

Product Data Sheet  
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Sikafloor® 160

# Sikafloor® 160

## Epoxy Epo-Rok Mortar System

<b>Description</b>	A three-component, high solids epoxy concrete floor resurfacer. This product can be placed using a screed and finished by hand troweling or power troweling. Typical thickness is from 3/16" (4.8 mm) to 1/4" (6 mm).
<b>Where to Use</b>	Designed for overlaying new and resurfacing worn concrete floors in light to heavy duty industrial applications. Sikafloor 160 is formulated to restore and protect concrete floors from impact and abrasive traffic.
<b>Advantages</b>	<ul style="list-style-type: none"> <li>■ Protects new concrete from abuse</li> <li>■ Rejuvenates worn surfaces, to a smooth finish</li> <li>■ Designed to take heavy loads</li> <li>■ Formulated for easy application</li> <li>■ Fast curing reduces downtime</li> <li>■ Smooth and Slip resistant surface possible</li> <li>■ (Optional) Use of Sikadur-506 RC Type Aggregate which contains 30 % recycled Basalt, Pre-Consumer Recycled Material</li> <li>■ Meets the qualifications for acquiring LEED point.</li> </ul>

### TYPICAL DATA

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

<b>Packaging</b>	Component A: 3.00 US gal. (11.3 L) Component B: 1.50 US gal. (5.7 L) Components A+B: 4.5 US gal. (17 L) Component C: 6 bags (50 lbs. each)	Component A: 50 US gal. (189 L) (2 units needed) Component B: 50 US gal. (189 L) Components A+B: 150 US gal. (567 L) Component C: 200 bags (50 lbs. each)		
<b>Colors</b>	Neutral aggregates or pigmented with Sikafloor Epoxy Color Additive; 1 quart (1.0 L) size Depending on the color chosen, 1 or 2 of color packs may be required per 4.5 gallon mix.			
<b>Coverage</b>	Approximately 180 ft <sup>2</sup> (16.7 m <sup>2</sup> ) at a nominal 3/16" (4.8 mm) thickness per unit. Approximately 144 ft <sup>2</sup> at a nominal 1/4" thickness per unit (13.3 m <sup>2</sup> at 6 mm over relatively smooth concrete floors. Rough, worn or pitted concrete floors will require additional material. Each unit includes 1 pail of Resin, 1 pail of Hardener and 6 bags of aggregate.			
	<b>Size Unit</b>	<b>Sq. feet/unit</b>	<b>Thickness</b>	
	150 US gal unit (200 Bags)	4,800 ft <sup>2</sup> (446 m <sup>2</sup> ) 6,000 ft <sup>2</sup> (557 m <sup>2</sup> )	1/4" (6 mm) 3/16" (4.8 mm)	
<b>Pot Life</b>	<b>Material Temperature</b>	<b>Time</b>		
	+50°F (10°C)	~ 50 minutes		
	+68°F (20°C)	~ 25 minutes		
	+86°F (30°C)	~ 15 minutes		
<b>Waiting / Recoat Times</b>	Before applying Sikafloor Epoxy or Polyurethane on Sikafloor 160 allow:			
	<b>Ambient &amp; Substrate Temperature</b>	<b>Minimum</b>	<b>Maximum</b>	
	+50°F (10°C)	24 hours	3 days	
	+68°F (20°C)	8 hours	2 days	
	+86°F (30°C)	6 hours	1 day	
<b>Cure Times</b>	<b>Ambient &amp; Substrate Temperature</b>	<b>Foot traffic</b>	<b>Light traffic</b>	<b>Full cure</b>
	+50°F (10°C)	~ 24 hours	~ 6 days	~ 10 days
	+68°F (20°C)	~ 8 hours	~ 4 days	~ 7 days
	+86°F (30°C)	~ 6 hours	~ 2 days	~ 5 days

Properties Tested at 73°F (23°C) and 50 % R.H.:

