



System Information

BDC MOISTURE BARRIER UNDERLAYMENT SYSTEM

Description:

BDC Moisture Barrier Underlayment System is an epoxy system designed to reduce excessive moisture vapor emissions in new or existing concrete prior to the application of an Overlayment System. The steps consist of a Vapor Seal primer and a second Vapor Seal primer with Silica Sand broadcasted to refusal.

Advantages

- Strong and resilient flooring system
- Reduces Moisture Vapor Emissions

System Specification

1 Coat - BDC Vapor Seal Epoxy Primer
1 Coat - BDC Vapor Seal Epoxy Primer broadcasted into with Silica Sand (90 Grit for Under-Tile; 30 grit for Under-Cement applications)

Installation

The following information is to be used as a guideline for the installation of the BDC Moisture Barrier Underlayment System. Contact the Technical Service Department for assistance prior to application.

Surface Preparation - Concrete

Inspection

Concrete must be clean, dry, and free of grease, paint, oil, dust, curing agents, or any foreign material that will prevent proper adhesion. The concrete should be porous and be able to absorb water. A minimum of 14 days cured is required on all concrete. Relative humidity in the concrete floor slab should be below 80% (per ASTM F-2170).

Before starting flooring work, test existing concrete slab to make sure there is no efflorescence or high levels of alkalinity. Alkalinity refers to a high pH reading which means the floor is not neutral. A high alkaline environment can cause salts to creep up through the cement called efflorescence. These salts have a tendency to prevent or destroy the bonding of coatings to the concrete. The most common form of testing is the use of a wide-range pH paper or tape. Make sure the floors pH reading ranges between 5-9 to ensure adhesion. The testing of concrete for alkalinity can show the amount of alkalinity only at the time the test is ran, and cannot be used to predict long-term conditions.

Calcium chloride tests should be conducted to

determine if the concrete is sufficiently dry for an epoxy flooring installation. The calcium chloride tests should be conducted in accordance with the latest edition of ASTM F 1869, *Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride*. When running a calcium chloride test, it is important to remove any grease, oil, curing agents, etc. so accurate readings can be obtained.

Failing to adhere to these strict guidelines can result in product delamination, discoloration, blistering, or all together failure of the coating system. Testing is the responsibility of the applicator. B.D. Classic bears no responsibility for failures due to any of the above conditions.

Concrete surfaces shall be bead blasted or diamond grinded to remove all surface contaminants and laitance. The concrete should be at least 2500 psi and have an ICRI concrete surface profile within 3-5. After initial preparation has occurred, inspect the concrete for imperfections and treat as necessary. Allow concrete to breathe for a minimum of 24 hours after preparation. Any voids need to be filled using BDC 7200G Crack Patch Gel. Any high spots need to be ground smooth. For surface preparation recommendations consult the Technical Service Department.

Joints

Prime expansion joints, isolation joints, or moving cracks with BDC Vapor Seal Epoxy. After priming, these must be honored and addressed with a proper flexible sealing compound. Use BDC 76 Crack Bridging Epoxy in expansion joints. BDC 76 will remain flexible for life of system. After filling with BDC 76, broadcast 90 grit silica sand onto joint and do not coat joints with any other coating until applying overlayment on Step 3 below. If applying cement, sawcut joints 1/8" after self leveling cement application.

Temperature

Do not apply at temperatures below 50°F or above 95°F. Substrate temperature must be at least 5°F above the dew point. Applications on concrete substrates should occur during the cooler season to decrease the chances of outgassing. The material should not be applied in direct sunlight, if possible.

Step 1: Primer

Use: BDC Vapor Seal Primer

Mixing and Application

Premix each component separately. Mix 2 parts A Resin with 1 part B Hardener, by volume, into a clean container. Mix thoroughly with a low speed (400-600 rpm) drill motor/jiffy mixer for 3-4 minutes. Make sure to scrape the sides and bottom of the container during mixing.

BDC Vapor Seal should be applied using a magic trowel, 3/8" non-shedding nap roller, or squeegee. Apply at approximately 200 sq. ft. per gallon (8 mils), evenly, with no puddles. Coverage will vary depending upon porosity of the substrate and surface texture. Let BDC Vapor Seal dry for approximately 2 hours before applying next step of system.

Step 2: Second Coat

Use: BDC Vapor Seal Primer and Silica Sand

Mixing and Application

Add 1 ounce of Yellow Colorant into each gallon of resin to help distinguish the two coats from each other. Premix each component separately. Mix 2 parts A Resin with 1 part B Hardener, by volume, into a clean container. Mix thoroughly with a low speed (400-600 rpm) drill motor/jiffy mixer for 3-4 minutes. Make sure to scrape the sides and bottom of the container during mixing.

Apply coat of BDC Vapor Seal 2-3 hours after application of original primer coat. Make sure to walk on surface with rubber cleats or spikes to insure the releveling of primer coat. Apply second coat at approximately 150 sq feet per gallon (10 mils thick), evenly, with no puddles.

Under-tile System: Immediately after application, broadcast 90 grit silica sand to refusal (at approx. 1 lb/sq. ft) onto the wet Vapor Seal.

Under Acrylic or Self-Leveling Cement: Immediately after application, broadcast 30 grit silica sand to refusal (at approx. 1 lb/sq. ft) onto the wet Vapor Seal.

Let the sand broadcasted BDC Vapor Seal dry for a minimum of 6 hours before applying next step of system. There is no maximum recoat time. Very light and careful foot traffic is acceptable over the sand filled epoxy immediately after broadcasting to refusal. Make sure to walk on surface using spiked or rubber cleats being careful not to drag feet. Wait 24hrs before resuming normal foot traffic.

Step 3: Overlayment

Use: Overlayment

Mixing and Application

Make sure to walk on surface using spiked or rubber cleats. Approximately 6 hours after application of the second coat of Vapor Seal, use a blower, sweep, and vacuum to clean excess silica sand off of substrate.

Apply overlayment according to specification.

Cleanup

Clean up mixing and application equipment immediately after epoxy use. Use acetone or xylene. Observe all fire and health precautions when handling or storing solvents.

Safety

MSDS (Material Safety Data Sheets) must be read and understood by personnel responsible for supervision and installation of the B.D. Classic Materials. All applicable federal, state, local, and particular plant safety guidelines must be followed during the handling and installation and cure of these materials. Safe and proper disposal of excess materials shall be done in accordance with applicable federal, state, and local codes.

Material Storage

Store materials in a temperature controlled environment (50°F to 90°F) and out of direct sunlight. Keep resins, hardeners, and solvents separated from each other and away from sources of ignition. One year shelf life is expected for products stored between 50°F to 90°F.