

LABPOX FAST CURE (NEW)

100% Solids, High-Performance Fast Cure Epoxy

Technical Data Sheet



Description

The LABPOX FAST CURE is a 100% solids, two-component (2A:1B), low-VOC, self-priming, and fast-curing epoxy designed for concrete floor coatings. This product possesses superior mechanical properties, making it ideal for industrial, commercial, and residential applications. It offers a quick return to service. While the LABPOX FAST CURE has been primarily designed as a topcoat epoxy, it can also be applied directly to concrete as it is self-priming. For heavy or high-traffic applications, we recommend using Labsurface's EPOXY PRIMER before installing the LABPOX FAST CURE. The LABPOX FAST CURE formulation is based on high-performance cycloaliphatic polyamine technology, displaying outstanding properties.

Uses

The LABPOX FAST CURE (NEW) provides excellent results for the following 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

- + Environment friendly (100% solids, no solvent, and low-VOC)
- + Potential for LEED eligibility
- + Virtually odor-free
- + Quick return to service
- + Good abrasion resistance
- + High resistance to amine blush and contamination (fisheyes)
- + Impermeability / low moisture sensitivity
- + High density of the product prevents dirt penetration resulting in low maintenance post application
- + Available in unlimited color range

Application Data

Mix Ratio	2A:1B
Packaging	3 US gallon kit (3 x 3.78 L) 15 US gallon kits (3 x 18.9 L)
Color	Clear or colored

Solids Coverage / US GAL	Mils	Sq. Ft.
	8	200
	10	160
	12	133
Shelf Life	One year, in original unopened factory pails under normal storage conditions	
Pot Life	15 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	20 min	
Tack Free	1 h 30	
Recoat	1 h 30 - 24 h	
Dry Through	4 h	
Foot Traffic	24 h	
Light Traffic	36 h	
Full Cure	1 week	
Cure Time	10°C / 50°F and 50% Rel. Hum.	
Tack Free	6 h	

Technical Properties

Hardness ASTM D2240	80	Shore D at maturity
Abrasion Resistance ASTM D4060 (Taber Abraser, Wheel CS 17/1000 g (2.2 lbs) / 1000 cycles)	47 mg loss	
DRY Coefficient of Friction (Smooth coating) ASTM D1894	1.4	
Pull Off Test ASTM D4541	>3 Mpa	
Elongation at break ASTM D638	19%	
Tensile Strength ASTM D638	7000 psi	
Compressive Strength ASTM D695	10750 psi (74 MPa)	
Solids Content	100%	
Viscosity (A&B)	1400 - 1500 cps	
VOC Content	9 g/l	
DE 500 hr ASTM 3424	14	



Surface Preparation

Concrete should be clean, dry and free of grease, oil, paint, curing agents or any contaminants that may inhibit proper adhesion. Concrete should be cured at least 28 days before applying the coating system. If the concrete slab has been installed within 28 days, the LABPOX MVB FAST moisture mitigation system can be considered (refer to the LABPOX MVB FAST technical data sheet for additional details).

Proper testing procedures should be practiced with regards to soil acidity and moisture vapor transmission. Take a pH reading to ensure concrete is neutral (a reading between 5 and 9 is acceptable). Use a Tramex® CME / CMExpert to measure the moisture content of the concrete slab. Moisture content must be below 4% before applying the product. It is necessary to take several measurements at various places on the slab. If the reading is higher than 4%, steps will be required to neutralize the soil moisture. 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.

If the product is applied over an existing LABPOX flooring system that has been cured for a period longer than 24 hours, it should be sanded with a proper floor machine. A mechanical bond to a sanded surface is required and the pores of the existing coating must be opened for better adhesion. Vacuum dust and properly wipe the surface with alcohol or solvent prior applying the LABPOX FAST CURE (NEW). The alcohol or solvent must be completely evaporated before applying the product. This preparation is necessary to ensure proper adhesion. Conduct adhesion tests if there is a doubt about surface preparation.

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.

Use the same batch number when working with pre-tinted products, In the event that different batch numbers have to be use

for a same job, we recommend pre-mixing all part A's individually, then mix together part A's from the different batch numbers for two minutes until homogenous color.

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 particle. 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 scrap 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

Apply only when air and slab temperature is between 16°C / 61°F - 30°C / 86°F and the 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 designed to adhere to concrete surfaces.

