Bostik
smart adhesives

D-250™

MOISTURE VAPOR BARRIER COATING

KEY FEATURES

- Two-component, water-based epoxy
- Bostik's Blockade® Antimicrobial Protection
- Reduces moisture vapor transmission from substrates

DESCRIPTION

Bostik D-250™ is a high performance, rapid drying, water-based, penetrating epoxy formulated to dramatically reduce moisture vapor transmission and surface alkalinity from substrates including; "freshly-poured/green concrete," properly prepared concrete, cement backer board, radiant heat flooring, and cement based terrazzo prior to the installation of carpet; vinyl/VCT; rubber; engineered or solid hardwood; porcelain, marble, granite or ceramic tile floor covering. Bostik D-250™ is a low odor, non-flammable, two-component system.

Bostik D-250™ contains Bostik's Blockade® Antimicrobial Protection which inhibits the growth of mold and mildew on the surface of the membrane. Bostik D-250™ is uniquely formulated so that it may be applied to fresh "green" concrete as soon as it has achieved "initial set" (when the concrete can be walked on without disturbing the surface). It is pigmented green for visual indication of coverage and film thickness during the application process. It is extremely durable and wear resistant.

When properly installed, Bostik D-250™ is designed to reduce the moisture vapor emission rate of concrete slabs to ≤ 3 lbs. per 1,000 ft^2 per 24 hours. This non-blushing formulation requires no solvent wiping, and has no application window in which floor covering adhesives must be applied to achieve a strong bond. Bostik D-250™ is formulated to be effective in reducing the surface alkalinity of concrete slabs with pH levels as high as 14 down to pH levels of 9 or lower as recommended by the Carpet and Rug Institute and the Canadian Carpet Institute, making them ideal for bonding with most adhesives.

Please refer to and follow industry standards for flooring material being installed (ie.: NWFA, NOFMA, MMFA, TCNA, NTCA, CRI, etc.) prior to using this material. Various flooring materials have vastly different substrate preparation and installation requirements; substrate preparation and installation requirements are key to a successful installation regardless of flooring material being installed.

SURFACE PREPARATION

Surfaces must be absorptive, clean, free from loose materials, oil, grease, sealers, curing compounds, waxes, silicates, laitance, and all other surface contaminants that may inhibit proper bond. Completely remove cutback adhesive residue or other surface contaminants by shotblasting or diamond grinding.

PLEASE NOTE: Concrete substrate should NOT be smooth and reflective; it must have a concrete surface profile of CSP 1-3 (similar to broomed concrete or cinderblock texture), as defined by ICRI (International Concrete Repair Institute, Guideline No. 03732).

Surface areas requiring patching or leveling must be treated using Bostik Webcrete 95®, Webcrete 98®, SL-100™, SL-150™, SL-175™, SL-200™, or SL-Gyp™ Self-Leveling Underlayments with Bostik Universal Primer® Pro **ON TOP OF** the properly cured Bostik D-250™ Moisture Vapor Barrier Coating according label instructions.

DIRECTIONS FOR USE

Read and understand data sheet and Material Safety Data Sheet completely before beginning installation. Follow industry standards and flooring manufacturer's recommendations for design, layout and application of flooring materials; including test methods, jobsite temperature and relative humidity. Always do a test area to ensure product satisfaction, including adhesion to substrate, and/or to become familiar with proper application techniques prior to use.

MOISTURE VAPOR TESTING

Moisture Vapor Testing: Prior to the application of Bostik D-250™, a concrete Moisture Vapor Emission Rate, using "Anhydrous Calcium Chloride" testing per ASTM F 1869-05, or in-situ RH, using ASTM F-2170, must be obtained.

