

Sikafloor®-160

2-part solvent free epoxy primer & binder, modular Sikafloor® system

Construction

Product Description	Sikafloor®-160 is a two part, low viscosity epoxy resin. "Total solid epoxy composition acc. to the test method Deutsche Bauchemie e.V. (German Association for construction chemicals)"		
Uses	<ul style="list-style-type: none">■ For priming concrete substrates, cement screeds and epoxy mortars■ For normal to strongly absorbent surfaces■ Primer for all Sika Epoxy floorings■ Binder for levelling mortars and mortar screeds		
Characteristics / Advantages	<ul style="list-style-type: none">■ Solvent Free■ Available in bulk quantities■ Low viscosity■ Good penetration ability■ High bond strength■ Easy application■ Short waiting times■ Multi-purpose		
Product Data			
Form			
Appearance /Colours	Resin - part A:	transparent, liquid	
	Hardener - part B:	transparent, liquid	
Packaging	<i>Pre-proportioned 5.5 kg kit:</i>		<i>Pre-proportioned 11.1 kg kit:</i>
	Part A	3.55 kg	Part A: 7.1 kg
	Part B	2 kg	Part B: 4 kg
	<i>Bulk packaging:</i>		
	Part A:	20kg and 200kg	
	Part B	20kg and 200kg	
Yield	5.55 kg kit:	5.1 litres approx.	
	11.10 kg kit	10.2 litres approx.	
Mix Ratio	Part A : Part B =	(by mass) 1.8:1 (by volume) 1.6:1	
Consumption (as primer)	2-3 m²/litre for porous and high profile substrates and 5-6 m²/litre for low profile and dense substrates		
Storage			
Storage Conditions/ Shelf-Life	24 months from date of production if stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C and 30°C.		



Technical Data

Chemical Base	Epoxy	
Density	Part A: ~ 1.10 kg/l Part B: ~ 1.02 kg/l Mixed Resin: ~ 1.1 kg/l All density values at +23°C	(DIN EN ISO 2811-1)
Solid Content	~ 100% (by volume) / ~ 100% (by weight)	

Mechanical / Physical Properties

Compressive Strength	Mortar: ~ 95 N/mm ² (7 days / +23°C / 50% r.h.)	(EN 196-1)
Bond Strength	> 1.5 N/mm ² (failure in concrete)	(EN 4624)
Shore D Hardness	83 (7days / +23°C / 50% r.h.)	(DIN 53505)

System Information

System Structure	<i>Primer:</i> Low/medium porosity concrete: 1 x Sikafloor®-160 High porosity concrete: 2 x Sikafloor®-160 <i>Levelling mortar fine (surface roughness < 1 mm):</i> Primer: 1 x Sikafloor®-160 Levelling mortar: 1 x Sikafloor®-160 + Sikfloor® Fillers + Sikadur®-513 <i>Levelling mortar medium (surface roughness up to 2 mm):</i> Primer: 1 x Sikafloor®-160 Levelling mortar: 1 x Sikafloor®-160 + Sikfloor® Fillers + Sikadur®-513 <i>Mortar Screed (15 - 20 mm layer thickness) / Repair Mortar:</i> Primer: 1 x Sikafloor®-160 Bonding bridge: 1 x Sikafloor®-160 Screed: 1 x Sikafloor®-160 + Sikadur®-506
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Application Details

Consumption / Dosage

Coating System	Product	Consumption
Primer	Sikafloor®-160	2-3 m ² /litre or 5-6 m ² /litre for dense surfaces
Levelling mortar fine (surface roughness < 1 mm)	1 pbw Sikafloor®-160 + 0.5 pbw Sikafloor® Fillers + 0.015 pbw Sikadur®-513	1.4 kg/m ² /mm
Levelling mortar medium (surface roughness up to 2 mm)	1 pbw Sikafloor®-160 + 1 pbw Sikafloor® Fillers + 0.015 pbw Sikadur®-513	1.6 kg/m ² /mm
Bonding Bridge	Sikafloor®-160	2-3 m ² /litre or 5-6 m ² /litre for dense surfaces
Mortar Screed (15 - 20 mm layer thickness) / Repair Mortar	1 pbw Sikafloor-160 + 10 pbw Sikadur®-506	2.2 kg/m ² /mm

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.

Substrate Quality

Concrete substrates must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 1.5 N/mm².

The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc.

If in doubt, apply a test area first.

Substrate Preparation

Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.

Substrates heavily impregnated with oil must be cleaned by torching or other methods. To check that all traces of oil have been completely removed, sprinkle a few drops of water over the surface. If all the water is quickly absorbed, the surface is sufficiently oil and grease free. If water forms into globules that remain on the surface, further thorough treatment of the substrate is necessary.

Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed.

Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor®, SikaDur® and SikaGard® range of materials.

The concrete or screed substrate has to be primed or levelled in order to achieve an even surface.

High spots must be removed by e.g. grinding.

All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.

Application Conditions / Limitations

Substrate Temperature +10°C min. / +30°C max.

Ambient Temperature +10°C min. / +30°C max.

Substrate Moisture Content < 4% pbw moisture content.

Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method.

No rising moisture according to ASTM (Polyethylene-sheet).

Relative Air Humidity 80% r.h. max.

Dew Point Beware of condensation! The substrate and uncured floor must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish. Note: Low temperatures and high humidity conditions increase the probability of blooming.

Application Instructions

Mixing Time

Prior to mixing, stir part A mechanically. When all of part B has been added to part A, mix continuously for 3 minutes until a uniform mix has been achieved.

When parts A and B have been mixed, add the quartz sand and if required the Sikadur®-513 and mix for a further 2 minutes until a uniform mix has been achieved.

To ensure thorough mixing pour materials into another container and mix again to achieve a consistent mix.

Over mixing must be avoided to minimise air entrainment.

Mixing Tools

Sikafloor®-160 must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

For the preparation of mortars use a forced action mixer of rotating pan, paddle or trough type. Free fall mixers should not be used.

Application Method / Tools

Prior to application, confirm substrate moisture content, r.h. and dew point.

If > 4% pbw moisture content, Sikafloor® EpoCem® may be applied as a T.M.B. (temporary moisture barrier) system.

Primer:

Make sure that a continuous, pore free coat covers the substrate. If necessary, apply two priming coats. Apply Sikafloor®-160 by brush, roller or squeegee.

Levelling mortar:

Rough surfaces need to be levelled first. Apply the levelling mortar by squeegee/trowel to the required thickness.

Bonding bridge:

Apply Sikafloor®-160 by brush, roller or squeegee.

Mortar screed / repair mortar:

Apply the mortar screed evenly on the still "tacky" bonding bridge, using levelling battens and screed rails as necessary. After a short waiting time compact and smoothen the mortar with a trowel or Teflon coated power float (usually 20 - 90 rpm).

Cleaning of Tools

Clean all tools and application equipment with Thinner C immediately after use. Hardened and/or cured material can only be removed mechanically.

Potlife

Temperature	Time
+10°C	~ 50 minutes
+20°C	~ 25 minutes
+30°C	~ 15 minutes

Waiting Time / Overcoating

Before applying solvent free products on Sikafloor®-160 allow:

Substrate temperature	Minimum	Maximum
+10°C	24 hours	4 days
+20°C	12 hours	2 days
+30°C	6 hours	1 day

Before applying solvent containing products on Sikafloor®-160 allow:

Substrate temperature	Minimum	Maximum
+10°C	36 hours	3 days
+20°C	20 hours	2 days
+30°C	10 hours	1 day

Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

Notes on Application / Limitations

Do not apply Sikafloor®-160 on substrates with rising moisture.

Freshly applied Sikafloor®-160 should be protected from damp, condensation and water for at least 24 hours.

Avoid puddles on the surface with the primer.

Sikafloor®-160 mortar screed is not suitable for frequent or permanent contact with water unless sealed.

Practical trials should be carried out for mortar mixes to assess suitable aggregate grain size distribution.

For external applications, apply on a falling temperature. If applied during rising temperatures "pin holing" may occur from rising air.

Construction joints require pre-treatment. Treat as follows:

- Static Cracks: prefill and level with SikaDur® or Sikafloor® epoxy resin
- Dynamic cracks: to be assessed and if necessary apply a stripe coat of elastomeric material or design as a movement joint

The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.

Under certain conditions, underfloor heating or high ambient temperatures combined with high point loading, may lead to imprints in the resin.

If heating is required do not use gas, oil, paraffin or other fossil fuel heaters, these produce large quantities of both CO₂ and H₂O water vapour, which may adversely affect the finish. For heating use only electric powered warm air blower systems.

Curing Details**Applied Product ready for use**

Temperature	Foot traffic	Light traffic	Full cure
+10°C	~ 24 hours	~ 4 days	~ 10 days
+20°C	~ 12 hours	~ 2 days	~ 7 days
+30°C	~ 6 hours	~ 1 days	~ 5 days

Note: Times are approximate and will be effected by changing ambient conditions.

Value Base

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.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Legal Notes

The information, and, in particular, the recommendations relating to the application and end-use of Sika's 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 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 proprietary rights of third parties must be observed. All orders are accepted subject of our terms and conditions of sale. Users should always refer to the most recent issue of the Australian version of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.



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