LABPOX® MVB FAST

VOC-Free, High-Performance Moisture Vapor Barrier Epoxy with Pinhole Mitigation Technology

Technical Data Sheet

DESCRIPTION

The LABPOX® MVB FAST is a 100% solids, two-component (2A:1B), and VOC-free epoxy moisture vapor barrier for concrete floor coatings. The main property of the LABPOX® MVB FAST is its ability to initially adhere to damp slabs with up to 100% relative humidity. Additionally, the LABPOX® MVB FAST demonstrates a permeance rating of less than 0.1 perm @ 16 mils which can reduce moisture vapor emission rate from 25 lbs/1000sq.ft/24hrs to less than 3 lbs/1000 sq.ft/24hrs on concrete on concrete. This performance aligns with the highest standards in the industry. The LABPOX® MVB FAST is used as a primer before installing a complete epoxy or polyaspartic system. The LABPOX® MVB FAST is formulated with Pinhole Mitigation Technology that reduces pinholes by up to 98%. The product can receive a subsequent layer of coating in as little as 3 hours, enabling very rapid commissioning. The product has been formulated with state-of-the-art components and is one of the most efficient vapor barrier systems in the industry.

USES

The LABPOX® MVB FAST provides excellent results for the most demanding applications:

+ Industrial, commercial and residential uses
+ Manufacturing facilities
+ Warehouses
+ Commercial centers
+ Office buildings
+ Retail stores
+ Garages
+ Food/beverage processing and preparation plants
+ Public facilities including hospitals and schools
+ Pharmaceutical companies

ADVANTAGES

+ Pinhole Mitigation Technology reduces pinholes by up to 98%
+ Effective membrane against residual moisture up to 100%
+ Ideal for concrete slabs with less than 28 days of curing
+ Suitable for damp concrete substrates
+ Environment friendly (100% solids, VOC-free and no solvent)
+ Virtually odor-free
+ Quick curing
+ High degree of permeability
+ Easy 2A:1B mixing ratio
+ Potential for LEED eligibility
+ Can be used in combination with epoxy or polyaspartic floor systems
+ Low viscosity, easy to apply
+ Indoor and outdoor use

APPLICATION DATA

Mix Ratio	2A:1B	
Packaging	3 Gal kit (3 x 3.78L) 15 Gal kit (3 x 18.9L)	
Color	Clear, Grey, Tan, Black, White	
Solids Coverage / GAL	Mils	Sq. Ft.
	10	160
	12	133
	14	114
Recommended	16	100
Recommended	18	89
Shelf Life	One year, in original unopened factory pails under normal storage conditions	
Pot Life	20 min	
Application Temperature	Min 16°C / 61°F, Max 30°C / 86°F	
Cure Time	**22°C / 72°F and 50% Rel. Hum.**	
Working time	25 min	
Tack Free	3 h	
Recoat	3 - 24 h	
Dry Through	8 h	
Foot Traffic	24 h	
Full Cure	1 week	

TECHNICAL PROPERTIES

Hardness ASTM D2240	80	Shore D at maturity
Pull Off Test ASTM D7234		>3 Mpa
Tensile Strenght ASTM D638		7450 psi
Compressive Strenght ASTM D695		14800 psi (102 Mpa)
Solids Content by Volume		100%
Viscosity (A&B)		900 +/- 100 cps
VOC Content		Clear: 10 g/l Pretinted: 9g/l
Permeability (up to 100% residual humidity) ASTM E96		< 0.1 perms @ 16 mils

SURFACE PREPARATION

Concrete should be clean, dry and free of grease, oil, paint, curing agents or any contaminants that may inhibit proper adhesion. The surface humidity should be controlled for more than three hours prior installing the LABPOX® MVB FAST.

Proper testing procedures should be practiced with regards to moisture vapor transmission. Use a Tramex® CME / CMExpert to measure the moisture content of the concrete slab. The first thing to do is to make sure that the floor is completely dry before application. Floors with higher results can receive the LABPOX® MVB FAST moisture mitigation.

