



DRYTEK™ Moisture Vapor Barrier

DS-056.0-1215

**Globally Proven
Construction Solutions**



1. PRODUCT NAME

DRYTEK™ Moisture Vapor Barrier

2. MANUFACTURER

LATICRETE International, Inc.
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3. PRODUCT DESCRIPTION

DRYTEK Moisture Vapor Barrier is a single-coat, 100% solids, liquid applied 2-part epoxy coating specifically designed for controlling the moisture vapor emission rate from new or existing concrete slabs prior to installing DRYTEK underlayment, decorative toppings and most resinous coatings. DRYTEK Moisture Vapor Barrier exceeds ASTM F3010 standard with a perm rating of 0.052 grains/h/ft²/in. Hg (3 ng/h • m² • Pa) at only 12 mil thickness.

DRYTEK Moisture Vapor Barrier can be pigmented for use in conjunction with SPARTACOTE® system offering. DRYTEK Moisture Vapor Barrier Pigment Base is to be mixed with SPARTACOTE Epoxy Pigment available in 8 different colors: Black, White, Light Grey, Medium Grey, Dark Grey, Light Beige, Sand Beige, Dark Beige and Tile Red.

Uses

- Ensures protection of moisture/pH sensitive floor coverings.
- Reduces MVER from ≤25 to below 3 lbs/1000 ft²/24hr (170 µg/(s • m²)).
- Use on concrete up to 100% RH / 14 pH.
- Ideal for slab-on-grade construction and elevated slabs.
- Allows for the installation of vinyl, rubber, VCT, carpet, wood, ceramic tile, stone and other moisture sensitive floor coverings, floor adhesives, epoxies and most resinous coatings.

Advantages

- Exceeds ASTM F3010 standard
- Component of the DRYTEK system warranty
- Can be applied over new concrete in as little as 5 days
- Fast cure – ability to apply finish floor goods, DRYTEK underlayments and most resinous coatings in as soon as 12 hours
- VOC content (mixed) <10g/L– UL GREENGUARD Gold Certified
- Low odor
- Easy to use
- Compatible with DRYTEK underlayments, most resinous coatings, as well as non-water based adhesives for hardwood, vinyl, carpet and tile

Suitable Substrates

Concrete slabs (Interior use only)

Packaging

Full Unit Kit*: 6.5 Gal (24.6 L)

- Part A – 2.2 Gal (8.3 L) packaged in a steel pail
- Part B – 4.3 Gal (16.3 L) packaged in a steel pail

Mini Unit Kit*: 2.4 Gal (9.1 L)

- Part A – 0.8 Gal (3 L) packaged in a steel pail
- Part B – 1.6 Gal (6.1 L) packaged in a steel pail

Pigment Base Full Unit Kit*: 6 Gal (22.7 L)

- Part A – 2.2 Gal (8.3 L) packaged in a steel pail
- Short Filled Part B – 3.8 Gal (14.3 L) packaged in a steel pail to receive 0.5 gal (1.9 L) SPARTACOTE Epoxy pigment

Pigment Base Mini Unit Kit*: 2.2 Gal (8.3 L)

- Part A – 0.8 Gal (3 L) packaged in a steel pail
- Short Filled Part B – 1.4 Gal (5.3 L) packaged in a steel pail to receive 0.2 gal (0.8 L) SPARTACOTE Epoxy pigment

*DRYTEK™ Moisture Vapor Barrier is a kit of two pails. Individual pails (Part A or Part B) cannot be purchased separately, and cannot be returned separately.

Coverage

DRYTEK Moisture Vapor Barrier is to be applied at minimum thickness of 12 mils. DRYTEK Moisture Vapor Barrier when applied at a minimum 12 mils thickness exceeds ASTM F3010 and will control moisture vapor emission rate up to 25 lbs./1,000 ft²/24 hr (1415 µg/(s • m))[^] per ASTM F1869/ maximum[^] RH conditions per ASTM F2170. In order to help insure coverage, periodically check mil thickness using a DRYTEK Moisture Vapor Barrier Wet Film Thickness Gauge.

Vapor Permeance ^µ	MVER/ RH	mil thickness	ft ² /gal (m ² /L)
0.052 grains/h/ft ² /in Hg (3 ng/h • m ² • Pa)	≤25 lbs (1415 µg) / 100%	12	133 (3.2)
Each full unit will yield approximately 865 ft ² (80.8 m ²)**. Each mini unit will yield approximately 319 ft ² (29.8 m ²)**.			

**Coverage is approximate and will vary depending on CSP (concrete surface profile), mil thickness, absorption, and other field conditions.

^µNo visible water or condensation on the surface.

^µTested according to ASTM E96 Wet Method.

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
- DRYTEK™ Moisture Vapor Barrier is not a waterproofing membrane and is not intended to stop liquid water intrusion through or into the slab.
- Not for use over any other substrates other than concrete slabs cured for a minimum of 5 days at 70°F (21°C)
- All existing expansion joints, cold joints and control joints must be brought up through the DRYTEK Moisture Vapor Barrier and the finish. Failure to honor movement joints will result in cracking and/or loss of bond.
- DRYTEK is not responsible for moisture vapor emission from any movement joints, existing cracks, new cracks that may develop or voids in the DRYTEK Moisture Vapor Barrier in the concrete slab after the system has been installed.

