

Sikafloor® 81 EpoCem

Self-Leveling, Epoxy-Cement Floor Topping for Structural Resurfacing

Description Sikafloor 81 EpoCem is a three-component, solvent-free, odorless, moisture-insensitive, epoxy-modified, cementitious self-leveling mortar. Especially formulated for leveling and structurally reprofiling on damp, "green" or saturated surface dry concrete slabs for thicknesses of 100-160 mil (2.5-4 mm).

- Where to Use**
- As a temporary moisture barrier, minimum thickness 100 mils (2.5 mm), prior to subsequent flooring systems on damp, "green" or saturated surface dry concrete slabs.
Note: Sikafloor 81 EpoCem must be sealed with a suitable Sikafloor® epoxy coating to form a permanent vapor barrier. Contact Technical Service for recommendations.
 - As a self-leveling mortar for reprofiling and resurfacing concrete surfaces, thickness between 100-160 mils (2.5-4 mm), before the application of: Subsequent Sikafloor epoxy or polyurethane resin-based products, polymer floor coatings, waterproofing membranes, tile, carpet and wood floor bonding systems. Other authorized finished flooring systems.
 - Can be used as a patching and repair mortar for thickness of 1/4-8 in (6-200 mm) when extended with oven-dried silica sand.

Typical Data	
Packaging	46.3 lb (21 kg) unit: 1 Jug (A), 1 Jug (B), 1 Bag (C) Component A: Carton containing (4)* 1-gal Jugs Component B: Carton containing (4)* 1-gal Jugs Component C: 38 lb bag * Order one carton of Part A (4 Jugs per carton), one carton of Part B (4 jugs per carton) and 4 bags of Part C
Color	Gray after mixing
Yield	Primer - Components A+B = 1 gal. (3.85 L) of Sika EpoCem Depends on substrate porosity: 200-400 ft ² /gal. (5-10 m ² /L) Primer sold separately.
Module	Self-Leveling Mortar - Components A+B+C = 2.64 gal. (10 L) of mortar/43 ft ² (4 m ²) for a 100 mils (2.5 mm) application thickness Patching Mortar - Sikafloor 81 EpoCem extended with oven-dried silica sand
Shelf Life	Sikafloor 81 EpoCem pre-mix 2.64 gal, 46.3 lb (21 kg) (10 L) Silica sand # 24 (0.3-0.85 mm) 1.82 gal, 22 lb (10 kg) (6.9 L) Silica sand # 16 (0.6-1.6 mm) 1.88 gal, 22 lb (10 kg) (7.1 L) Final mix 5.05 gal, 90.3 lb (41 kg) (19.1 L) 1 year in original, unopened packaging. Store dry at 40° - 90°F (5° - 32°C). Protect from freezing and high temperatures. If frozen, discard.
Mixing Ratio	A:B:C = 1:2.7:15-15.9 by weight A:B:C = 1:2.8:9.5-9.9 by volume
Properties at 73°F (23°C) and 50% R.H.	
Density, lbs/gal. (kg/L)	Component A 8.84 (1.06) Component B 8.58 (1.03) Component C 14.1 (1.7) Components A+B+C 17.5 (2.1)
Application Life	Components A+B+C 20 min.* Maximum time before de-airing with spiked roller 15 min. *Do not use after this period
Curing Time	50°F (10°C)** 68°F (20°C)** Foot traffic 24 hrs. 15 hrs. Light mechanical loading 3 days 2 days Overcoatable after 3 days 1 day Fully cured after 14 days 7 days **Product cured and tested at temperatures indicated.
Compressive Strength ASTM C109, psi (MPa)	1 day 3300 (23) 3 days 7250 (50) 28 days 9400 (65)
Bond Strength ASTM D4541	> 250 psi (1.7 MPa) substrate failure

