LABFAST VOC-EXEMPT

VOC-Exempt, Long Working Time and Quick Curing Polyaspartic

Technical Data Sheet

Description

The LABFAST VOC-EXEMPT is a two-component (1A:1B) polyaspartic floor coating system which is VOC-exempt. The LABFAST VOC-EXEMPT is used as a colored base coat and a clear topcoat using a common hardener. High solids versions (70, 80 and 90%) are available as well as a prolonged working time version (+) and a fast cure version (-). The system provides a quick turnaround with very rapid curing time (tack free of 35-45 minutes) allowing the installation in a single day as a very fast return to service. The product displays excellent curing capability even at very low temperature levels. This product offers superior mechanical and chemical properties and is low maintenance. It also displays a superior aesthetic finish and excellent UV stability which makes it ideal for interior and exterior applications. We recommend the utilization of the LABTEC Vinyl Chips in combination with LABFAST/LABSHIELD ECO products. Two- or three-coat systems can be considered.

Uses

The chemical and mechanical properties of LABFAST VOC-EXEMPT provide excellent results for several applications:

+ Garages
+ Other residential applications
+ Commercial centers
+ Office buildings
+ Retail stores
+ Manufacturing facilities
+ Public facilities including hospitals and schools
+ Other commercial uses

Advantages

+ VOC-Exempt
+ Potential for LEED eligibility
+ High solids content ~70%, 85%, 90%
+ Non-yellowing
+ Excellent impact and abrasion resistance
+ Easy to use 1A:1B system with common hardener for the base coat and topcoat
+ Possibility to install base coat and topcoat in a single workday
+ Cures quickly – recommended to obtain best curing at very low temperature levels (below -10°C /14°F)
+ Ideal for exterior applications
+ (+) version offers longer working time of approx. 25 min.
+ Possible to install two- or three-coat systems
+ Easy to install due to the very low viscosity of the product
+ Very long recoat window and pot life
+ Excellent chemical and mechanical resistance
+ Impermeability / low moisture sensitivity
+ Superior gloss finish
+ High density of the product prevents dirt penetration resulting in low maintenance

Application Data

Mix Ratio	1A:1B
Packaging	2 US gallon kits (2 x 3.78L) 10 US gallon kits (2 x 18.9L)
Color	Clear

Solids Coverage / US GAL	Mils	Sq. Ft.
	4	400
	5	320
	6	267
	7	229
	8	200
	9	178
	10	160
	11	145
	12	133
	13	123
	14	114
	15	107
	16	100

Shelf Life	Six months, in original unopened factory pails under normal storage conditions.
Application Temperature	Min -10°C / 14°F , Max 30°C / 86°F
Cure Time	22°C / 72°F and 50% Rel. Hum.

VOC-EXEMPT Version	**70 -**	**80-**	**80+**	**90-**
Working time	15 min	15 min	25 min	15 min
Tack Free	35 min	2 h	45 min	45 min
Recoat	35 min - 24 h	2 h - 24 h	45 min - 24 h	45 min - 24 h
Dry Through	2 h	2 h	6 h	2 h
Foot Traffic	24 h	24 h	24 h	24 h
Light Traffic	48 h	48 h	48 h	48 h
Full Cure	2 weeks	2 weeks	2 weeks	2 weeks
Pot Life 250 ml	15 min	20 min	10 min	10 min
Larger Volume	30 min	30 min	30 min	30 min

Technical Properties

VOC-EXEMPT Version	70 -	80-	80+	90-
Hardness ASTM D2240 Shore D at maturity	70	70	70	70
Abrasion (1000 cycles) ASTM D4060	35 mg loss	40 mg loss	40 mg loss	30 mg loss
DRY Coefficient of Friction (Smooth coating) ASTM D1894	1.2	1.3	1.3	1.1
Pull Off Test ASTM D4541	>3 Mpa	>3 Mpa	>3 Mpa	>3 Mpa
Elongation at break ASTM D638	-	175%	175%	-
Tensile Strenght ASTM D638	7175 psi	6700 psi	6700 psi	7900 psi
Compressive Strenght ASTM D695	9025 psi (62 MPa)	8525 psi (59 MPa)	8525 psi (59 MPa)	8925 psi (61 MPa)
Impact resistance (Direct) ASTM D2794 ft lb	>9	>9	>9	>9
Solids Content	70%	80%	80%	90%
Viscosity (cps)	200 +/-50	300 +/-50	500 +/-50	500 +/-50
VOC Content	0 g/l	0 g/l	0 g/l	0 g/l
DE 500 hr ASTM 3424	<2.0	<2.0	<2.0	<2.0
Gardner Impact (Dir/Rev)	>140 lbs	>140 lbs	>140 lbs	>140 lbs