Surface must be shot blasted or prepared with an equivalent mechanical means in line with CSP-2 or more depending on the application. Ensure the surface is free of contaminants, and the pores are open to allow the product to penetrate.

When installing a broadcast decorative system, after appropriate hardness has been reached, the base coat in which the aggregates are broadcasted should be carefully scraped and swept and then thoroughly vacuum cleaned to remove any remaining residues prior applying the topcoat. Contact us for more details on how to use the product with broadcast systems.

MIXING

Before final mixing, pre-mix part A at low speed using a Jiffy® or an Exomixer® mixer blade. Special attention must be paid to colored versions of the product since pigments may have separated from the rest of the formulation during storage. Mixing should be done until the color is uniform.

Then, using a Jiffy® or an Exomixer® mixer blade, mix two parts of A and one part of B together at low speed in a separate container. The mixing container must be clean and free of any outside particles. Mix thoroughly for a minimum of three minutes, until a completely homogeneous mixture is obtained. Use a low speed drill (300-450 rpm) to minimize the air entrapment. It is recommended to activate the mixer in the reverse mode after the first 90 seconds for the liquid to mix from the bottom of the mixing can to the top. Make sure to scrape sides and bottom of mixing container so no unmixed material remains. Mix only the necessary quantity to be used according to the specified pot life / working time. Once the product is properly mixed, it needs to be immediately poured on the floor. Leaving mixed material for too long in a mixing pail will create an exothermic reaction and the product will no longer be usable.

APPLICATION

The LABPOX® MVB FAST has been specifically designed to adhere to damp concrete substrates with a residual humidity of up to 100% and new concrete slabs having been installed within 28 days. Note that very high levels of humidity may also indicate a hydrostatic pressure problem. Hydrostatic pressure is usually caused by a drainage failure or a water leak. Make sure the causes of hydrostatic pressure are checked before installing the product.

Apply only when air and floor temperature is between 16°C / 61°F - 30°C / 86°F, and with a relative humidity of less than 85%. If a heated floor is installed, ensure that the system is turned off 2-4 hours (depending on type of radiant floor) before application and for the full duration of the cure. The product has been specifically designed to adhere to concrete surfaces. Make sure the concrete surface is completely dry at the time of installation. The surface humidity must be controlled for more than three hours, which corresponds to the time required for the product to harden sufficiently.

If floor repairs are to be made, use cementitious repair products which can dry adequately in the presence of moisture or use LABPOX® MVB FAST mixed with silica or other filing agents. When mixed with silica or other filling agents, use a low-speed drill to minimize the air entrapment.

The vapor barrier performance of the product is directly proportional to the thickness of the coating. Labsurface recommends 16 to 18 mils. The vapor barrier protection increases with thickness. It is also important that the film thickness is uniform over the entire floor.

Rapid aggregates system for polyaspartic adhesion or anti-slip finish

When the surface has been properly prepared, apply 16-18 mils of the LABPOX® MVB FAST using a squeegee and back roll to even out the surface. It is recommended to apply the product in a multidirectional manner (north-south, east-west) to ensure that the desired coverage rate is achieved. Saturate to rejection with 1) vinyl flakes or silica sand before installing polyaspartic 2) silica sand for an anti-slip system. For increased and more consistent permeability over the entire covered area when silica sand is used, install two coats of 8-9 mils each and saturate only the second coat with aggregates. Then, scrape or broom sweep and vacuum the surface to remove all loose particles before continuing with a LABFAST®, LABSHIELD® ECO or LABPOX® system.