Cautions

- Consult SDS for more safety information
- DRYTEK Moisture Vapor Barrier Part A is harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. Toxic to aquatic life with long lasting effects.
- DRYTEK Moisture Vapor Barrier Part B causes skin irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.
- Check www.drytek.com for any technical bulletins or updated information about the product and its application.
- Contact your local DRYTEK Technical Sales Representative with any questions.
- Once material is fully mixed the reaction may generate high heat if left in mixing container for an extend period of time.
- Do not mix DRYTEK Moisture Vapor Barrier in a plastic bucket.
- Do not take internally
- Keep out of reach of children

4. TECHNICAL DATA

Specifications are subject to change without notification. Technical data shown in DRYTEK product data sheets and technical data sheets are typical but reflect laboratory test procedures conducted in laboratory conditions. Actual field performance and test results will depend on installation methods and site conditions. Field test results will vary due to variability of job site factors.

Test	Method	Results
Vapor Permeance at 12 mil thickness	ASTM E96	0.052 grains/h/ft ² /in. Hg (3 ng/h • m ² • Pa) CTL Project 281426
Tensile Strength (7 days)	ASTM C1583	> 410 psi (> 2.8 MPa) Concrete Failure
Pull off Adhesion Strength	ASTM C7234	> 480 psi (> 3.3 MPa)
Alkalinity Resistance	ASTM D1308	Pass (resist up to 14 pH)

5. INSTALLATION

Surface Preparation

Concrete slabs must be clean, structurally sound, absorptive, and have an ICRI concrete surface profile (CSP) of 3 - 5. All dirt, oil, paint, laitance, efflorescence, sealers, curing compounds and any other bond breaking contaminants must be removed down to the full depth of contamination by shot blasting or other mechanical means then swept and vacuumed clean. Use of chemicals to remove contaminants is prohibited. Use of sweeping compound is not recommended as they may contain oil which can act as a bond breaker. Do not use over gypsum or asphalt based products. Water drop test (Refer to TDS 230D for water drop test instruction) is recommended prior to application of DRYTEK Moisture Vapor Barrier. If the water drop test yields a non-suction results where the water beads up and doesn't absorb, please contact LATICRETE Technical Sales Representative. Per ASTM F3010, concrete slab to receive DRYTEK Moisture Vapor Barrier must have a tensile pull-off strength of 200 psi (1.4 MPa) or greater when tested in accordance with ASTM C1583.

Surface temperature must be 50–90°F (10–32°C) during application and for 24 hours after installation. In all cases, the surface temperature of the prepared concrete slab must be warm enough to avoid condensation on the surface of the concrete.

Joints, Cracks, Surface Depressions and Other Irregularities

All joints and cracks should be evaluated and repaired if necessary prior to installation of DRYTEK Moisture Vapor Barrier. A good crack repair technique depends on knowing the causes and selecting appropriate repair procedures that take these causes into account. Repairing a crack without addressing the cause may only be a temporary fix. Successful long-term repair procedures must address the cause of the crack as well as the crack itself. Refer to ACI 224.1R for guidance on evaluation and repair of cracks in concrete. DRYTEK product application over moving cracks and joints is not recommended.

1. Moving joints (e.g. expansion joints, isolation joints, etc.) and dynamic cracks must be honored up through the DRYTEK Moisture Vapor Barrier. DRYTEK is not responsible for vapor emission through untreated joints or for areas where cracks may develop later.

2. All non-moving joints and dormant cracks (e.g. saw cuts, surface cracks, grooves, etc.) must be cleaned out and free of all loose debris. Non-structural cracks up to 1/8" (3 mm) in width can be filled with DRYTEK Moisture Vapor Barrier epoxy during main application. Inspect these areas to ensure cracks are completely filled with no voids.

3. Non-moving joints, dormant cracks greater than 1/8" (3 mm) wide, can be patched with mixture of 1 part DRYTEK Moisture Vapor Barrier and 3 parts clean, washed play sand. In a suitable container, such as an empty DRYTEK Moisture Vapor Barrier pail, pour 1 part DRYTEK Moisture Vapor Barrier pre-blended to 3 parts clean, washed play

sand, using a 300 rpm drill with jiffy paddle, mix together for 2-3 minutes until the DRYTEK Moisture Vapor Barrier and qualified sand mixture is consistent. Slowly pour the mixture into the crack, using the flat side of a trowel force the mortar into the crack. Surface crazing and hairline cracks do not need filling. Construction joints, expansion joints and large moving cracks that have lost aggregate lock (one side of crack is higher than the other) have structural implications and cannot be repaired using this method.

