BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-161 HC

Multipurpose epoxy primer and binder for levelling screeds and mortars

DESCRIPTION

Sikafloor®-161 HC is a 2-part, low viscosity multipurpose filled epoxy resin for priming and levelling concrete and cementitious substrates.

USES

Sikafloor®-161 HC may only be used by experienced professionals.

- For priming concrete substrate, cement screeds and epoxy mortars.
- For low to medium absorbent substrates.
- Primer for the Sikafloor®-263 SL HC and Sikafloor®-264 HC flooring systems.
- Binder for levelling mortars and mortar screeds.
- Intermediate layer underneath Sikafloor®-263 SL HC and Sikafloor®-264 HC.

CHARACTERISTICS / ADVANTAGES

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

ENVIRONMENTAL INFORMATION

- Environmental Product Declaration (EPD) in accordance with EN 15804. EPD independently verified by Institut Bauen und Umwelt e.V. (IBU)
- Conforms with LEED v4 EQ credit : low-emitting materials

CERTIFICATES AND TEST REPORTS

- VOC content pass LEED v4.1 requirement (VOC Content), Report no. 392-2022-10179004_XG_EN, Eurofins Product Testing, Denmark, June 2022.
- VOC emission pass CDPH, Report no. 392-2022-00179001_H_EN, Eurofins Product Testing, Denmark, May 2022.

PRODUCT INFORMATION

Composition	Epoxy	
Packaging	Part A	15.8 kg can
	Part B	4.2 kg can
	Part A+B	20 kg set
Appearance / Colour	Part A – Resin	Liquid, brownish-transparent
	Part B – Hardener	Liquid, transparent
Shelf Life	24 months from date of production if stored properly in original, unopened and undamaged sealed packaging.	
Storage Conditions	Store in dry conditions at temperatures between +18 °C and +30 °C.	

Density	Part A	~1.6 kg/L	(DIN EN ISO 2811-1) (at +23 °C)
	Part B	~1.0 kg/L	
	Mixed Resin	~1.4 kg/L	
Solid content by weight	~100%		
Solid content by volume	~100%		

TECHNICAL INFORMATION

Shore D Hardness	7 days (at +23 °C)	~76	(DIN 53 505)
Compressive Strength	28 days (at +23 °C)	~60 N/mm² (resin)	(EN 196-1)
Tensile Strength in Flexure	28 days (at +23 °C)	~30 N/mm² (resin)	(EN 196-1)
Tensile Adhesion Strength	> 1.5 N/mm² (failure in concrete)		(ISO 4624)
Chemical Resistance	Resistant to many chemicals. Please ask for a detailed chemical resistance table.		

Service Temperature

IMPORTANT

Simultaneous mechanical and chemical strain

While the Product is exposed to temperatures up to +60 °C, simultaneous mechanical or chemical strain may cause damage to the Product.

1. Do not expose the Product to chemical or mechanical strain at elevated temperatures

Short-term, maximum 7 days	+60 °C

Note : Short-term moist/wet heat* up to +60°C where exposure is only occasional (steam cleaning etc.).

APPLICATION INFORMATION

Mixing Ratio

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

Consumption

Coating System	Product	Consumption
Priming	Sikafloor®-161 HC	0.35–0.55 kg/m²
Levelling mortar / Scratch coat	1 pbw Sikafloor®-161 HC + 0.5 pbw quartz sand (0.1–0.3 mm)	1.7 kg/m²/mm
Bonding bridge	Sikafloor®-161 HC	0.3–0.5 kg/m²
Resin screed (15–20 mm layer thickness) / Repair Mortar	1 pbw Sikafloor®-161 HC + 8 pbw quartz sand (by weight)	2.2 kg/m²/mm

Note: These figures are theoretical and do not allow for any additional material required due to surface porosity, surface profile, variations in level, wastage or any other variations etc. Apply product to a test area to calculate the exact consumption for the specific substrate conditions and proposed application equipment.

Layer Thickness

As Top Coat	70 microns min. / 140 microns max.
As stand alone coating	140 microns min. / 275 microns max.

Ambient Air Temperature	+10 °C min / +30 °C
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 / +30 °C

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).

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 HC 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 HC 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.

Applied Product Ready for Use

Substrate Temperature	Foot Traffic	Light Traffic	Full Cure
+10 °C	~24 h	~6 d	~10 d
+20 °C	~12 h	~4 d	~7 d
+30 °C	~8 h	~2 d	~5 d

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

SYSTEM INFORMATION

Systems

Primer:

Low / medium porosity concrete:	1–2 x Sikafloor®-161 HC
High porosity concrete:	2 x Sikafloor®-161 HC

Levelling mortar / Scratch coat:

Primer	1–2 x Sikafloor®-161 HC
Levelling mortar / Scratch coat:	1 x Sikafloor®-161 HC + quartz sand (0.1 - 0.3 mm)

Bonding bridge:

Bonding bridge	1 x Sikafloor®-161 HC

Resin screed (15 mm to 20 mm layer thickness) / Repair mortar:

Primer	1–2 x Sikafloor®-161 HC
Bonding bridge	1 x Sikafloor®-161 HC
Screed:	1 x Sikafloor®-161 HC + suitable sand mixture

The following sand mixtures are indicative mix design quantities that must be confirmed by pre-trials. Grain size distribution for layer thicknesses of 15–20 mm, parts by weight (pbw):

- 25 pbw quartz sand 0.1–0.5 mm
- 25 pbw quartz sand 0.4–0.7 mm
- 25 pbw quartz sand 0.7–1.2 mm
- 25 pbw quartz sand 2–4 mm

The largest grain size may not exceed 1/3 of the finished layer thickness. Dependent on the grain shape and application temperatures, the sand and the most suitable mix must be selected and confirmed by pre-trials.