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 could be considered system (refer to the LABPOX MVB FAST technical data sheet for application 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 to an existing LABFAST/LABSHIELD ECO flake flooring system that has been cured for more than 24 hours (at 22°C / 72°F), the floor surface should be sanded properly until a matte appearance is reached above and between the flakes. To achieve this result, we recommend the use of a sander equipped with a sponge pad which will follow the profile of the surface and allow the sandpaper to reach the low points between the flakes. It is necessary to sand in a multidirectional way. Repeat until a matte finish is achieved on the entire floor. It is also necessary to use xylene to remove all dust after sanding and to soften the existing layer so that it can bond with the new layer. The use of xylene for this task is mandatory as it will soften the previous coat for better adhesion. The xylene must be completely evaporated before applying the next coat.

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 LABFAST VOC-EXEMPT. 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.

Once cured, the base coat with the flakes should be scraped and cleaned after appropriate hardness is reached prior applying the topcoat.

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 one part 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 entrapping of air. It is recommended to activate the mixer in the reverse mode after 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.

Application

Best results will be obtained between -10°C / 14°F et 30°C / 86°F and with a relative humidity of less than 80%. This product will also cure at temperatures well below -10°C / 14°F. If a heated floor is installed, ensure that the system is turned off during application and for the full duration of the cure. The product has been specially designed to adhere on concrete surfaces.

Once the surface has been properly prepared, squeegee 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.

The following flake systems can be considered:

LABFAST VOC-EXEMPT	2-Coats System		3-Coats System		
	Base Coat + LABTEC Chips	Topcoat	Base Coat 1	Base Coat 2 + LABTEC Chips	Topcoat
70			4-9 mils	4-9 mils	
80	8-13 mils	8-13 mils	4-9 mils	4-9 mils	8-13 mils
90		8-13 mils			8-13 mils

The LABFAST VOC-EXEMPT is used as a colored base coat and a clear topcoat using a common hardener. A prolonged working time version (+) and a fast cure version (-) are available.

We recommend the LABTEC Vinyl Chips when installing a flake system. Do not exceed a thickness of 30 mils for the entire system as solvent entrapment or lingering odors may occur following the installation.The color of the base coat should match the type of flake blend used. With that regards, Labsurface has made recommendations in the LABTEC Vinyl Chips section of this document.

It is also possible to use the LABFAST VOC-EXEMPT as a protective coat over epoxy. In addition to the superior chemical resistance and cleanability, the LABFAST VOC-EXEMPT also provides additional UV protection that will significantly slow the yellowing of epoxy over time. Colored versions of the LABFAST VOC-EXEMPT can also be used as a protective coat, either pre-tint or using the LABTEC Universal Pigment Pods. When used as a protective layer on epoxy, a thickness of 10 mils is recommended.

Proper tests should be conducted prior application. Contact a Labsurface representative for additional information.

Recoat

If the product is applied to an existing LABFAST/LABSHIELD ECO flooring system that has been cured for more than 24 hours (at 22°C / 72°F), the floor surface should be sanded properly until a matte appearance is reached above and between the flakes. To achieve this result, we recommend the use of a sanding machine equipped with a soft sanding pad which will follow the profile of the surface and allow the sandpaper to reach the low points between the flakes. It is necessary to sand in a multidirectional way. Repeat until a matte finish is achieved on the entire floor. It is also necessary to use xylene to remove all dust after sanding and to soften the existing layer so that it can bond with the new layer. The use of xylene for this task is mandatory. Make sure the solvent is completely evaporated and there are no residues. In case there are remaining residues, wipe the surface using a dry rag or swab.

