BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-156

2-PART EPOXY DPM, PRIMER, LEVELLING MORTAR AND MORTAR SCREED

PRODUCT DESCRIPTION

Sikafloor®-156 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

Sikafloor®-156 may only be used by experienced professionals.
- For moisture control on cement-based substrates with moisture contents of up to 6 % CM (99% RH).
- For priming concrete substrates, cement screeds and epoxy mortars
- For normal to strongly absorbent surfaces
- Primer for all Sika Epoxy and PUR floorings
- Binder for levelling mortars and mortar screeds
- For internal and external use
- For substrate consolidation on concrete, cement and anhydrite screeds and refurbished substrates.
- For adhesion promotion for broadcast mastic asphalt and on old adhesive residues.

CHARACTERISTICS / ADVANTAGES

- High bond strength
- Easy application
- Short waiting times
- Suitable for use with underfloor heating
- Multi-purpose
- For external use also

APPROVALS / STANDARDS

- Synthetic resin screed material according to EN 13813:2002, Declaration of Performance 02 08 01 02 007 0 00001 1008, certified by notified factory production control certification body 0921, and provided with the CE marking.
- Coating for surface protection of concrete according to EN 1504-2:2004, Declaration of Performance 02 08 01 02 007 0 00001 1008, certified by notified factory production control certification body 0921, and provided with the CE marking.

PRODUCT INFORMATION

Chemical Base	Epoxy	
Packaging	Part A	1.875 kg, 7.5 kg and 18.75 kg containers. Bulk units also available in 180kg and 1000kg.
	Part B	0.625 kg, 2.5 kg and 6.25 kg containers. Bulk units also available in 180kg and 1000kg.
	Part A+B	2.5 kg and 10 kg unipacks 25 kg ready to mix units 3 Drums Part A (180kg) + 1 Drum Part B (180kg) = 720kg 3 IBC Part A (1000kg) + 1 IBC Part B (1000kg) = 4000kg

Appearance / Colour	Resin - part A	transparent, liquid
	Hardener - part B	brownish, liquid
Shelf Life	24 months from date of production	
Storage Conditions	The product 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	~ 1.10 kg /l (DIN EN ISO 2811-1)
	Part B	~ 1.02 kg /l
	Mixed resin	~ 1.1 kg /l
	All density values at 23°C.	
Solid content by weight	~100 %	
Solid content by volume	~100 %	

TECHNICAL INFORMATION

Shore Hardness	83 (7days / +23 °C / 50 % r.h.)	(DIN 53505)
Compressive Strength	Mortar: ~ 55 N/mm² (30 days / +23 °C / 50 % r.h.) Mortar screed: SR-156 mixed 1:10 with the suitable sand mixture, mentioned below.	(EN 196-1)
Flexural Strength	Mortar: ~ 15 N/mm² (30 days / +23 °C / 50 % r.h.) Mortar screed: SR-156 mixed 1:10 with the suitable sand mixture, mentioned below.	(EN 196-1)
Tensile Adhesion Strength	>1.5 N/mm² (failure in concrete)	(EN 4624)

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.). In order to avoid damage to the installed wood floor elements, surface temperature must not exceed +25 °C.

*No simultaneous chemical and mechanical exposure.

SYSTEM INFORMATION

Systems

Primer, moisture control and consolidation:	
Low / medium porosity substrate	1 x Sikafloor®-156
High porosity substrate	2 x Sikafloor®-156

Levelling mortar fine (surface roughness < 1 mm):	
Primer	1 x Sikafloor®-156
Levelling mortar	1 x Sikafloor®-156+ quartz sand (0.06 - 0.3 mm) + Extender T

Levelling mortar medium (surface roughness up to 2 mm):	
Primer	1 x Sikafloor®-156
Levelling mortar	1 x Sikafloor®-156 + quartz sand (0.06 - 0.3 mm) + Extender T

Epoxy screed (15 - 20 mm layer thickness) / repair mortar:	
Primer	1 x Sikafloor®-156
Bonding bridge	1 x Sikafloor®-156
Screed	1 x Sikafloor®-156 + suitable sand mixture

In practice the following sand mixtures proved to be suitable (grain size distribution for layer thicknesses of 15 - 20 mm):

25 pbw quartz sand 0.06 - 0.3 mm
25 pbw quartz sand 0.3 - 0.8 mm
25 pbw quartz sand 0.6 - 1.2 mm
25 pbw quartz sand 2 - 4 mm

Note: The largest grain size should be a maximum 1/3 of the finished layer thickness. Dependent on the grain shape and application temperatures, the aggregates and the most suitable mix should be selected.

APPLICATION INFORMATION

Mixing Ratio

Part A : part B = 75 : 25 (by weight)

Consumption

Coating System	Product	Consumption
Moisture Barrier	1-2 x Sikafloor®-156	0.50 kg/m² (total)
Priming	1-2 x Sikafloor®-156	1-2 x 0.30 - 0.50 kg/m²
Levelling mortar fine (surface roughness < 1 mm)	1 pbw Sikafloor®-156 + 0.5 pbw quartz sand (0.06 - 0.3 mm) + 0.015pbw Extender T	1.4 kg/m²/mm
Levelling mortar medium (surface roughness up to 2 mm)	1 pbw Sikafloor®-156 + 1 pbw quartz sand (0.06 - 0.3 mm) + 0.015 Extender T	1.6 kg/m²/mm)
Bonding bridge	1- 2 x Sikafloor®-156	1- 2 x 0.3 - 0.5 kg/m²
Epoxy screed (15 - 20 mm layer thickness) / Repair Mortar	1 pbw Sikafloor-156 + 10 pbw quartz sand	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 or wastage etc.