Advantages	<ul style="list-style-type: none"> ■ Economical structural resurfacing compound. ■ Water-based, solvent-free and odorless. ■ Self-leveling and good flowability. ■ Can be overcoated with epoxy resin compounds after 24 h [68°F (20°C)]. ■ Application possible on damp and “green” cement based substrates. ■ Waterproof yet permeable to water vapor. ■ Fast curing and high early strengths. ■ Excellent adhesion to dry, damp, “green” or saturated surface dry concrete substrates. ■ Modulus of elasticity and coefficient of thermal expansion comparable to concrete. ■ Good adhesion after long-term water immersion. ■ Will not corrode reinforcement steel. ■ Meets USDA requirements for incidental food contact.
How to Use	
Surface Preparation	<p>Surface must be clean, sound and dry. Remove dust, laitance, grease, curing compounds, bond inhibiting impregnations, waxes and any other contaminants. Preparation Work: 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 blastcleaning or equivalent mechanical means. (CSP3 as per ICRI guidelines).</p>
Mixing	<p>Shake components A and B and pour them into an appropriate 5 gal. (20 L) sized mixing container. Pre-mix thoroughly with an electric or pneumatic mixer at low speed (300-450 rpm) for 30 sec. Progressively add component C while mixing. Continue mixing thoroughly for 3 min after complete addition of component C. Use an Exomixer type mixing paddle (recommended model). During the mixing operation, scrape down the sides and bottom of the pail with a flat or straight edge trowel at least once to ensure thorough mixing. Upon completion of mixing, Sikafloor 81 EpoCem should be uniform in consistency.</p>
Application	<p>Primer for Self-Leveling Mortar - Sika EpoCem Module (A+B) at a rate of 200-400 ft²/gal. (5-10 m²/L) using a brush or roller of appropriate length nap to control the coverage according to the surface profile of the concrete. Avoid puddling. Apply the self-leveling mortar after a minimum waiting time of 1 hrs. [68°F (20°C)] but within 3 hrs. [68°F (20°C)] maximum. Note: For porous or excessively absorbent concrete, prime with a second application of Sika EpoCem Module applied at a rate of 200-400 ft²/gal. (5-10 m²/L).</p> <p>Primer for Extended Mortar - As a primer for extended mortar with oven dried silica sand, use Sikadur® 32 Hi-Mod or Sikafloor 89 in accordance with the respective technical data sheet.</p> <p>Self-Leveling Mortar - After mixing, immediately apply the self-leveling mortar using a notched trowel [3/16 x 3/16 in. (4 x 4 mm)] or a screed rake (rubber or metal) to obtain even coverage. Immediately work down with a spiked roller to ensure uniform thickness and to remove entrapped air. When Sikafloor 81 EpoCem has cured sufficiently, sand if required and apply appropriate Sikafloor epoxy resin based product or any other authorized finished flooring systems directly over the mortar coating, ideally within 3 days. Maintain the floor topping in a clean, dry surface condition prior to the application of the floor system. Note: The consistency of the mix may be adjusted to suit application requirements by slightly reducing the powdered C component. See mixing ratio or consult Sika Technical Service for more information.</p> <p>Extended Mortar with Silica Sand - To proceed with local repairs and slope corrections for thickness of 1/4-8 in. (6-200 mm), Sikafloor 81 EpoCem can be extended with oven dried silica sand.</p>
Limitations	<ul style="list-style-type: none"> ■ Minimum thickness of self-leveling mortar: 100 mils (2.5 mm). ■ Maximum thickness of self-leveling mortar: 160 mils (4 mm). ■ Maximum thickness for holes of 1 1/4 -2 in. (3-5 cm) diameters: 3/8 in. (10 mm). ■ Minimum substrate temperature: 45°F (8°C). ■ Maximum substrate temperature, with mixing ratio by weight of: A+B:C = 4:17/77°F (25°C) A+B:C = 4:16/86°F (30°C) ■ Maximum ambient temperature: 85°F (30°C). ■ Maximum relative humidity: 85%. ■ On no account should water be added to the mix. ■ Minimum topping thickness when used as a temporary moisture barrier: 100 mils (2.5 mm). ■ Maximum moisture content in Sikafloor 81 EpoCem prior to subsequent application of an epoxy resin based Sikafloor coating: 4% by weight.



Industrial Flooring

Caution	<p>WARNING: COMPONENT 'A': IRRITANT, SENSITIZER. Contains Epoxy Novolac Resin (CAS 28064-14-4) and Epoxy Resin (CAS 025068-38-6). May cause eye/ skin/respiratory irritation. Prolonged and/or repeated skin/respiratory contact may cause allergic reaction/ sensitization. Harmful if swallowed.</p> <p>WARNING: COMPONENT 'B': CORROSIVE, IRRITANT, SENSITIZER. Contains Proprietary blend of Aliphatic amines (mixture). Causes eye irritation. Contact with eyes/skin causes burns. May cause skin/respiratory irritation. Prolonged and/or repeated skin contact may result in allergic reaction/sensitization. Harmful if swallowed.</p> <p>WARNING: COMPONENT 'C': IRRITANT, SENSITIZER. Contains Calcium Silicate (CAS 1344-95-2), Magnesium Oxide (CAS 1309-48-4) and Silica Quartz (CAS 14808-60-7). May cause eye/skin/respiratory irritation. Prolonged and/or repeated skin contact may cause allergic reaction/sensitization. May cause delayed lung damage (silicosis). May be harmful if swallowed.</p> <p>WARNING: This product contains a chemical known to the State of California to cause cancer. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.</p>
First Aid	<p>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. Contact physician. In all cases contact a physician immediately if symptoms persist.</p>
Handling and Storage	<p>Avoid direct contact with eyes and skin. Wear chemical resistant gloves/goggles/clothing. Avoid breathing vapors. Use with adequate general and local ventilation. In absence of adequate ventilation, use properly fitted NIOSH approved respirator. Wash thoroughly after handling product. Store in a cool, dry, well ventilated area. Keep containers tightly closed.</p>
Clean Up	<p>Uncured material can be removed with approved solvent. Follow solvent manufacturer's instructions for use and warnings. Cured material (when Component 'A' combined with Component 'B' and Component 'C') can only be removed mechanically. In case of spill, ventilate area and contain spill. Collect with absorbent material (Component 'A' and Component 'B'). Shovel Component 'C' into approved container. Dispose of in accordance with current applicable local, state and federal regulations.</p>

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

All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith based on Sika's current experience and knowledge of its products when properly stored, handled and applied under normal conditions in accordance with Sika's instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Sika's control are such that Sika assumes no liability for the provision of such information, advice, recommendations or instructions related to its products, nor shall any legal relationship be created by or arise from the provision of such information, advice, recommendations or instructions related to its products. The user of the Sika product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s). Sika reserves the right to change the properties of its products without notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at www.sikacorp.com or by calling 800-933-7452.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Technical Data Sheet, product label and Material Safety Data Sheet which are available online at www.sikaconstruction.com or by calling Sika's Technical Service Department at 800-933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Technical Data Sheet, product label and Material Safety Data Sheet prior to product use.

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 Technical 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 BE LIABLE 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.**

Visit our website at www.sikaconstruction.com

1-800-933-SIKA NATIONWIDE

Regional Information and Sales Centers. For the location of your nearest Sika sales office, contact your regional center.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Delmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-697-2610
Fax: 514-694-2792

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537