FOR APPLICATIONS OVER "FRESHLY-POURED CONCRETE"

For Applications Over "Freshly-Poured/Green Concrete": Bostik D-250™ is uniquely formulated so that it may be applied as soon as the fresh concrete can be walked on without disturbing the surface ("initial set"). Since a calcium chloride test cannot be done prior to application, the "Anhydrous Calcium Chloride" test, per ASTM F 1869-05, should be done prior to application of flooring material to confirm the moisture vapor emission rate is within flooring manufacturer's acceptable rate. This can be done approximately 16 hours after application of Bostik D-250™ at 70ºF (21ºC). Dry time will vary depending on the temperature of the concrete slab.

MIXING

Using a slow speed drill (< 150 RPM), fitted with a blade that is at least 3" in diameter, separately pre-mix Part A (**RESIN**) and then separately pre mix Part B (**HARDENER**). Because some of the ingredients may settle to the bottom of each container, it is very important to scrape all of the material off of the sides and bottom of each pail to ensure that a proper mix is obtained. After each container has been thoroughly scraped and mixed, slowly add Part A into Part B while mixing, mix for one minute until a homogenous mix (uniform color/no streaks) is obtained. Do not over mix, as the pot life will be reduced. Mix full units only; do not mix partial components, or alter components in any way. Material components should be a minimum of 60ºF (15ºC) at time of mixing.

INSTALLATION

Make sure the concrete substrate and ambient room temperature is between 40ºF and 90ºF (4ºC to 32ºC) during and for a minimum of 24 hours after application. To achieve proper coverage, protection, and application of material, layout jobsite into 150 ft. "grids". Ensure the material is applied at the required coverage rate by staying within the grid per unit/container. Use a short 3/8" nap roller or squeegee followed by back rolling to coat the substrate with Bostik D-250™. Let the coating cure a minimum of 6 hours (until it is tack free to the touch), this may vary due to temperature and humidity. A nylon bristle deck brush can be used to work the coating into any pin holes or surface imperfections that may not be properly filled using the nap roller. For required application rates, please refer to the **COVERAGE** section.

The surface of Bostik D-250™ should be tack-free prior to application of a second coat of Bostik D-250™ (if required), floor covering adhesives, primers or patch/underlayments. Cementitious patch/underlayment products, such as Bostik Webcrete 95®, Bostik Webcrete 98® or Bostik SL-150™ Self Leveling Underlayment with Bostik Universal Primer®, must be installed **ON TOP OF** properly cured Bostik D-250™ according to label instructions. Always coat the dry surface of Bostik D-250™ with Bostik Universal Primer® prior to the installation of Bostik SL-150™ Self Leveling Underlayment.

FOR CRACK/JOINT TREATMENT

For "Non-Dynamic" Cracks/Joints (Cracks With No Movement): Remove any existing sealant or debris. Treat all non-dynamic joints with Bostik D-250™ by applying a layer into the joint with a paint brush to completely coat the walls of the cavity. Once dry, fill the crack/joint with an approved cement-based patch material (ie: Bostik Webcrete 95® or Webcrete 98®).

FOR "DYNAMIC" JOINTS/CRACKS WITH MOVEMENT

For "Dynamic" Joints/Cracks (Joints With Movement): Remove any existing sealant or debris. Treat all dynamic joints (i.e. expansion, isolation, control) with Bostik D-250™ by applying a layer into the joint with a paint brush to completely coat the walls of the cavity. Once dry, fill the joint with sand or backer rod while leaving the top 1/8" to 1/4" of joint for proper treatment with Bostik 900™ Urethane sealant.

CAUTION: There is a major difference between the proper application of flooring over non-dynamic vs. dynamic joints, as well as, variations based upon the type of flooring being installed. Please follow appropriate industry standards, as well as flooring manufacturer's recommendation for treatment of joints..

CLEAN UP

Immediately clean all tools and equipment with soap and water. Once cured this material can only be mechanically removed; which may damage some surfaces.

CURE TIME

Light foot traffic and installation of flooring material may typically begin after 6 hours of cure time (once the surface is tack free to the touch.) **DO NOT INSTALL OVER BOSTIK D-250™, IF IT IS STILL TACKY**.

