BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-161

2-PART EPOXY PRIMER, LEVELLING MORTAR AND INTERMEDIATE LAYER

DESCRIPTION

Sikafloor®-161 is an economic, two part, low viscosity epoxy resin.
Suitable for use in hot and tropical climatic conditions.

USES

Sikafloor®-161 may only be used by experienced professionals.
- For priming concrete substrates, cement screeds and epoxy mortars
- For low to medium absorbent substrates
- Primer for the Sikafloor®-263 SL, Sikafloor®-264 economic flooring systems and Sikalastic®-800 series
- Binder for levelling mortars and mortar screeds
- Intermediate layer underneath Sikafloor®-263 SL and Sikafloor®-264

CHARACTERISTICS / ADVANTAGES

- Low viscosity
- Good penetration
- Excellent bond strength
- Easy application
- Short waiting times
- Multi-purpose

SUSTAINABILITY

Conformity with LEED v2009 IEQc 4.2: Low-Emitting Materials: Paints and Coatings

APPROVALS / CERTIFICATES

- Sikafloor®-161 follows the requirements of EN 1504 - 2 : 2004 and EN 13813 : 2002
- “Products and systems for the protection and repair of concrete structures – Test method – Compatibility on wet concrete when exposed to the effects of humidity from the rear” according to the EN 13578 : 2004. Proof statement P 6239.

PRODUCT INFORMATION

Composition	Epoxy

Packaging

Please refer to local country price list for available packaging sizes:

Part A	3.95 kg containers
Part B	1.05 kg containers
Part A + B	5 kg ready to mix units
Part A	15.8 kg containers
Part B	4.2 kg containers
Part A + B	20 kg ready to mix units
Part A	19.75 kg containers
Part B	5.25 kg containers
Part A + B	25 kg ready to mix units
Part A	3 drums 220 kg
Part B	1 drum 177 kg
Part A + B	3 drums Part A (220 kg) + 1 drum part B (177 kg) = 837 kg

Appearance / Colour

Resin - Part A	Brownish-transparent, liquid
Hardener - Part B	Transparent, liquid

Shelf life

24 months from date of production

Storage conditions

The packaging must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5 °C and +30 °C.

Density

Part A	~1.6 kg/l	(DIN EN ISO 2811-1)
Part B	~1.0 kg/l	
Mixed Resin	~1.4 kg/l	

All density values at +23 °C

Solid content by weight

~100 %

Solid content by volume

~100 %

TECHNICAL INFORMATION

Shore D Hardness

~76 (7 d / +23 °C) (DIN 53 505)

Tensile Adhesion Strength

> 1.5 N/mm² (failure in concrete) (ISO 4624)

Temperature Resistance

Exposure*	**Dry heat**
Permanent	+50 °C
Short-term max. 7 d	+80 °C
Short-term max. 12 h	+100 °C

Short-term moist / wet heat* up to +80 °C where exposure is only occasional (steam cleaning etc.).

*No simultaneous chemical and mechanical exposure and only in combination with Sikafloor® systems as a broadcast system with approximately 3 - 4 mm thickness.

SYSTEMS

Systems

Primer

Low / medium porosity concrete	1 - 2 x Sikafloor®-161

Levelling mortar fine (surface roughness < 1 mm)

Primer	1 - 2 x Sikafloor®-161
Levelling mortar	1 x Sikafloor®-161 + Sikadur®-504

Levelling mortar medium (surface roughness up to 2 mm)

Primer	1 - 2 x Sikafloor®-161
Levelling mortar	1 x Sikafloor®-161 + Sikadur®-504

Intermediate layer (self-smoothing 1.5 to 3 mm)

Primer	1 x Sikafloor®-161
Levelling mortar	1 x Sikafloor®-161 + Sikadur®-504

APPLICATION INFORMATION

Mixing Ratio

Part A : Part B = 79 : 21 (by weight)