Ambient Air Temperature

+10 °C min. / +30 °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

During laying and until Sikafloor®-156 has fully cured, the substrate and ambient temperatures shall be between +10 °C and +30 °C without and between +20 °C and +30 °C with underfloor heating.

Substrate Moisture Content

Permissible substrate moisture content without underfloor heating

For cement screeds	<6 % CM (up to 99% RH)
For anhydrite screeds	<0.5 % CM
For magnetite flooring	3–12 % CM (depending on the organic content)

Note: RH method, determine the moisture content of the substrate in accordance with BS 8203:2017.
To check the moisture content, use the “Rubber Mat Test”, according to ASTM. A polyethylene sheet of > 1x1 m in dimension shall be taped to the concrete surface. Leave the polyethylene sheet in place for > 24 hours prior to testing. This test allows for the detection of any condensed vapour transmissions.
Note: CM: carbid method, to determine the moisture content of the substrate. For all moisture contents, the quality of the substrates and surfaces, where applicable always follow the guidelines of the wood flooring manufacturer.

Pot Life

Temperature	Time
+10 °C	~ 60 minutes
+20 °C	~ 30 minutes
+30 °C	~ 15 minutes

Curing Time

Before applying solvent free products on Sikafloor®-156 allow:

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

Before applying solvent containing products on Sikafloor®-156 allow:

Substrate temperature	Minimum	Maximum
+10 °C	36 hours	6 days
+20 °C	24 hours	4 days
+30 °C	12 hours	2 days

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

Applied Product Ready for Use

Temperature	Foot traffic	Light traffic	Full cure
+10 °C	~ 24 hours	~ 5 days	~ 10 days
+20 °C	~ 12 hours	~ 3 days	~ 7 days
+30 °C	~ 6 hours	~ 2 days	~ 5 days

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

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 can be damp but must be free of standing water and free of all contaminants such as oil, grease, coatings and surface treatments etc. If in doubt, apply a test area first.
- Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment, thoroughly cleaned with an industrial vacuum to remove cement laitance and achieve an open textured surface.
- Anhydrite screeds, including flowable anhydrite screeds must be ground and thoroughly cleaned with an industrial vacuum shortly before coating.
- Broadcast mastic asphalt must be broadcasted to excess and thoroughly cleaned with an industrial vacuum.
- On fibre reinforced concrete any exposed fibers must be burnt off the 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.
- At least 50 % of the surface area must be cleared of residual adhesive (i.e. by grinding).
- 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®-156 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, 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®-156 by brush, roller or squeegee. Preferred application is by using a squeegee and then back-rolling crosswise.

Application	Coatings	Results in
Moisture barrier only	Minimum 1 x	Mirror like finish
Substrate consolidation only	Minimum 1 x	Good penetration
Adhesion promotion only	Minimum 1 x	Mirror like finish
Moisture barrier + substrate consolidation	Minimum 1 x	Mirror like finish
Moisture barrier + adhesion promotion	Minimum 2 x	Mirror like finish

Levelling mortar:

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

thickness.
Intermediate layer:
Sikafloor®-156 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®-156 by brush, roller or squeegee. Preferred application is by using a squeegee and then backrolling crosswise.
Epoxy 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.

FURTHER DOCUMENTS

- **Substrate quality & Preparation**
  Please refer to Sika Information Manual: "EVALUATION AND PREPARATION OF SURFACES FOR FLOORING SYSTEMS".
- **Application instructions**
  Please refer to Sika Information Manual: "MIXING & APPLICATION OF FLOORING SYSTEMS".
- **Maintenance**
  Please refer to "Sikafloor®- CLEANING REGIME".

LIMITATIONS

Please note:
- Do not apply Sikafloor®-156 on substrates with rising moisture or significant vapour pressure.
- If Sikafloor®-156 is left out for more than 36 hours, the surface must be thoroughly cleaned with a moist cleaning rag and checked for any defects before proceeding with over-coating.
- If Sika® Level or Sika® SCHÖNOX levelling products are to follow the layer of Sikafloor®-156 within the system build up, a second layer of Sikafloor®-156 must be fully broadcast with quartz sand (15–30 minutes after, at +20 °C). Begin broadcasting lightly and then to excess with quartz sand 0.3–0.8 mm. Alternatively SCHÖNOX SHP can be applied to the first layer of Sikafloor®-156 without broadcasting.
- Freshly applied Sikafloor®-156 should be protected from damp, condensation and water for at least 24 hours.
- Sikafloor®-156 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.
- These pinholes can be closed after a soft grinding by applying a scratch coat of Sikafloor-156 mixed with approx. 3 % of Extender T.

Tools:
Recommended supplier of tools:
PPW-Polyplan-Werkzeuge GmbH, Phone: +49 40/5597260, www.polyplan.com
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.

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.

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.

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.

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

According to the EU-Directive 2004/42, the maximum allowed content of VOC (Product category IIA / j type sb) 500 g/l (Limit 2010) for the ready to use product. The maximum content of **Sikafloor®-156** is < 500 g/l VOC for the ready to use product.

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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