COVERAGE

For applications over "freshly-poured/green concrete" or installations with substrate moisture vapor emission rate of ≤ 14 lbs. per 1,000 ft^2 per 24 hours: Required coverage is 150 ft^2 per gallon which yields a dry film thickness of ~6.4 mils.

For applications with substrate moisture vapor emission rate of > 14 lbs. to ≤ 25 lbs. per 1,000 ft^2 per 24 hours: Two coats of Bostik D-250™ are required; required coverage for each coat is 150 ft^2 per gallon. The second coat must be applied over a fully cured/dried initial coat (typically 6 hours after application of the coating) which will yield a dry film thickness of 12.8 mils.

Coverage rates are approximate and actual coverage will vary based upon porosity and roughness of substrate, application technique, waste and/or other jobsite conditions.

LIMITATIONS

- For applications involving a wet set adhesive installation of resilient floor covering, or 'non-breathable floor coverings' with a water-based adhesive, a cementitious layer, such as Webcrete 95®, Webcrete 98® or Bostik SL-150™ Self-Leveling Underlayment, must be installed at a minimum of 1/8" layer on top of the Bostik D-250™ coating according to label instructions. Failure to apply this layer will result in the adhesive not drying and remaining wet/uncured.
- If using pressure sensitive adhesives, a cementitious layer is **NOT** required to be placed over the Bostik D-250™ coating, **ONLY** IF the products are used properly (according to label instructions) and allowed adequate time to 'flash off' prior to the installation of the floor covering. Failure to allow these adhesives to reach their intended high-tack state will result in the adhesives not drying and remaining wet/uncured.
- Always do a test area to ensure product satisfaction, including adhesion to substrate, and/or to become familiar with proper application techniques prior to use.
- **PLEASE NOTE:** Not all floor covering adhesives/installation systems are compatible, or designed for use over epoxy coatings. Use ONLY adhesives/installation systems specifically approved in writing for use over this coating. Please contact Bostik Technical Service for questions related to the application of adhesive systems.
- Do not use over concrete slabs treated with sealers or curing compounds.
- Due to limitations with gypsum-based materials in wet/moist environments, gypsum-based patches/underlayments should not be used in conjunction with this system.
- Thoroughly clean surface to remove any substance that could interfere with the bond including; dirt, paint, oil, grease, laitance, efflorescence and other surface contaminants that may inhibit proper bond.
- Completely remove cutback adhesive residue, curing compounds, and sealers by sandblasting, shot blasting, or scarifying.
- Do not use in areas subject to hydrostatic head.
- Use indoors only.
- This is not a waterproofing or anti-fracture membrane.
- Do not use acid etching to prepare substrate surface.
- Do not thin/dilute product with water or solvent.
- Bostik D-250™ is **NOT** designed to be used as a penetrant to treat concrete slabs that contain ASR (Alkali Silica Reaction). If this condition is suspected to be present, do not use this product.

STORAGE/SHELF LIFE

Shelf life is two years from date of manufacturing in unopened original packaging. Store at temperatures between 60°F to 90°F (16°C to 32°C). **DO NOT ALLOW MATERIAL TO FREEZE**.

PACKAGING

Each kit contains 24 fl. oz. of Part A Resin and 104 fl. oz. of Part B Hardener.