<b>Solid Content</b>		~ 100% (by volume) / ~ 100% (by weight)
<b>Compressive Strength</b>	ASTM C579	Resin (filled 1:0.9 with F34): > 12,500 psi (86 N/mm <sup>2</sup> ) (28 days)
<b>Flexural Strength</b>	ASTM C580	Resin (filled 1:0.9 with F34): 2,900 psi (20 N/mm <sup>2</sup> ) (28 days)
<b>Pull-off Strength</b>	ASTM D4541	> 400 psi (2.7 MPa) (100% concrete failure)
<b>Viscosity (mixed)</b>	Components A+B:	292 (SP1/100)
<b>Shore D Hardness (7 days)</b>	ASTM D2240	78 - 82
<b>VOC Content</b>	ASTM D2369	≤ 5 g/L
<b>Chemical Resistance</b>	Please consult Sikafloor Technical Services.	
<b>Shelf Life</b>	2 years in original unopened container under proper storage conditions, Store dry between 40° - 90°F (4° - 32°C).	

Industrial Flooring



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# Industrial Flooring

## 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-free and contaminant-free, open textured surface by shot blasting or equivalent mechanical means (CSP-3 to CSP-4 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/coating and the 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 "shotblast" pattern may show through the last coat, known as "tracking". The compressive strength of the concrete substrate should be at least 3,500 psi (24 MPa) at 28 days and at least 215 psi (1.5 MPa) in tension at the time of application. For other substrates, please contact Sikafloor Technical Services.

## Priming

Priming for concrete substrate is required.

**For wet in wet application:** Prime with either **Sikafloor 107**, **Sikafloor 160** or **Sikafloor 161** using a squeegee and back roll to provide uniform coverage. Avoid ponding. If primer becomes tack-free, re-prime the substrate.

**For dry application:** Apply either **Sikafloor 107**, **Sikafloor 160** or **Sikafloor 161** using a squeegee and back roll to provide uniform coverage and broadcast a 20 mesh quartz sand into the fresh primer. Avoid ponding.

**Please refer to the individual most current and respective Product Data Sheet for specific and detailed information.**

## Mixing

### Mixing Ratio - 2 : 1 by volume.

For bulk packaging, when not mixing full units, each component must be pre-mixed separately to ensure product uniformity.

### Clear Resin:

Premix each component separately to ensure product uniformity. Empty Component B (Hardener) in the correct mix ratio into Component A (Resin). Mix the combined components for at least 2 minutes using a low speed drill (300 - 450 rpm) and Exomixer or Jiffy type paddle suited to the volume of the mixing container to minimize entrapped air. Be careful not to introduce any air bubbles while mixing. During the mixing operation, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing. Transfer the mixed binder (components A+B) 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 2 to 4 minutes to ensure complete mixing. Make sure the contents are completely mixed to avoid any weak or partially cured spots in the mortar. Immediately transfer the materials onto the floor or into the screed box for application.

### Field Pigmented:

Premix each component separately to ensure product uniformity. If color is desired, the appropriate Sikafloor Epoxy Color Additive is added to Component A at a rate of 1 quart per 4.5 mixed gallons (i.e. Components A+B). Mix Component A and Sikafloor Epoxy Color Additive for 30 seconds or until a uniform color is achieved with a low speed drill (300 - 450 rpm) and Exomixer or Jiffy type paddle suited to the volume. Empty Component B (Hardener) in the correct mix ratio to Component A (Resin) and mix for additional 2 minutes. Be careful not to introduce any air bubbles while mixing. During the mixing operation, scrape down the sides and bottom of the container with a flat or straight edge trowel at least once to ensure complete mixing. Transfer the mixed binder (components A+B) 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 2 to 4 minutes to ensure complete mixing. Make sure the contents are completely mixed to avoid any weak or partially cured spots in the mortar. Immediately transfer the materials onto the floor or into the screed box for application.

**Note:** The color of the installed Sikafloor 160 may vary in shades, due to the high consumption of natural aggregates and/or different finishes like power or hand troweling.