System with Optimal Permeability

For a system with optimal permeability and to achieve the specified level of permeability less than or equal to 0.1 perm according to ASTM E96, the following steps need to be completed. First use the clear version of the LABPOX® MVB FAST for optimal adhesion and permeability. When the surface has been properly prepared, apply the first coat at 6-8 mils with a squeegee (no back roll) to allow a good seal of the surface and to minimize the pinholes phenomenon. Once dry, if there are pinholes, scrape to burst bubbles and clean. Then repair the pinholes using the LABPOX® MVB FAST mixed with silica sand. While mixing the silica

sand, make sure there is no air bubbles trapped in the mix. Then spread the second coat of LABPOX® MVB FAST to a minimum thickness of 8-10 mils (for a total system thickness of 16 mils or more) using a squeegee and back roll to even out the surface. It is recommended to apply the product in a multidirectional manner (north-south, east-west) to ensure that the desired coverage rate is achieved. Then, continue building the system with a LABPOX® 30, 35, 40 UV, LV UV or LV 3D UV epoxy. A polyaspartic system can only be considered following the installation of a layer of LABPOX® 30, 35, 40 UV, LV UV or LV 3D UV for proper adhesion. Any repairs before or during the application of the system should be made with the LABPOX® MVB FAST. No repair with CRACK FILLER or INSTANT PU REPAIR is recommended as it will affect the permeability of the system.

RECOAT

Do not recoat without sanding if last coating of the product has been applied for more than 24 hours. The floor surface should be sanded/abraded until a uniform dullness is achieved. There should be no gloss on the prior coating after vacuuming and before applying the next coat. No need to sand if silica broadcast technique to saturation was used.

LABPOX® products chemically adhere to LABPOX® MVB FAST without sanding within a 24-hour window. LABFAST® and LABSHIELD® ECO systems do not chemically adhere to LABPOX® MVB FAST, it is therefore necessary to use aggregates (flakes or silica sand in full saturation to rejection) in order to obtain good adhesion. Contact LABSURFACE to obtain more details on systems including our recommendations if an external system is envisaged.

LIMITATIONS

The surface humidity must be controlled for more than three hours, the time required for the product to harden sufficiently. If this applies, make sure that the causes of hydrostatic pressure are checked before installing the product. The LABTEC Universal Pigment Pods are not compatible with the LABPOX® MVB FAST. Although this product may be applied in a wide range of thickness, limitations may apply when taking into consideration curing time. Everything else being equal, thicker is the film, quicker is the curing time. Temperature will also impact curing time. Curing time may extend significantly at low temperature levels and the surface may be affected. Leaving mixed material for too long in a mixing pail will create an exothermic reaction and the product will no longer be usable. Do not clean the finished surface during the week following installation. Keep the product stored at room temperature to ensure consistent results. Although Labsurface makes reasonable efforts to control the quality of the finished product and its components, ASTM results may vary depending on the quality of the inputs delivered to Labsurface.

Adhesion of LABFAST® & LABSHIELD® ECO products to LABPOX® MVB FAST can only be achieved on a full silica/flake broadcast-to-rejection LABPOX® MVB FAST surface. EVEN WITHIN THE 24 HOUR RECOAT WINDOW.

The usage of direct-fired, unvented and certain other heat sources are not recommended as they emit byproducts that may negatively impact the curing process of the resin and lead to defects such as amine blush, whitening, loss of adhesion, or other surface imperfections.

Labsurface stands behind the quality of its products. However, Labsurface cannot guarantee results since Labsurface has no control over surface preparation, operating conditions and application procedures. Clients are solely responsible to test Labsurface's products to determine if they perform as expected.

To meet our strict requirements, we are continuously testing our coatings and on occasion, formulations may be modified to improve certain properties within each coating. Information and data included in this reference document may not be up to date as of the date of reference. Contact Labsurface for further information regarding the limitations of this product.

Exposure to certain chemicals may cause reactions similar to those experienced with allergies. Chemicals that may cause sensitivity include synthetic and natural substances found in the Part A or the Part B of flooring or casting products. Once cross linked and completely cured, those substances are inert and therefore should not result in allergic reactions. Raw materials used by Labsurface do not differ significantly from comparable products manufactured by our competitors.

Refer to the most recent Material Safety Data Sheet prior using this product.

AVAILABLE COLORS

CLEAR, GREY, TAN, BLACK, WHITE

Not compatible with LABTEC Universal Pigment Pods

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