

Sikafloor® Epo-Rok

Epoxy Mortar System

Description	Sikafloor Epo-Rok consists of Sikafloor 105, a two-component, penetrating high solids, light amber, epoxy-based primer/bond coat, Sikafloor 110 Epoxy Mortar, a three-component, high solids epoxy/modified polyamine concrete floor resurfacer and Sikafloor 205, a two-component, high solids, thixotropic, epoxy based topcoat. This product can be placed using a screed and finished by hand troweling or power troweling. Typical thickness is 1/4" (6 mm).
Where to Use	Designed for overlaying new and resurfacing worn concrete floors in light to heavy duty industrial applications. Mixed and applied on the jobsite from pre-proportioned kits, Sikafloor Epo-Rok is ready for use in less than 24 hours. Formulated to restore and protect concrete floors from the harsh effects of abrasive traffic and chemical spillages.
Advantages	<ul style="list-style-type: none"> ■ Pre-proportioned batches for easy job site mixing ■ Protects new concrete from abuse ■ Rejuvenates worn surfaces, to a smooth finish ■ Resists heavy steel-wheeled traffic ■ Excellent resistance to a broad range of chemicals ■ Formulated for easy application ■ Fast curing means reduced downtime ■ Slip resistant surface ■ Can be used as clear or with Epoxy Color Additive to achieve a variety of colors ■ (Optional) Integral cove, base and curbs ■ (Optional) Crack-bridging/waterproofing flexible membrane

How to Use

Surface Preparation

Surface must be clean, sound and dry. Remove dust, laitance, grease, curing compounds, bond inhibiting impregnations, waxes and any other contaminants. All projections, rough spots, etc should be dressed off to achieve a level surface prior to the application. Concrete should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by shot blasting or equivalent mechanical means. (CSP-3 as per ICRI guidelines). Sweep and vacuum any remaining dirt and dust with a wet/dry vacuum. Removing residual dust will help ensure a tenacious bond between the primer and substrate. Whenever "shot-blasting" is utilized, be careful to leave concrete with a uniform texture. Over "blasting" will result in reduced coverage rates of the primer and/or subsequent topcoats. The compressive strength of the concrete substrate should be at least 3500 psi (24 MPa) at 28 days and at least 250 psi (1.7 MPa) in tension at the time of application of Sikafloor 105 Primer.

Typical Data (Sikafloor 110 Mortar)

Colors	Gray. Other colors available with use of Epoxy Color Add and Neutral Aggregate.	
Coverage @ 1/4" (6mm)	Approximately 200 sq. ft. at a nominal 1/4" thickness per unit (18.6m ² @ 6 mm) over relatively smooth concrete floors. Rough, worn or pitted concrete floors will require additional material. Each unit includes 4- triple kits, 4 pails of Resin, 4 pails of Hardener and 12 bags of aggregate.	
	Also available in bulk units:	
	Size Unit	Sq. feet/unit Thickness
	25-gal unit	711 (67.8 m ²) 1/4" (6 mm)
		968 (90 m ²) 3/16" (4.8 mm)
	*A 25 gallon unit will take 43 bags of Epo-Rok aggregate.	
	275-gal unit	7,816 (743 m ²) 1/4" (6 mm)
		10,560 (981 m ²) 3/16" (4.8 mm)
	*A 275 gallon unit will take 469 bags of Epo-Rok aggregate.	
Pot Life @ 75°F (24° C)	20 minutes @ 75°F (24°C)	
VOC (g/l)	ASTM D2369-07	20.1 g/l
Cure Rate	6-8 hrs. - Foot Traffic	
	18-24 hrs. - Medium Loads	
	48+ hrs. - Heavy Loads or Chemical Resistance.	
Shelf-Life	Two years in original unopened containers under proper storage conditions. Store dry between 40° - 90°F (5° - 32°C).	