Limitations

Requires a dry substrate. Moisture content of the substrate must be measured with a Tramex® CME / CMExpert at 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 a LABPOX MVB FAST moisture mitigation system is used. Do not exceed a thickness of 30 mils for the entire system as solvent entrapment may occur above those levels. It is recommended to use 100% solids products and avoid solvent-based products for installations beyond those normal thickness levels. It is also recommended to do proper testing if a nonconventional installation is considered. Everything else being equal, thicker is the film, longer is the curing time. Drying time will be faster in a hot and/or humid environment. Conversely, the drying time will be longer in a cold and/or dry environment. Do not clean the finished surface during the week following installation. Keeping the product stored at room temperature.

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 shortened working times and/or issues with adhesion.

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. 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.

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

Clear - Pre-tint: Grey, Tan, Black, White

LABTEC Vinyl Chips

Signature LABTEC Chips 1/4"

BEAN
Pre-tint Color: Tan
Pods Suggestions: Beechwood, Sand, Tan, Black

CABIN FEVER
Pre-tint Color: Grey
Pods Suggestions: Light Concrete

DARKSIDE
Pre-tint Color: Black
Pods Suggestions: Stone Concrete, Black

DOMINO
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Black, White

GRAVEL
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Dark Concrete, White

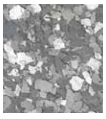
GUNFLINT*
Pre-tint Color: Tan
Pods Suggestions: Beechwood, Sand, Tan, Black

MANDRAS
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Dark Concrete

NIGHTFALL
Pre-tint Color: Grey
Pods Suggestions: Mid Concrete, Dark Concrete, Light Concrete, Black

ORBIT
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Mid Concrete, Black

OUTBACK*
Pre-tint Color: Tan
Pods Suggestions: Beechwood, Beige, Sand, Tan, Black

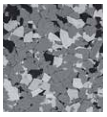


RAINSTORM
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, White

SHORELINE (CAMEL)
Pre-tint Color: Tan
Pods Suggestions: Tan, Sand

STAMPEDE*
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Mid Concrete, Stone Concrete, Black, White

STORM*
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Mid Concrete, Black, White



WOMBAT
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Mid Concrete, Black, White

WOODCLIFF*
Pre-tint Color: Tan
Pods Suggestions: Beechwood, Sand, Beige, Tan, Dark Concrete

Signature LABTEC Chips 1/16"

BEAN
Pre-tint Color: Tan
Pods Suggestions: Beechwood, Sand, Tan, Black

CABIN FEVER
Pre-tint Color: Grey
Pods Suggestions: Light Concrete

DARKSIDE
Pre-tint Color: Black
Pods Suggestions: Stone Concrete, Black

DOMINO
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Black, White

GRAVEL
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Dark Concrete, White

GUNFLINT*
Pre-tint Color: Tan
Pods Suggestions: Beechwood, Sand, Tan, Black

MANDRAS
Pre-tint Color: Grey
Pods Suggestions: Light Concrete, Dark Concrete

NIGHTFALL
Pre-tint Color: Grey
Pods Suggestions: Mid Concrete, Dark Concrete, Light Concrete, Black

RAVEN*
Pre-tint Color: Black
Pods Suggestions: Dark Concrete, Black

SHORELINE (CAMEL)
Pre-tint Color: Tan
Pods Suggestions: Tan, Sand

*While quantities last

Marble LABTEC Chips

BASALT
Pre-tint Color: Grey
Pods Suggestions:
Light Concrete, Mid Concrete, Dark Concrete

SCHIST
Pre-tint Color: Grey
Pods Suggestions:
Light Concrete, White

DOLERITE
Pre-tint Color: Grey
Pods Suggestions:
Stone Concrete ,
Mid Concrete,
Dark Concrete

PUMICE
Pre-tint Color: Grey
Pods Suggestions:
Sand, Light Concrete

OBSIDIAN
Pre-tint Color: Grey
Pods Suggestions: Tan,
Mid Concrete, Stone Concrete, Dark Concrete,
Light Concrete

Terrazo LABTEC Chips

DENALI
Pre-tint Color: Grey
Pods Suggestions:
Stone Concrete,
Mid Concrete,
Light Concrete

JUNEAU
Pre-tint Color: Grey
Pods Suggestions:
Stone Concrete,
Mid Concrete,
Light Concrete

ARMADILLO
Pre-tint Color: Grey
Pods Suggestions:
Stone Concrete ,
Beechwood

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