

PRODUCT DATA SHEET

Sikafloor®-160

EPOXY PRIMER AND BINDER

PRODUCT DESCRIPTION

A general service, two component, high solids, epoxy system for use as a primer, coating or as a binder for pigmented slurry/broadcast system or epoxy mortar.

USES

Sikafloor®-160 may only be used by experienced professionals.

Its formulated to restore and protect concrete floors from impact and abrasive traffic as an epoxy binder. Sikafloor®-160 is designed as a primer for Sikafloor epoxy and urethane coatings, as well as a binder resin for broadcast and troweled systems.

CHARACTERISTICS / ADVANTAGES

- Low VOC.
- Excellent penetration and adhesion.
- Multi-purpose use.
- High solids as supplied.
- Protects new concrete from abuse.
- Rejuvenates worn surfaces, to a smooth finish.
- Designed to take heavy loads.
- Formulated for easy application.
- Smooth and slip resistant surface possible (Optional)
Use of Sikadur-506 RC Type Aggregate which contains 30 % recycled basalt, Pre-Consumer Recycled Material.
- Meets the qualifications for acquiring LEED points.

PRODUCT INFORMATION

Packaging	<u>Component A: 5.00 US gal. (18.9 L)*</u>	<u>Component A: 50 US gal. (189 L)*</u>
	<u>Component B: 5.00 US gal. (18.9 L)</u>	<u>Component B: 50 US gal. (189 L)</u>
	<u>Components A+B: 15 US gal. (56.7 L)</u>	<u>Components A+B: 150 US gal. (567 L)</u>
	<u>Component C: 20 bags (50 lbs. each)</u>	<u>Component C: 200 bags (50 lbs. each)</u>
	* (2 units needed)	
Appearance / Color	Neutral aggregates or pigmented with Sikafloor Epoxy Pigment Pack	
Shelf Life	2 years in original unopened container under proper storage conditions	
Storage Conditions	Store dry between 40–90 °F (4–32 °C)	

TECHNICAL INFORMATION

Shore D Hardness	80 - 85	ASTM D2240 at 73°F (23°C) and 50% R.H
Abrasion Resistance	CS-17/1000 cycles/1000g ~ 85 mg loss	ASTM D-4060 at 73°F (23°C) and 50% R.H
Impact Strength	>160 In.lbs	ASTM D2794 at 73°F (23°C) and 50% R.H
Compressive Strength	11,300 Psi (78 MPa) 28 days	ASTM C579 at 73°F (23°C) and 50% R.H
Flexural Strength	5,795 psi (39.95 MPa)	ASTM C580 at 73°F (23°C) and 50% R.H
Tensile Strength	1,400 psi (9.6 MPa)	ASTM C307 at 73°F (23°C) and 50% R.H
Tensile Adhesion Strength	> 400 psi (2.7 MPa) (Concrete failure)	ASTM D7234 at 73°F (23°C) and 50% R.H
Chemical Resistance	Please consult Sikafloor Technical Services.	
Thermal Resistance	Pass	ASTM C884 at 73°F (23°C) and 50% R.H
Indentation	0.23 %	(MIL-PRF-24613)
Water Absorption	0.55 % (2 hours boiling)	ASTM C413 at 73°F (23°C) and 50% R.H

APPLICATION INFORMATION

Coverage	Applied over relatively smooth concrete floors. Rough, worn or pitted concrete floors will require additional material.			
	Size Unit	Sq. feet/unit	Thickness	
	15 US gal unit (20 Bags)	448 ft ² (41.6 m ²) 600 ft ² (52 m ²)	1/4" (6 mm) 3/16" (4.8 mm)	
	150 US gal unit (200 Bags)	4,480 ft ² (416 m ²) 6,000 ft ² (520 m ²)	1/4" (6 mm) 3/16" (4.8 mm)	
Ambient Air Temperature	50 °F (+10 °C) min. / 86 °F (+30 °C) max.			
Substrate Temperature	50 °F (+10 °C) min. / 86 °F (+30 °C) max.			
Pot Life	Material Temperature	Time		
	50 °F (10°C)	~50 minutes		
	68 °F (20°C)	~25 minutes		
	86 °F (30°C)	~15 minutes		
Cure Time	Ambient & Substrate Temperature	Foot traffic	Light traffic	Full cure
	50 °F (10 °C)	~ 24 hours	~ 3 days	~ 10 days
	68 °F (20 °C)	~ 12 hours	~ 2 days	~ 7 days
	86 °F (30 °C)	~ 8 hours	~ 1 day	~ 5 days
Waiting / Recoat Times	Before applying solvent free products on Sikafloor®-160 allow:			
	Ambient and Substrate Temperature	Minimum	Maximum	
	50 °F (10 °C)	24 hours	36 hours	
	68 °F (20 °C)	8 hours	24 hours	
	86 °F (30 °C)	6 hours	24 hours	

BASIS OF PRODUCT 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.

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 ≤ 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) but < 6% as measured with Tramex® CME/CMExpert type concrete moisture meter, use Sikafloor®-1620. If moisture content is ≥ 6%, use Sikafloor® 22 NA or 24 NA PurCem®.

When relative humidity tests for concrete substrate are conducted per ASTM F2170 for project specific requirements, values must be ≤ 85 %. If values are > 85% but < 96% according to ASTM F2170, use Sikafloor®-1620. If values are ≥ 96%, use Sikafloor® 22 NA or 24 NA PurCem®.

Material Temperature: Precondition material for at least 24 hours between 65 °F 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 must adhere to Material, Ambient and Substrate temperatures listed above or a decrease in product workability and slower cure rates will occur.

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 24 h.
- 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.
- 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.

Product Data Sheet

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ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Concrete surfaces must be clean and sound. Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, form oils, hydraulic or fuel oils, brake fluid, grease, fungus, mildew, biological residues or any other contaminants which may prohibit a good bond.

Prepare the surface by any appropriate mechanical means, in order to achieve a profile equivalent to ICRI - CSP 3-6. The compressive strength of the concrete substrate should be at least 3,625 psi (25 MPa) at 28 days and a minimum of 218 psi (1.5 MPa) in tension at the time of application.

Repairs to cementitious substrates, filling of blowholes, leveling of irregularities, etc. should be carried out using an appropriate Sika profiling mortar. Contact Sika Technical Service for a recommendation.

Priming

Priming for concrete substrate is required.

For wet in wet application

Prime with either 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 application over cured primer

Apply either 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.

Note: If a small mix unit is needed, mix the following quantities: 64 oz of Component A (Resin) + 32 oz of Component B (Hardener) + 1 bag of Sikadur Trowel

Aggregate (50 lbs). This mix would yield approximately 22 ft² at 1/4" (6 mm).

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 aggregate (Component C) to the binder. 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 a screed box for application.

Field Pigmented

Premix each component separately to ensure product uniformity. If color is desired, the appropriate Sikafloor® Epoxy Pigment Pack is added to Component A at a rate of 1 quart per 5 gallons of Component A. Additional Sikafloor® Epoxy Pigment Packs may be necessary. Mix Component A and Sikafloor® Epoxy Pigment Pack 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.

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 finishing techniques 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.

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 20 mesh quartz sand and spread using a steel trowel, gauge 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. Finish using a clean steel finishing trowel or power trowel. 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 power 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 and vacuum.

Grout and Sealer Application

Grouting and sealing of Sikafloor®-160 may be required. The following Sikafloor® products may be used, Sikafloor®-264, Sikafloor®-217 Thixo Lite or 264 Thixo Lite.

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

OTHER RESTRICTIONS

See Legal Disclaimer.

Product Data Sheet

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LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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