**Do not mix more material than can be applied within the working time limits (i.e. Pot Life) at the actual field temperature.**



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**Application****Mortar Application**

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 or fully cured primer with quartzite sand and spread using a steel trowel, rake or if using a screed box, pull the box across the wet primer overlapping approximately 1 inch. The hand troweled or screed box applied material can then be power troweled. The power trowel will compact the material, remove voids and make the floor smooth and dense. (Excessive power troweling will cause blisters.) The finished surface should be relatively smooth, free of trowel marks and without any process areas. 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 Sikafloor 160 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. Sikafloor 160 has a wet consistency. To finish areas inaccessible to a wet trowel, use light "feathering" strokes with a hand trowel to smooth the surface. When Sikafloor 160 has cured, the surface should be lightly ground or sanded to remove any burrs or surface defects then sweep or vacuum.

**Grout and Sealer Application**

Grouting and sealing of Sikafloor 160 is required. The following Sikafloor products may be used: **Sikafloor 205 and Sikafloor 264 Thixo Lite.**

**Please refer to the individual most current and respective Product Data Sheet for specific and detailed information.**

**Limitations****Notes on Limitations:**

Prior to application, measure and confirm Substrate Moisture Content, Ambient Relative Humidity, Ambient and Surface Temperature and Dew Point. During installation, confirm and record above values at least once every 3 hours, or more frequently whenever conditions change (e.g. Ambient Temperature rise/fall, Relative Humidity increase/decrease, etc.).

**Substrate Moisture Content:** Moisture content of concrete substrate must be  $\leq 4\%$  by mass (pbw – part by weight) as measured with a Tramex® CME/CMExpert type concrete moisture meter on mechanically prepared surface according to this product data sheet (preparation to CSP-3 to CSP-4 as per ICRI guidelines). Do not apply to concrete substrate with moisture levels  $> 4\%$  mass (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter. If moisture content of concrete substrate is  $> 4\%$  by mass (pbw – part by weight) as measured with Tramex® CME/CMExpert type concrete moisture meter, use Sikafloor 1610 or Sikafloor 81 EpoCem.

When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be  $\leq 85\%$ . If values are  $> 85\%$  according to ASTM F2170 use Sikafloor 1610 or Sikafloor 81 EpoCem.

ASTM F2170 testing is not a substitute for measuring substrate moisture content with a Tramex® CME/CMExpert type concrete moisture meter as described above.

**Material Temperature:** Precondition material for at least 24 hours between 65° to 75°F (18° to 24°C)

**Ambient Temperature:** Minimum/Maximum 50°/85°F (10°/30°C)

**Substrate Temperature:** Minimum/Maximum 50°/85°F (10°/30°C). Substrate temperature must be at least 5°F (3°C) above measured Dew Point.

Mixing and Application attempted at Material, Ambient and/or Substrate Temperature conditions less than 65°F (18°C) will result in a decrease in product workability and slower cure rates.

**Ambient Relative Humidity:** Maximum ambient humidity 85% (during application and curing)

**Dew Point:** Beware of condensation!

The substrate must be at least 5°F (3°C) above the Dew Point to reduce the risk of condensation, which may lead to adhesion failure or "blushing" on the floor finish. Be aware that the substrate temperature may be lower than the ambient temperature.

**Mixing:** Do not hand mix Sikafloor materials. Mechanically mix only.

Do not thin this product. Addition of thinners (e.g. water, solvent, etc.) will slow cure and reduce ultimate properties of this product. Use of thinners will void any applicable Sika warranty.

Improper mixing procedure or incorrect mixing ratio may result in moisture sensitivity, whitening, slow cure, soft spots, and other defects.

- Do not apply while ambient and substrate temperatures are rising, as pinholes may occur. Ensure there is no vapor drive at the time of application. Refer to ASTM D4263, may be used for a visual indication of vapor drive.
- Certain physical and mechanical properties may vary depending on the type of aggregate and resin/aggregate ratio used. Sika does not warrant any performance characteristic for the finished product when used in conjunction with aggregates not provided by Sika.
- Freshly applied material should be protected from dampness, condensation and water for at least 72 hrs.