Moisture Evaluation

Moisture testing must be conducted in accordance with finish floor goods and adhesive manufacturers' requirements prior to DRYTEK™ Moisture Vapor Barrier application. When evaluating moisture conditions the HVAC system or a properly conditioned temporary enclosure must be operational and in place for the minimum specified time period recommended in the moisture test standard. The concrete floor slabs and the ambient air space above the floor must be at service temperature and relative humidity for at least 48 hours before taking moisture measurements in the concrete slab. These conditions must remain throughout the test period to ensure accurate results.

Mixing

Before using, store resins at room temperature 65-85°F (18-30°C) for 24 hours to ensure ease of mixing. Mix Components A and B to a ratio of 1:2 by volume (components are packaged into the pails to the specified ratio). Pour the A component into the larger B component steel pail. Verify that all of the Part A liquid is drained from pail.

Mix with a slow speed drill (<300 RPM) with a jiffy blade for 3 minutes, assuring mixture is fully uniform and that all ribbons of contrasting shade are completely eliminated. Pour the fully mixed material onto the substrate immediately after mixing.

Mixing For Pigment Base

Add SPARTACOTE® Epoxy Pigment to DRYTEK Moisture Vapor Barrier Pigment Base Short Filled Part B and mix for 1-2 minutes with a high speed drill (>600 RPM). Once fully mixed, add part A to part B and follow mixing instructions.

Full unit DRYTEK Moisture Vapor Barrier Pigment Base is to be mixed with 0.5 gal (1.9 L) SPARTACOTE Epoxy pigment

Mini unit DRYTEK Moisture Vapor Barrier Pigment Base is to be mixed with 0.2 gal (0.8 L) SPARTACOTE Epoxy pigment.

NOTE: Do not mix DRYTEK Moisture Vapor Barrier in a plastic bucket as mix generates excessive heat!

Application

Pour ribbons of DRYTEK Moisture Vapor Barrier onto the prepared concrete and spread using appropriate round or square notch squeegee that is designed to apply the desired mil thickness in a single coat. Apply an even coat making sure to cover all areas thoroughly. Immediately following, while epoxy is still wet, use a high quality 3/8" (9 mm) nap non-shedding paint roller to back-roll at 90° from the squeegee direction to help ensure full coverage and uniform thickness. Replace worn squeegee blades and paint rollers when necessary to help ensure proper application. Use a paint brush to apply epoxy around penetrations, columns, and any other obstructions. Periodically check mil thickness using a DRYTEK Moisture Vapor Barrier Wet Film Thickness Gauge. Allow to cure for 12 hours at 50-90°F (10-32°C) prior to installation of underlayment or finish flooring. Always consult flooring and adhesive manufacturer's installation instructions, restrictions and

confirm compatibility with DRYTEK Moisture Vapor Barrier. Always test performance and compatibility of floor systems prior to application.

Finish Flooring and Self Leveling Underlayments Installation

Floor goods, including polyaspartic coating, and DRYTEK self-leveling underlayments shall be installed over DRYTEK Moisture Vapor Barrier as soon as the epoxy is slightly tacky to the touch with no transfer; typically 12 hours after application depending on ambient and substrate conditions. The maximum time to install goods and DRYTEK self-leveling underlayments over DRYTEK Moisture Vapor Barrier is 3 days provided that the surface is protected from traffic, dust, debris, water and any other contaminants. If DRYTEK Moisture Vapor Barrier is left open and unprotected longer than 3 days or the surface becomes contaminated, contact DRYTEK Technical Sales Representative. DRYTEK self-leveling underlayments require the use of DRYTEK LEVELEX™ Primer. Refer to TDS 230D for detailed primer installation instructions. Always refer to finished floor manufacturer's recommendations regarding installation instructions, restrictions, moisture conditions and compatibility. Always test performance suitability and compatibility of finished floor systems prior to their application. Sample surfaces should be installed as a field test so as to be representative of entire surface and tested for intended use.

6. AVAILABILITY AND COST

Availability

LATICRETE® and DRYTEK materials are available worldwide.

For Distributor information:

Toll Free: 1.800.243.4788

Telephone: +1.203.393.0010

For online Distributor information, visit DRYTEK at www.drytek.com.

Cost

Contact a DRYTEK Distributor in your area.

7. WARRANTY

See 10. FILING SYSTEM:

DS 230.13: LATICRETE Product Warranty

DS 200.3: 3 Year Wear Surface System Warranty (United States and Canada)

8. MAINTENANCE

LATICRETE, DRYTEK and LATAPOXY® installation 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 DRYTEK Technical Service Hotline:

Telephone: +1.877.DRYTEK1, ext. 247 or;

+1.877. 379.8351, ext. 247

Fax: +1.203.393.1684

Technical and Safety Literature

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

10. FILING SYSTEM

Additional product information is available on our website at www.laticrete.com. The following is a list of related documents:

DS 230.13: LATICRETE Product Warranty

DS 200.3: 3 Year Wear Surface System Warranty (United States and Canada)

DS 076.0: DRYTEK LEVELEX Primer

DS 663.0: HYDRO BAN®

DS 236.0: 9235 Waterproofing Membrane

TDS 230D: DRYTEK Substrate Preparation and Primer Guide