

PRODUCT DATA SHEET

Sikafloor®-81 EpoCem®

SELF-LEVELLING EPOXY-CEMENT FLOOR TOPPING

DESCRIPTION

Sikafloor®-81 EpoCem® is three part, epoxy-modified cementitious, self levelling mortars.

USES

Sikafloor®-81 EpoCem® may only be used by experienced professionals.

Sikafloor®-81 EpoCem® is used for self-levelling screeds of 1.5–3 mm thickness:

- Temporary moisture barrier (min. 2 mm thick)
- Levelling or patching of concrete surfaces
- On concrete floor slabs without waterproofing membrane, on damp substrates and where aesthetic appearance is not a primary demand.
- Patching layer for epoxy coatings as well as for industrial floor coatings
- Designed for all cementitious substrates

CHARACTERISTICS / ADVANTAGES

- Coating for green concrete and screed
- Good adhesion even on mat-damp surfaces
- Suitable for on-grade slabs without waterproofing membrane
- Waterproof
- Permeable to water vapour
- Can be overcoated with epoxy resin after a waiting time of 24 h (20 °C, 75 % relative humidity)
- Good water and oil resistance
- Quick application

APPROVALS / STANDARDS

Performance test No. A-13974-1, 1993, LPM, CH-5712
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PRODUCT INFORMATION

Packaging	23 kg per set (component A + B + C)	
	Component A	1.14 kg pail
	Component B	2.86 kg pail
	Component C	19 kg bag
Appearance / Colour	Component A	Liquid / Whitish
	Component B	Liquid / Slight yellow
	Component C	Powder / Grey
Shelf life	Min.12 months if stored properly in unopened, original packaging	
Storage conditions	Dry, cool, shaded place (storage temperature from +5 °C to +30 °C)	
Density	Approx. 2.10 kg/l (freshly mixed mortar)	

TECHNICAL INFORMATION

Compressive Strength	28 days ~ 60 N/mm ²	(EN 196-1)
Tensile Strength in Flexure	28 days ~ 14 N/mm ²	(EN 196-1)
Tensile Adhesion Strength	≥ 1.5 N/mm ² (concrete failure, on prepared concrete surface)	
CHEMICAL RESISTANCE	Resistant against moisture, mineral oils and aviation fuels as well as de-icing salt. The temperature resistance corresponds to the resistance of a cement screed. The chemical resistance can be increased by an additional coating. Sikafloor® EpoCem has a good resistance to extreme temperature changes e.g. cold storage rooms.	

APPLICATION INFORMATION

Mixing ratio	Component A : B : C = 1.14 : 2.86 : 17–19 (parts by weight)																				
Consumption	<p><i>1. Self levelling mortar</i></p> <table border="1"> <tr> <td>Primer</td> <td>Sikafloor® Repair EpoCem Module</td> <td>0.20–0.30 kg/m²</td> </tr> <tr> <td>Levelling mortar</td> <td>Sikafloor®-81 EpoCem®</td> <td>2.1 kg/m²/mm</td> </tr> </table> <p><i>2. Anti-skid system</i> Broadcast kiln-dried sand (0.3–0.7mm) "in excess" at approx. 6 kg/m². The loose material can be brushed off and vacuum cleaned after 24 hours and immediately sealed with either Sikafloor®-7530 or Sikafloor®-261 or Sikagard®-63 N.</p> <p><i>3. Mortar</i></p> <table border="1"> <tr> <td>Primer</td> <td>Sikatop® Armatec 110 EpoCem</td> <td>> 1.2 kg/m²</td> </tr> <tr> <td>Repair mortar</td> <td>Sikafloor®-81 EpoCem® (A+B+C)</td> <td>23 kg per bag</td> </tr> <tr> <td></td> <td>Quartz sand 0.7–1.7 mm</td> <td>5–10 kg per bag, or</td> </tr> <tr> <td></td> <td>Quartz sand 1.7–2.4 mm</td> <td>5–10 kg per bag</td> </tr> </table>			Primer	Sikafloor® Repair EpoCem Module	0.20–0.30 kg/m ²	Levelling mortar	Sikafloor®-81 EpoCem®	2.1 kg/m ² /mm	Primer	Sikatop® Armatec 110 EpoCem	> 1.2 kg/m ²	Repair mortar	Sikafloor®-81 EpoCem® (A+B+C)	23 kg per bag		Quartz sand 0.7–1.7 mm	5–10 kg per bag, or		Quartz sand 1.7–2.4 mm	5–10 kg per bag
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Pot Life	Temperature	Time																			
	+10°C	~ 40 minutes																			
	+20°C	~ 20 minutes																			
	+30°C	~ 10 minutes																			
Curing time	Curing time	10 °C	20 °C	30 °C																	
	Ready for over painting	1 day	18 hours	12 hours																	
	Light loading permitted	3 days	2 days	1 day																	
	Fully cured	14 days	7 days	5 days																	
	Max. open time for working down with spiked roller	30 minutes	15 minutes	10 minutes																	

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

The substrate must be of sufficient strength (minimum compressive strength 25 N/mm²). The concrete or cement screed surface must be fine gripping, dense and free from loose and friable particles. Substrates of insufficient strength or oil contamination must be removed mechanically, e.g. by blastcleaning. The pull-off strength must not be below 1.5 N/mm².

Cementitious surfaces

- Normal absorbent surfaces are primed with Sikafloor® Repair EpoCem Module. Waiting time before applying Sikafloor®-81 EpoCem® is about 1–3 hours after primer application.
- Highly absorbent, friable surfaces require two primer coats of Sikafloor® Repair EpoCem Module. Waiting time between first and second primer coat is 18–24 hours.

Green concrete / screed

Green concrete or screed can be overcoated with Sikafloor® EpoCem after a short waiting time. Use Sikafloor® Repair EpoCem Module. Ask for special advice. Whilst priming avoid ponding as a rule!

MIXING

Shake component A and add to component B. Shake A+B together for minimum 30 seconds. Pour the liquid component (A+B) into a mixing vessel and add powder component C by using an electric stirrer (approx. 300–400 rpm).

Mixing time minimum 3 minutes, until a homogeneous mixture is achieved!

Please note: By reducing component C ratio by 1 to 2 kg per set of Sikafloor EpoCem, the necessary consistency can be adapted.

DO NOT add any water!

APPLICATION

Pour the mixed material onto the still slightly tacky, ready for foot traffic primer and apply evenly with serrated trowel or drag in the recommended layer thickness.

Immediately after application ventilate with spike roller to remove entrapped air and to obtain an even layer.

Observe max. open time of Sikafloor®-81 EpoCem®.

CLEANING OF TOOLS

Uncured material can be removed from tools with water. Once cured, Sikafloor®-81 EpoCem® can only be removed mechanically.

IMPORTANT CONSIDERATION

- Min. substrate temperature +10 °C
- Max. substrate temperature +30 °C
- Substrate temperature must be at least 3 °C above dew point
- Maximum relative air humidity 80 %.
- Mix to a uniform consistency (no lumps)
- It is not allowed to add water into the mix

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

ECOLOGY, HEALTH AND SAFETY

Ecology: In a liquid not fully cured state component A+B contaminate water and should not get into drains, water and ground.

Disposal: According to local law

Transportation: Non-hazardous

Important notes:

- Sikafloor®-81 EpoCem® contains cement and is therefore alkaline. Wearing protective clothing (gloves and goggles) is recommended during its application to minimize direct contact with the skin.
- During application, instruction regard on safe and safety on the containers must be observed.
- Further more local regulation closed rooms, pits and shafts etc. sufficient ventilation must be provided. Keep away open light including welding.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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