## Industrial Flooring

- Will discolor over time when exposed to sunlight (UV) and under certain artificial lighting conditions. Use of clear UV resistant top coat may not prevent discoloration of underlying coatings.
- Do not apply Sikafloor to concrete substrate containing aggregates susceptible to ASR (Alkali Silica Reaction) due to risk of natural alkali redistribution below the Sikafloor product after application. If concrete substrate has or is suspected to have ASR (Alkali Silica Reaction) present, do not proceed. Consult with design professional prior to use.
- Any aggregate used with Sikafloor systems must be non-reactive and oven-dried.
- This product is not designed for negative side waterproofing.
- Typically not recommended for exterior slabs on grade where freeze/thaw conditions may exist.
- Use of unvented heaters and certain heat sources may result in defects (e.g. blushing, whitening, debonding, etc.).
- Beware of air flow and changes in air flow. Introduction of dust, debris, and particles, etc. may result in surface imperfections and other defects.
- For professional use only by experienced applicators.

**Caution**

**COMPONENT A: WARNING: IRRITANT, SENSITIZER.** Contains bisphenol A-(epichlorohydrin) epoxy resin (CAS:25068-38-6), Benzyl alcohol (CAS:100-51-6), and bisphenol F-(epichlorohydrin) epoxy resin (CAS:28064-14-4). Causes skin/eye irritation. Harmful if inhaled in high concentrations/swallowed. May cause allergic skin reaction after prolonged contact. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. **Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.**

**COMPONENT B: WARNING: CORROSIVE, SENSITIZER.** Avoid direct contact. Contains Benzyl alcohol (CAS:100-51-6), Isophoronediamine (CAS:2855-13-2), m-phenylenebis(methylamine) (CAS:1477-55-0), bisphenol-A-(epichlorohydrin) epoxy resin (CAS:25068-38-6), Phenol, 4-dodecyl-, branched (CAS:210555-94-5), and 2,4,6-tris(dimethylaminomethyl)phenol (CAS:90-72-2). Harmful if inhaled/swallowed/absorbed through skin. Causes skin/eye/digestive tract burns. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. May cause allergic skin reaction after prolonged contact. Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain, liver, kidney and nervous system damage. **Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal. Strictly follow all usage, handling and storage instructions.**

**First Aid**

**Eyes** – Hold eyelids apart and flush thoroughly with water for 15 minutes. **Skin** – Remove contaminated clothing. Wash skin thoroughly for 15 minutes with soap and water. **Inhalation** – Remove to fresh air. **Ingestion** – Do not induce vomiting. Dilute with water. Contact physician. **In all cases contact a physician immediately if symptoms persist.**

**Handling and Storage**

Avoid direct contact. Wear personal protective equipment (chemical resistant goggles/gloves/clothing) to prevent direct contact with skin and eyes. Use only in well ventilated areas. Open doors and windows during use. Use a properly fitted NIOSH respirator if ventilation is poor. Wash thoroughly with soap and water after use. Remove contaminated clothing and laundry before reuse.

**Clean Up**

Avoid contact. Wear chemical resistant clothing/gloves/goggles. In absence of adequate ventilation; use a properly fitted NIOSH respirator. Uncured material can be removed with approved solvent. Follow solvent manufacturer's instructions for use and warnings. Cured material (when Component R combined with Component H) can only be removed mechanically. In case of spill, ventilate area and contain spill. Collect with absorbent material. Dispose of in accordance with current, applicable local, state, and federal regulations.

**KEEP CONTAINER TIGHTLY CLOSED • KEEP OUT OF REACH OF CHILDREN • NOT FOR INTERNAL CONSUMPTION • FOR INDUSTRIAL USE ONLY**

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**LIMITED WARRANTY:** Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKASHALL NOT BELIEVABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKASHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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