTM F1869 prior to and subsequent to installation of DRYTEK MVB Moisture Vapor Barrier.
- Consult with adhesive manufacturer for compatibility with DRYTEK MVB Moisture Vapor Barrier.
- During cold weather, protect finished work from traffic until fully cured.
- Product performance contingent upon proper completion of ASTM F1869 by properly trained testing personnel. Test must be performed as per test manufacturers written installation instructions.
- Keep out of reach of children.

4. TECHNICAL DATA

Applicable Standard

ISO 13007-2, ANSI A118.10

Physical Properties

Test	Method	Results
Shear Bond to Concrete 28 Days	ANSI A118.10 5.5	285–570* psi (2.0–3.9 MPa)
Euro Norm Test: Tensile Pull		
Bond to Concrete 28 Days	ISO13007-2 4.4.4.2	260-280 psi (1.8-1.9 MPa)
Permeability	ASTM F1869	9.7 down to 0.2 lb/1000 ft^2/24 hr. (4.4 down to 0.09 kg/92.9 m^2/24 hr)
Alkalinity Resistance	ASTM C267	Pass, No Degradation

Specifications are subject to change without notification. Results shown are typical but reflect test procedure used. Actual field performance will depend on the type of tile/stone used, installation methods and site conditions.
* Failure in thin-set adhesive

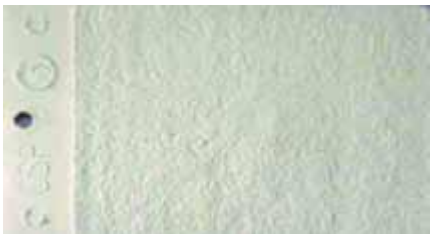
Working Properties

Time to heavy traffic	24 hours
Pot life	60 min

5. INSTALLATION

Surface Preparation

All substrates must be structurally sound, clean and free of dirt, oil, grease, paint, laitance, efflorescence, concrete sealers or curing compounds. Surfaces treated with form release agents or other bond inhibiting contaminants must be properly shot or bead blasted to ensure all contaminants are removed. Make rough or uneven concrete smooth to a wood float or better finish with a DRYTEK® Premium Skimcoat Patch Underlayment or DRYTEK 8400. Do not level with gypsum or asphalt based products.



ICRI CSP 3

Mechanical scarification, shot or bead blasting of the surface is required to obtain an ICRI profile of CSP 3 (Light shot-blast). Acid etching, solvents, sweeping compounds, and sanding equipment are not acceptable means of cleaning the substrate.

If the DRYTEK product being installed on top of the DRYTEK MVB Moisture Vapor Barrier will be used as a self-leveling underlayment then conduct tensile pull strength tests to ensure a minimum 72 psi (0.5 MPa) tensile pull strength is achieved.

If the DRYTEK product being installed on top of the DRYTEK MVB Moisture Vapor Barrier will be used as a topping/wearing surface then conduct tensile pull strength tests to ensure a minimum 217 psi (1.5 MPa) tensile pull strength is achieved.

Conduct 3 calcium chloride tests for the first 1000 ft^2 (92.9 m^2) and 1 calcium chloride test for every 1000 ft2 (92.9 m2) thereafter of surface to receive the DRYTEK MVB Moisture Vapor Barrier.

For areas that have a moisture vapor emission rate (MVER) between 3 lbs./1,000 ft^2/24 hours (170 µg/s • m^2) and 12 lbs. /1,000 ft^2/ 24 hours (678 µg/s • m^2) apply one coat of DRYTEK MVB Moisture Vapor Barrier. For areas that have an MVER between 12 lbs./1,000 ft^2/24 hours (678 µg/s • m^2) and 20 lbs./1,000 ft^2/24 hours (1,130 µg/s • m^2) remeasure MVER (as stated above) and, if nec-essary, apply a second coat of DRYTEK MVB Moisture Vapor Barrier until 3 lbs/ 1,000 ft^2/24 hours (170 µg/s • m^2) is reached

ICRI CSP 6

- Surface temperature must be 45–90°F (7–32°C) during application and for 24 hours after installation.

If the concrete substrate is too uneven (typically CSP 6 or higher) to provide a uniform film thickness of the DRYTEK MVB Moisture Vapor Barrier, the substrate can be pre-smoothed using DRYTEK Premium Skimcoat Patch Underlayment or DRYTEK 8400. DRYTEK Premium Skimcoat Patch Underlayment or DRYTEK 8400 must be allowed to cure a minimum of 24 hours at 70°F (21°C) prior to the installation of DRYTEK MVB Moisture Vapor Barrier.

Maximum deviation in plane must not exceed 1/4" in 10 ft (6 mm in 3 m) with no more than 1/16" in 1 ft (1.5 mm in 0.3 m) variation between high spots. Dampen hot, dry surfaces and sweep off excess water – installation may be made on a damp surface with NO standing water. New concrete slabs should meet the minimum MVER of 20lbs/1000 ft^2/ 24 hours (1,130 µg/s m^2) , as stated above, prior to application of the DRYTEK MVB Moisture Vapor Barrier.