It is crucial to prevent sweat or water droplets from coming into contact with the product while blending the product or spreading/rolling it out. This precaution is necessary to avoid the formation of circles and/or fisheyes. Additionally, wall-mounted Air Wick type devices and aerosols should be avoided during both the installation and drying processes, as they can also cause circles or fisheyes.

The LABPOX FAST CURE (NEW) is self-priming. When used as a base coat, apply with a squeegee in thin coat without back rolling to seal properly the surface, this will help reduce the creation of pin holes. Most porous concrete are affected with outgasing, which raises the probabilities of pineholes creation. If pineholes appear within the working time window, we recommend going back on the surface with a spike or regular roller to burst the bubbles. This will reduce significantly the chances of bubbles reappearing. Do not exceed working time window. Take into account that hot temperatures will reduce working time. For colored versions, the use of aggregates can also help to fill in pinholes. For the second coat, repeat the same steps and back roll the product. It is recommended to apply the product in a multi-directional (north-south, east-west) motion to ensure proper coating thickness. If there is a significant presence of pinholes after applying the first coat due to the porosity of the concrete, sand and plug the pinholes with epoxy gel.



We recommend the application of one base coat and one topcoat for total system thickness of approximately 20 mils for standard systems.

For high traffic applications, it is recommended to use Labsurface's EPOXY PRIMER before installing the LABPOX FAST CURE (NEW). The EPOXY PRIMER will seal the slab and display higher flexibility. A thickness of 4-6 mils is recommended for the EPOXY PRIMER. Labsurface's EPOXY PRIMER cures within 4 hours under normal conditions while proving a working time of 45 minutes (refer to the EPOXY PRIMER TDS for more details).

For better stain and chemical resistance, we strongly recommend the usage of a AQUALAB PUR, LABFAST or LABSHIELD ECO product over the LABPOX FAST CURE (NEW) or over any epoxy product other than a Novolac epoxy. In addition to the superior chemical resistance and cleanability, the matte version of the AQUALAB PUR possesses a unique characteristic which is to make the scratches less apparent. The AQUALAB PUR, LABFAST or LABSHIELD ECO products also provide additional UV protection that will significantly slow the yellowing of epoxy.

We recommend the LABTEC Vinyl Chips when installing a flake system. Proper testing should be conducted prior application.

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.

Limitations

Requires a dry substrate. Moisture content of the substrate must be measured with a Tramex® CME / CMExpert and must be below 4% before applying the product. This product should not be applied to concrete substrates that show high levels of moisture/humidity unless a moisture LABPOX MVB FAST moisture mitigation system is used. 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. Drying time will be faster in a hot environment. Conversely, the drying time will be longer in a cold environment and the appearance of 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. Not suited for exterior applications. The LABPOX FAST CURE (NEW) has lower elongation and UV resistance than LABPOX 30 or LABPOX 40 UV. 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.

In the event that dew point conditions lead to condensation persisting above the concrete surface, and for which the grinding process fails to eliminate this condensation, it is crucial to thoroughly dry the surface before installation. Neglecting this step may result in adhesion issue.

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 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.

It is crucial to prevent sweat or water droplets from coming into contact with the product while blending the product or spreading/rolling it out. This precaution is necessary to avoid the formation of circles and/or fisheyes. Additionally, wall-mounted Air Wick type devices and aerosols should be avoided during both the installation and drying processes, as they can also cause circles or fisheyes.

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.

This product is not immune to transfers of plasticizers contained in rubber, including car tires. Although the transfer of plasticizers phenomenon is very rare, under specific circumstances combining high tire temperature with i) high levels of plasticizers, and/or (ii) certain plasticizer types and/or (iii) certain tire types, it is possible for plasticizers to transfer from the tire rubber to the floor coating. This phenomenon is irreversible and can cause staining of the coated area. Tires should therefore cool down prior to the parking of the vehicle in the coated area.

Pressure washing and power washing (power washing involves water heating while pressure washing uses cold water) must be used with caution. Extreme pressure could damage the coating. Using hot water could also cause irreversible damage. When used to clean polymer coatings, water temperature must not exceed 49°C / 120°F and should be ideally between 32°C and 43°C / 90°F and 110°F.



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

Pre-Tint and LABTEC Universal Pigment Pods
Standard Color Chart



+ Full color customization available

Labsurface

2250, Louis-Blériot, Mascouche, (QC) CANADA J7K 3C1
Phone: 450 966-9000 / Fax : 450 621-3135
Labsurface.com