Typical Physical Properties:

Compressive Strength	ASTM C-579	11,000 psi (75.8 MPa)
Tensile Strength	ASTM C-307	1,900 psi (13.1 MPa)
Flexural Strength	ASTM D-790	4,100 psi (28.3 MPa)
Flexural Modulus of Elasticity	ASTM D-790	2.01 x 10 ⁶ psi (13,856 MPa)
Hardness Shore D Durometer	ASTM D-2240	87-90
Thermal Coefficient of Linear Expansion	ASTM D-696	3.45 x 10 ⁻⁵ in/in/ °F (1.9 x 10 ⁻⁶ mm/mm/°C)
Bond Strength	ACI COM #503 (pp. 1139-1141)	>400+ psi (2.7 MPa) or concrete failure
Indentation	MIL-D-3134F	No Indentation
Abrasion Resistance (CS-17 Wheel, 1000 gm load, 1000 cycles)	ASTM D-1044	0.1 gm max
Water Absorption	ASTM C-413	0.24%
Heat Resistance		150°F (65°C) Continual 200°F (93°C) Intermittent

Above typical values based on cure @ 75° F (24° C)

Packaging: Sikafloor 110 is packaged in pre-proportioned units for easy jobsite mixing and application. Batch kits include 4- triple batches, (4 containers of Resin, 4 containers of Hardener and 12 bags of aggregate).

Bulk Packaging: Each 25-gal unit consists of one 5-gal pail of Part "H" Hardener, four 5-gal pails of Part "R" Resin and requires 43 bags of Epo-Rok aggregate.

Each 275-gal unit consists of one 55-gal drum of Part "H" and four 55-gal drums of Part "R" and requires 469 bags of Epo-Rok aggregate.

Mixing

Primer: Sikafloor 105: Carefully empty the contents of the Part "H" Hardener entirely into the can of Part "R" Resin. Product should be mixed using a "Jiffy Mixer" and a slow speed drill (300-450 rpm) to minimize entrapping air. Mix until completely blended. This will take about 1-1/2 to 2 minutes. Be careful to mix the contents completely to avoid weak spots in the primer. During the mixing operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing. Mix only that quantity that can be used within its pot life.

Mortar: Sikafloor 110 Epo-Rok Mortar: Triple Kits (1 Pail Sikafloor 110 Resin, 1 Pail of Sikafloor 110 Hardener, 3 Bags of Sikafloor 110 Aggregate)

1.) The contents of the Part "H" Hardener is emptied entirely into the container of Part "R" resin. 2.) The combination is mixed with a low speed jiffy mixer for 2 - 3 minutes. 3.) Transfer the mixed binder (R+H) into a suitable mechanical mixer. Gradually add aggregates (component C) to the binder to avoid excessive air entrapment. Once all ingredients are combined, mix continuously and thoroughly for 90 seconds to ensure complete mixing. During the mixing operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing. Mix only that quantity that can be used within its pot life. NOTE: When using Neutral Sikafloor 110 aggregate first mix 6-12 oz. of Sikafloor Epoxy Color Additives per triple batch into the Part "R" Resin for 60-90 seconds. For bulk units, premix all pails of Part "H" Hardener and Part "R" Resin prior to mortar batching.

Topcoat: Sikafloor 205: For bulk packaging when not mixing full units each component must be pre-mixed separately to ensure product uniformity. It is important to remember that this coating has a limited pot life. Therefore, make sure everything is in order before starting the mixing sequence. For application to an existing Epo-Rok Floor, it is recommended that a pigmented rather than a clear top dressing be used to help eliminate any shading which may have occurred.

Color Additives: If color is desired, the appropriate Sikafloor Epoxy Color Additive is added to the "Color Base" Part "R" Resin at the rate of 1 quart per 2.45 gallon kit for all colors except for white, yellow or bright red. These will require 2 quarts per batch. Refer to the Epoxy Color Add Data Sheet for specific ratios. Mix at low speed for a minimum of two minutes.

