Product Data Sheet
Edition 2 May 2013

Sikafloor®-161

2-part epoxy primer

Construction

Product Description	Sikafloor®-161 is an economic, two part, low viscosity epoxy resin for the use where substrate moisture content is between 4% to 6% by Tramex meter. "Total solid epoxy composition acc. to the test method Deutsche Bauchemie e.V. (German Association for construction chemicals)"
Uses	■ For priming concrete substrates, cement screeds and epoxy mortars ■ For low to medium absorbent substrates ■ Primer for the Sikafloor-263 SL and Sikafloor-264 economic flooring systems ■ Binder for levelling mortars and mortar screeds ■ Intermediate layer underneath Sikafloor-263 SL and Sikafloor-264 ■ Can be uses for substrates having <6% moisture content ■ Can be used as a primer for Sikalastic® system
Characteristics / Advantages	■ Good penetration ■ Excellent bond strength ■ Easy application ■ Short waiting times ■ Multi-purpose
Test	
Approval / Standards	Proof statement to determine the compatability of coating and water saturated concrete Report-No. P 5688 Polymer Institute, Germany, May 2009

Product Data

Form

Appearance / Colours	Resin - part A:	brownish-transparent, liquid
	Hardener - part B:	transparent, liquid
Packaging	Part A: Part B:	13.09 kg 4.0 kg
	Part A: Part B:	20 kg 20 kg

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: ~ 1.6 kg/l Part B: ~ 1.0 kg/l Mixed Resin: ~ 1.4 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 screed*: ~ 45 N/mm² (28 days / +23°C / 50% r.h.) *Mortar screed: SR-161 mixed 1:10 with SR-280 filler	(EN 13892-2)
Flexural Strength	Mortar screed: ~ 15 N/mm² (28 days / +23°C / 50% r.h.)	(EN 13892-2)
Bond Strength	> 1.5 N/mm² (failure in concrete)	(ISO 4624)
Shore D Hardness	76 (7 days / +23°C)	(DIN 53 505)

Resistance

Thermal 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 approx. 3 - 4 mm thickness

USGBC LEED Rating	Sikafloor®-161 conforms to the requirements of LEED EQ Credit 4.2: Low-Emitting Materials: Paints & Coatings SCAQMD Method 304-91 VOC Content < 100 g/l

System Information

System Structure

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

Application Details

Consumption / Dosage

Coating System	Product	Consumption
Priming	1- 2 x Sikafloor®-161	1-2 x 0.35 - 0.55 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

Substrate Quality

Concrete substrates must be sound and of sufficient compressive strength (minimum 25 N/mm^2) with a minimum pull off strength of 1.5 N/mm^2.

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

On critical substrates, e.g a strong absorbent cementitious surface, the application of a trial area is highly recommended, in order to ensure a porefree surface, after priming..

Substrate Preparation

Concrete

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 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.

Metal

Metal surfaces should be clean and free of contamination. The surface should be assessed and treated in accordance with ISO 8504. Abrasive blast the surface to minimum SA 2.5 as per ISO 8501-1, for a visual assessment of the surface cleanliness with an achor profile of 75-100 microns.

Manually prepared surfaces should be to a minimum standard of Std 3 BS 7079: Part A1:1989 at the time of coating.

Application Conditions / Limitations

Substrate Temperature

+10°C min. / +30°C max.

Ambient Temperature

+10°C min. / +30°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.

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.

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

Note: Low temperatures and high humidity conditions increase the probability of blooming.

Application Instructions

Mixing

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

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.

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.

Application Method / Tools

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

If > 6% 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 backrolling crosswise.

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®-161 allow:

Substrate temperature	Minimum	Maximum
+10°C	24 hours	4 days
+20°C	12 hours	2 days
+30°C	8 hours	24 hours

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

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

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

Construction

Notes on Application / Limitations

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.

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 approx. 3 % of Thickener 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.

Curing Details

Applied Product ready for use

Temperature	Foot traffic	Light traffic	Full cure
+10°C	~ 24 hours	~ 6 days	~ 10 days
+20°C	~ 12 hours	~ 4 days	~ 7 days
+30°C	~ 8 hours	~ 2 days	~ 5 days

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

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.

Important Notification

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.