



LABSHIELD ECO

Top Coat, Solvent-Free, High Performance Product

Description

The LABSHIELD ECO is a 100% solids two-component polyaspartic floor coating system with near zero VOC and no/minimal odor. The LABSHIELD ECO is used as a colored base coat and a clear topcoat using a common hardener. A version with a prolonged working time (+) and one providing fast curing (-) are available. The system provides a quick turnaround allowing the installation in a single day. 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. We recommend the utilization of the LABTEC vinyl chips in combination with LABSHIELD ECO products. Two- or three-coat systems can be considered (ask a Labsurface representative for additional details).

Uses

The chemical and mechanical properties of LABSHIELD ECO provide excellent results for a number of applications:

- + Parking garage floors
- + Other residential applications
- + Commercial centers
- + Office buildings
- + Retail stores
- + Manufacturing facilities
- + Food processing and preparation plants
- + Public facilities including hospitals and schools
- + Pharmaceutical companies
- + Other commercial uses

Advantages

- + Solvent-free, no/minimal odor
- + Zero VOC, 100% solids
- + Potential for LEED eligibility
- + 2:1 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 zero Celsius)
- + (+) version offers longer working time of approx. 25 minutes
- + Possible to install two- or three-coat systems using a single product
- + Easy to install due to the very low viscosity of the product
- + Possible to install 2- or 3-coat systems
- + 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	2A:1B		
Packaging	3 US Gal Kits (3 x 3.78L) 15 US Gal Kits (3 x 18.9L)		
Color	Clear or colored		
Solids Coverage / US GAL	<u>Mils</u>	<u>Sq. Ft.</u>	
	6	7	8
	9	10	11
	12	13	14
	15	16	
Shelf Life	Six months, in original unopened factory pails under normal storage conditions		
Application temp.	Min < 0°C, Max 30°C		
Cure Time	(-) (+)		
Working time	15 25	min	22°C and 55% rel. hum
Tack free	2 4.5	hours	22°C and 55% rel. hum
Recoat Time	2 4.5	hours	22°C and 55% rel. hum
Hard dry	6 8	hours	22°C and 55% rel. hum
Foot traffic	12 24	hours	22°C and 55% rel. hum
Light traffic	2 3	days	22°C and 55% rel. hum
Full cure	2 2	weeks	21°C and 50% rel. hum

Technical Properties

Hardness, Shore D	ASTM D2240	> 60	
Ultimate Elongation ⁽¹⁾		25%	
DE 500 hr	ASTM 3424	<2	
Abrasion (1000 cycles)	ASTM D4060	35	(mg loss)
Pull-Off Test		≈ 3	Mpa
Gardner Impact (Dir/Rev)		>160	lbs
Solids Content		100%	
Viscosity		400 +/-50	cps

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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.

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 calcium chloride test to measure moisture vapor transmission. Readings of 3.5 lbs/1000 sq. ft. during a 24-hour period or less are acceptable for applying coatings. Higher results should receive the LABPOX MVB moisture mitigation system (refer to the LABPOX MVB technical data sheet for installation details).

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

If the product is applied over epoxy, it is imperative to read the epoxy manufacturer data sheet on recoat properties for proper adhesion. Epoxy 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. Wiping properly prepared surface with alcohol will ensure no loose dust particles from the sanding process are present.

When using a broadcast decorative system, the base coat with the flakes should be scraped and cleaned after appropriate hardness is reached prior applying the topcoat. Contact us for more details on how to use the product with broadcast systems.

Mixing

Before final mixing, pre-mix parts A and B individually at low speed. 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, 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 two minutes using 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 the first minute in order 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 5°C and 30°C and with a relative humidity of less than 80%. This product will also cure at temperatures well below 5°C Celsius. Although this product has been formulated to reduce bubble entrapment within the film, it is recommended to avoid application during the hottest part of the day in order to minimize outgassing and bubble formation.

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 LABSHIELD ECO is self-priming. We recommend an application of approximately 6-16 mils. We recommend the LABTEC vinyl chips when installing a flake system. Proper tests should be conducted prior application. Contact a Labsurface representative for additional details.

Recoat

Do not recoat without sanding if last coating of the product has been applied for more than 24 hours (at 22°C). 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. It is recommended to use an aggressive solvent to eliminate all the dust after vacuuming and to soften the initial coat prior applying the additional coat. Labsurface recommends xylene. 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.

Clean Up

Cured product may be disposed of without restriction. Excess liquid A and B material should be mixed together and allowed to cure. Cured product may be disposed of without restriction. Uncured material should be stored in a suitable and sealed container and may be disposed in accordance with provincial and federal regulations.



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Limitations

Requires a dry substrate. This product should not be applied to concrete substrates that show high levels of moisture vapor transmission (see "Surface Preparation" section) unless a moisture LABPOX MVB 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, longer is the curing time. This product may dry extremely fast in a high humidity environment. Temperature will also impact curing time. Curing time may extend significantly at very low temperature levels. Keeping the product stored at room temperature will make the application easier and dry times shorter.

Labsurface stands behind the quality of its products. However, Labsurface cannot guarantee final 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. In order 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.

Available Colors

Clear

Grey

Tan

Others

- + Full color customization available
- + Contact us for additional details

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

Labsurface

101-1079 des Forges, Terrebonne, QC, Canada, J6Y 0J9
Phone : 450-966-9000 / Fax : 450-621-3135
Labsurface.com