1. Carefully empty the contents of the Part "H" Hardener entirely into the can of Part "R" Resin. The Part "R" container is oversized to allow for easy mixing.

2. Mix with a very low speed jiffy mixer, until completely blended. This will take about 2 to 3 minutes. Be careful not to introduce any air bubbles while mixing. Make sure the contents are completely mixed to avoid any weak or partially cured spots in coating. During the mixing operations, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing. Mix only that quantity that can be used within its pot life.

3. Do not mix less than full batch quantities.

Application

Primer: Sikafloor 105: Using a flat squeegee and high quality 3/8" nap roller, apply Sikafloor 105 PRIMER evenly at the rate of approximately 480-600 sq. ft. (44 - 55 m2) per 2.4 gallon kit. Avoid leaving puddles in rougher areas. The application of the Sikafloor 110 should begin right away over the "wet" primed surface. If the Primer is allowed to become tack free, the surface must be reprimed before application.

Mortar: Sikafloor 110 Epo-Rok: Maintain all control joints and expansion joints through the screed where movement is expected. Place mortar onto the still uncured primed surface while still tacky and spread using a steel trowel, rake or screed box. If primer becomes tack-free, re-prime substrate. Finish using a clean steel finishing trowel or power trowel. The finished surface should be relatively smooth, free of trowel marks and without any process areas. Whenever the Epo-Rok Flooring does not abut a vertical surface, the mixed product should be troweled into a chase which is a special groove cut into the concrete floor during the preparation process. Areas around drains and elevation changes or terminations must maintain a minimum 1/4 in (6 mm) thickness.

Topcoat: Sikafloor 205: Immediately pour the mixed contents onto the floor in the form of a bead and spread tightly over the surface using a rubber squeegee. Then, using a good quality 3/8" nap solvent resistant roller cover, remove any lap marks in the coated surface by back rolling lightly. This product is designed for use as is and therefore thinning or reducing with solvents is not recommended.

Limitations

- Minimum/Maximum substrate temperature: 60°F/85°F (15.5°C/30°C).
- Maximum relative humidity: 85%.
- Substrate temperature must be at least 5°F (3°C) above measured dew point.
- Conduct quantitative anhydrous calcium chloride testing in accordance with ASTM-F1869. Maximum acceptable test result is 5 pounds per 1,000 ft² per 24 hours. Determine the surface moisture content by using an impedance moisture meter designed for use on concrete as detailed in ASTM E-1907. Acceptable test results shall be 4% by mass or less. If over, use Sikafloor EpoCem 81/82.
- Do not use on exterior, on-grade substrates.
- Terminate at shoulders cut into substrate, avoid feather-edging.
- Freshly applied Sikafloor 110 Epo-Rok mortar and Sikafloor 205 topcoat should be protected from dampness, condensation and water for at least 24 hrs.
- Do not thin this product. Addition of thinners will slow the cure and reduce the ultimate properties of this product. Critical recoat times will also be affected.
- This product is not designed for exterior use, immersion, or any use where moisture can reach the underside of the resurfacers.
- Will discolor over time when exposed to sunlight (UV) and under certain artificial lighting conditions. UV resistant, light stable topcoats are available where ultimate color/clarity retention is required.

Additional Info

Sikafloor System Sheets describe a series of Sikafloor products installed in progression. For specific information on the individual products mentioned, including, Mixing, Application, Chemical Warnings, First Aid, Handling & Storage, and Clean Up, PLEASE REFER TO THE INDIVIDUAL PRODUCT'S TECHNICAL DATA SHEET, available at www.sikafloorusa.com. System sheets are updated periodically. To ensure the most current version is being used, visit Technical Resources on www.sikafloorusa.com. Proper material application is the responsibility of the user. Site visits made by Sika personnel are for making technical recommendations only and not for supervising or providing quality control. Before applying for protection against specific chemical environments, consult Chemical Resistance Guide or Sika Technical Service.

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