CHEMICAL & PHYSICAL PROPERTIES			
Use Environments	Residential		Yes
	Offices/Light Commercial		Yes
	Heavy Commercial		Yes
	Offices		Yes
	Hospital		Yes
	Wet Areas		Yes
	Exterior		No
Substrates	Below	Concrete	Yes
		Green Concrete	Yes
		Cement-based Terrazzo	Yes
	Above	Gypsum Underlayments*	Yes
		Cement Patch/ Underlayment*2	Yes
Flooring Types	Hardwood		Yes
	Sheet Vinyl		Yes
	Luxury Vinyl Tile		Yes
	Cork		Yes
	Carpet		Yes
	Porcelain		Yes
	Ceramic Tile, Marble, Stone		Yes
Cured Physical Properties	Cure Time*3	Re-coat	6-8 hours
		Prior to floor covering	6-8 hours
	Water Vapor Permeability*4		< .9
	Concrete Moisture Vapor Limits for subfloor moisture vapor protection:		
	ASTM 1869 Calcium Chloride Method		< 14 lbs/ 1,000 ft²/24 hrs
	ASTM 2170 Relative Humidity Test		≤ 85% RH
	Service Temperature		-40°F to 150°F (-40°C to 66°C)
Uncured Physical Properties	Viscosity (Color)		
	Part A (White)		10,000 cps
	Part B (Green)		1,800 cps
	Mixed (Green)		4,100 cps
	Odor		Mild
	Pot Life*5 @ 72°F (22°C)		60 minutes
	Density (lbs/gallon)		11.65
	Percentage of Water*6		0%
	Application Temperature		40°F to 90°F (4.4°C to 32°C)
	Maximum Relative Humidity of the Room		80%
Chemical Properties	Chemistry Type		Water-based Epoxy
	VOC Compliant (calculated per SCAQMD Rule 1113)		Yes (67 g/L)
	Flash Point		> 200°F (93°C)

* Dry, above grade
*2 After Universal Primer™ Pro
*3 The higher the temperature, the faster the cure.
*4 Per ASTM E-96 Standard Test Methods for Water Vapor Transmission of materials. Ratings are g/m2-24 hour-mmHG.
*5 May vary due to temperature.
*6 Per ASTM E203-01 Standard Test Method for water using Volumetric Karl Fischer Titration Method. Results rounded to the nearest tenth. Test Method has error range of +/_ 0.2%.

CAUTION

CAN CAUSE SEVERE SKIN, EYE AND RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. SUSPECT CANCER HAZARD —CONTAINS MATERIAL WHICH MAY CAUSE CANCER. POWDER AGGREGATE CONTAINS SILICA WHICH CAN CAUSE SILICOSIS (CHRONIC LUNG DISEASE) AND CANCER. RISK OF CANCER DEPENDS ON DURATION AND LEVEL OF EXPOSURE. Avoid breathing silica dust. Avoid prolonged exposure to epoxy vapors. Avoid contact with skin, eyes and clothing. Do not take internally. Keep containers closed. Use only with adequate ventilation. Wear protective clothing during handling. Wash thoroughly after handling and before eating. Do not reuse containers.

FIRST AID TREATMENT

In case of contact, wash skin with soap and water. Flush eyes with clear water for 10 minutes and **CALL A PHYSICIAN**. If inhaled, remove to fresh air. If ingested, get medical attention.

KEEP OUT OF REACH OF CHILDREN

SEE SAFETY DATA SHEET

LIMITED WARRANTY

Limited Warranty found at www.bostik-us.com or call 800.726.7845. TO THE MAXIMUM EXTENT ALLOWED BY LAW, BOSTIK DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. UNLESS OTHERWISE STATED IN THE LIMITED WARRANTY, THE SOLE REMEDY FOR BREACH OF WARRANTY IS REPLACEMENT OF THE PRODUCT OR REFUND OF THE BUYER'S PURCHASE PRICE. BOSTIK DISCLAIMS ANY LIABILITY FOR DIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES TO THE MAXIMUM EXTENT ALLOWED BY LAW. DISCLAIMERS OF IMPLIED WARRANTIES MAY NOT BE APPLICABLE TO CERTAIN CLASSES OF BUYERS AND SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. It is the buyer's obligation to test the suitability of the product for an intended use prior to using it. The Limited Warranty extends only to the original purchaser and is not transferable or assignable. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase.

BOSTIK HOTLINE™

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This document supersedes all previously published literature.