Consumption

Coating System	Product	Consumption
Priming	1 - 2 x Sikafloor®-161	1 - 2 x 0.25 - 0.55 kg/m²
Levelling mortar fine (surface roughness < 1 mm)	1 pbw Sikafloor®-161 + 0.5 pbw Sikadur®-504	~1.7 kg/m²/mm
Levelling mortar medium (surface roughness up to 2 mm)	1 pbw Sikafloor®-161 + 1 - 3 pbw Sikadur®-504	~1.9 kg/m²/mm)
Intermediate layer (self-smoothing 1.5 - 3 mm)	1 pbw Sikafloor®-161 + 1 - 3 pbw Sikadur®-504	~1.9 kg/m²/mm
	+ optional broadcast quartz Sikadur®-507	~4.0 kg/m²
Bonding bridge	1 - 2 x Sikafloor®-161	1 - 2 x 0.3 - 0.5 kg/m²

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

Ambient Air Temperature

+10 °C min. / +35 °C max.

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.

Substrate Temperature

+10 °C min. / +35 °C max.

Substrate Moisture Content

< 6 % pbw moisture content using the Sika® - Tramex meter (at the time of application).

Please note that the moisture content must be < 4 % pbw when using the CM measurement or Oven-dry-method. Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene-sheet).

Pot Life

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

Curing Time

Before applying solvent free products on Sikafloor®-161 allow:

Substrate temperature	Minimum	Maximum
+10 °C	24 h	4 d
+20 °C	12 h	2 d
+30 °C	8 h	24 h

Before applying solvent containing products on Sikafloor®-161 allow:

Substrate temperature	Minimum	Maximum
+10 °C	36 h	6 d
+20 °C	24 h	4 d
+30 °C	16 h	2 d

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

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

- The concrete substrate 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.
- Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve an open textured surface.
- Weak concrete must be removed and surface defects such as blow holes 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.
- All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush or vacuum.

MIXING

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 Extender T 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®-161 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

Prior to application, confirm substrate moisture content, relative humidity and dew point. If more than 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®-161 by brush, roller or squeegee. Preferred application is by using a squeegee and then back rolling crosswise.

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

Intermediate layer
Sikafloor®-161 is poured, spread evenly by means of a serrated trowel. Roll immediately in two directions with spiked roller to ensure even thickness and if required broadcast with quartz sand, after about 15 minutes (at +20 °C) but before 30 minutes (at +20 °C), at first lightly and then to excess.

Bonding bridge
Apply Sikafloor®-161 by brush, roller or squeegee. Preferred application is by using a squeegee and then backrolling crosswise.

CLEANING OF EQUIPMENT

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

FURTHER INFORMATION

Substrate quality & Preparation
Please refer to Sika Method Statement: “EVALUATION AND PREPARATION OF SURFACES FOR FLOORING SYSTEMS”.

Application instructions
Please refer to Sika Method Statement: “MIXING & APPLICATION OF FLOORING SYSTEMS”.

Maintenance
Please refer to “Sikafloor®- CLEANING REGIME”.

IMPORTANT CONSIDERATIONS

- Do not apply Sikafloor®-161 on substrates with rising moisture.
- Freshly applied Sikafloor®-161 should be protected from damp, condensation and water for at least 24 hours.
- 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.
- These pinholes can be closed after a soft grinding by applying a scratch coat of Sikafloor®-161 mixed with approximiately 3 % of Extender T.

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 CO_2 and H_2O water vapour, which may adversely affect the finish. For heating use only electric powered warm air blower systems.
Tools:
Recommended supplier of tools:
PPW-Polyplan-Werkzeuge GmbH, Phone: +49 40/5597260, www.polyplan.com

BASIS OF PRODUCT DATA

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) 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 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.

SIKA NORTHERN GULF
Bahrain / Qatar / Kuwait
Tel: +973 177 38188
sika.gulf@bh.sika.com
gcc.sika.com

SIKA SOUTHERN GULF
UAE / Oman / SIC
Tel: +971 4 439 8200
info@ae.sika.com
gcc.sika.com

SIKA SAUDI ARABIA
Riyadh / Jeddah / Dammam
Tel: +966 11 217 6532
info@sa.sika.com
gcc.sika.com