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.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

- 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.

SUBSTRATE PREPARATION

MECHANICAL SUBSTRATE PREPARATION

IMPORTANT: Exposing blow holes and voids

When mechanically preparing the surface, make sure to fully expose blow holes and voids.

1. Remove weak cementitious substrates.
2. Prepare cementitious substrates mechanically using abrasive blast cleaning or planing / scarifying equipment or grinding to remove cement laitance.
3. Before applying thin layer resins, remove high spots by grinding.
4. Use industrial vacuuming equipment to remove all dust, loose and friable material from the application surface before applying the Product.
5. Use products from the Sikafloor®, Sikadur® and Sikagard® range of materials to level the surface or fill cracks, blow holes and voids.

Contact Sika® Technical Services for additional information on products for levelling and repairing defects.

TREATMENT OF JOINTS AND CRACKS

Construction joints and existing static surface cracks in substrate require pre-treating before full layer application. Use Sikadur® or Sikafloor® resins.

MIXING

Note: To increase the viscosity of Sikafloor®-161 HC, add Sika® Extender T or Sikafloor® Quartz Flour.

PRIMER MIXING PROCEDURE

1. Mix Part A (resin) for ~30 seconds.
2. Add Part B (hardener) to Part A.
3. **IMPORTANT.** Do not mix excessively. Mix Part A + B continuously for ~3 minutes until a uniform mix is achieved.
4. To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth and uniform mix.
5. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.

LEVELLING MORTAR AND RESIN SCREED MIXING PROCEDURE

1. Mix Part A (resin) for ~30 seconds.
2. Add Part B (hardener) to Part A.
3. While mixing Parts A + B, gradually add the required filler or aggregates.
4. **IMPORTANT.** Do not mix excessivley. Mix for a further 2 minutes until a uniform mix is achieved.
5. To ensure thorough mixing, pour materials into another container and mix again to achieve a smooth and uniform mix.
6. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.

MIXING TOOLS

Sikafloor®-161 HC 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

IMPORTANT: Protect from moisture.

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.

After application, protect Sikafloor®-161 HC from damp, condensation and direct water contact for at least 24 hours.

Pin holes.

If Sikafloor®-161 HC is applied on porous substrates during rising temperatures, pin holes may form from rising air.

1. Apply Sikafloor®-161 HC mixture during falling temperatures.

Closing Pin holes

If pin holes are present after Sikafloor®-161 HC mixture has cured, blistering may occur in the subsequent layer. Close any pin holes using the following steps.

1. Lightly grind the cured surface.
2. Apply a scratch coat consisting of Sikafloor®-161 HC mixed with Sikafloor® Quartz Flour or Sika® Extender T.

STANDARD PRIMER APPLICATION

1. Pour Sikafloor®-161 HC mixture onto the substrate. (Note: The consumption is specified in Application Information).
2. Apply the mixture evenly over the surface with a short pile roller or a squeegee.
3. Back roll the surface in two directions at right angles with a fleece roller. (Note: Maintain a "wet edge" during application to achieve a seamless finish).
4. If broadcasting is required, wait between 15 and 30 minutes, then broadcast the surface with quartz sand. Broadcast lightly at first, then to excess.
5. **IMPORTANT.** Confirm waiting or overcoating time is achieved before applying subsequent products. (Refer to the "Waiting Time to Overcoating" section of Application Information) Once the mixture has hardened sufficiently, remove all loose sand with industrial vacuuming equipment.

LEVELLING MORTAR / SCRATCH COAT

Equipment:

- Squeegee
- Trowel

1. Pour Sikafloor®-161 HC mixture onto the substrate. (Note: The consumption is specified in Application Information).
2. Apply the mixture evenly over the surface with a trowel or a squeegee.

BONDING BRIDGE

1. Pour Sikafloor®-161 HC mixture onto the substrate. (Note: The consumption is specified in Application Information).
2. Apply the mixture evenly over the surface with a brush, fleece roller or a squeegee.
3. Back roll the surface in two directions at right angles with a fleece roller. (Note: Maintain a "wet edge" during application to achieve a seamless finish).
4. (Optional) If required, apply a second priming coat.

RESIN SCREED

IMPORTANT: Not suitable for contact with water

Sikafloor®-161 HC resin screed is not suitable for contact with water unless sealed with seal coat.

1. Pour the resin screed "wet on wet" onto the still tacky primer. (Note: The consumption is specified in Application Information).
2. Spread and compact the resin screed with a trowel to the required thickness between screed rails / battens, if installed.
3. Level the resin screed surface with a levelling beam spanning onto the screed rails / battens.
4. Finish the surface of the resin screed to the required surface texture with trowels or walk-behind power floats.

RESIN PATCH REPAIR MORTAR

1. Pour the resin patch repair mortar "wet on wet" onto the still tacky primer.
2. Apply the resin patch repair mortar with a trowel to the required thickness.
3. Compact the resin patch repair mortar with a trowel.
4. **IMPORTANT.** Confirm waiting or overcoating time is achieved before applying subsequent products. (Refer to the "Waiting Time to Overcoating" section of Application Information). Smoothen the surface with a trowel.

CLEANING OF TOOLS

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

LOCAL RESTRICTIONS

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

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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