Before using, store resins at room temperature 70°F (21°C) for 24 hours to ensure ease of mixing.

Treatment for Construction, Control (Saw-Cut), and Cold Joints; Dormant, and Shrinkage Cracks.

All non-structural cracks in the subfloor shall be repaired to minimize telegraphing through the underlayment, tile and stone.

1. Movement Joints—honor all expansion and isolation joints up through the DRYTEK MVB Moisture Vapor Barrier and underlayment or topping.

2. Saw Cuts, Control Joints and Dormant Cracks—Clean all non-structural cracks and joints of all loose debris and elements. Use DRYTEK MVB Moisture Vapor Barrier to fill small, non-moving in-plane cracks, control joints, construction joints and cold joints in existing concrete substrates. To fill dormant, non-structural cracks up to 1/16" (1.5 mm) in width, the epoxy material shall be DRYTEK MVB Moisture Vapor Barrier. To fill dormant, non-structural cracks up to 1/4" (6 mm) in width, the cementitious material shall be DRYTEK Premium Skimcoat Patch Underlayment or DRYTEK 8400. The filling of dormant cracks, as described above, is recommended to prevent moisture emissions through these cracks. Once the cracks or joints are filled, allow these areas to cure for a minimum of 24 hours at 70°F (21°C) prior to proceeding with the installation of the DRYTEK MVB Moisture Vapor Barrier over the entire surface.

Movement Joints and Cracks

In no case should expansion joints, isolation joints or moving cracks be filled with this epoxy. All moving joints and cracks must be honored up through the moisture control system, the DRYTEK underlayment or topping, and the floor covering or coating by installing LATICRETE® Latasil™ in the movement joint.

Mixing

- Mix all units of Part A and Part B until thoroughly mixed, uniform in color by using mechanical mixer. Add all powder (Part C) and mix until uniformly dispersed into the liquid. Make sure to dispense all liquids from the pouches to assure correct coverage.

Application

- Apply DRYTEK® MVB Moisture Vapor Barrier to the substrate using a 3/8" (9 mm) nap roller. Apply an even coat making sure to cover all areas thoroughly, allow to cure for 24 hours at 70°F (21°C) prior to conducting moisture testing per ASTM F1869 to determine if a second coat is necessary.
- If moisture level still does not meet the requirements of the finish flooring then a second coat can be applied after the first coat has dried for 24 hours @ 70°F (21°C). Allow the second coat to dry for 24 hours @ 70°F (21°C), before conducting the last round of calcium chloride tests to verify moisture level.
- Do not proceed with the installation of the finish flooring if the vapor emission rate exceeds the requirement of the finishing flooring manufacturer.
- If waterproofing and/or crack suppression is required, it will be necessary to pour the self-leveling underlayment (e.g. DRYTEK 7200) first, allow to do dry sufficiently and then install the waterproofing/crack suppression membrane (e.g. LATICRETE® Hydro Ban® or LATICRETE 9235 Waterproofing Membrane).

6. AVAILABILITY AND COST

Availability

LATICRETE and LATAPOXY® materials are available worldwide.

For Distributor information:

Toll Free: 1.800.243.4788
Telephone: +1.203.393.0010

For online Distributor information, visit LATICRETE at **www.drytek.com.**

Cost

Contact a LATICRETE Distributor in your area.

7. WARRANTY

See 10. FILING SYSTEM

DS 230.16: DRYTEK 3 Year Product Warranty

8. MAINTENANCE

LATICRETE and LATAPOXY grouts require routine cleaning with a neutral pH soap and water. All other LATICRETE and LATAPOXY® materials require no maintenance but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

9. TECHNICAL SERVICES

Technical Assistance

Information is available by calling the LATICRETE Technical Service Hotline (hours 8:00 AM to 5:30 PM EST):

Toll Free: 1.800.243.4788 ext. 235
Telephone: +1.203.393.0010 ext. 235
Fax: +1.203.393.1948

Technical and Safety Literature

To acquire technical and safety literature, please visit our website at **www.drytek.com**

10. FILING SYSTEM

Additional product information available upon request:

DS 230.16: DRYTEK 3 Year Product Warranty
DS 236.0: LATICRETE 9235 Waterproofing Membrane
DS 6200.1: LATICRETE Latasil™
DS 663.0: LATICRETE Hydro Ban
DS 047.0: DRYTEK Multi-Purpose Primer
DS 046.0: DRYTEK Premium Skimcoat Patch Underlayment
DS 044.0: DRYTEK 8400
DS 041.0: DRYTEK 7200

LATICRETE International, Inc.
One LATICRETE Park North, Bethany, CT 06524-3423 USA • 1.800.243.4788 • +1.203.393.0010 • www.laticrete.com