

PRODUCT DATA SHEET

Sikafloor[®]-280

3-PART EPOXY MORTAR

PRODUCT DESCRIPTION

Sikafloor[®]-280 is a three part epoxy mortar, consisting of an epoxy binder and quartz sand with a maximum grain size of 1.2 mm. All components are prebatched in the correct mixing ratio.

"Total solid epoxy composition acc. to the test method Deutsche Bauchemie e.V. (German Association for construction chemicals)"

USES

- Epoxy screeds with a layer thickness of 2–10 mm
- For heavy mechanical wear (e.g. metal industry, print shops, loading ramps)
- Repair mortar for floors and civil structures (e.g. bridges etc.)
- Embedding of balustrades and nosings etc.

CHARACTERISTICS / ADVANTAGES

- Very high abrasion resistance
- Very high impact resistance
- High compressive and flexural strength
- High bond strength
- Supplied in prebatched units
- Efficient and easy application

APPROVALS / STANDARDS

- Synthetic resin screed material according to EN 13813:2002, Declaration of Performance 02 08 01 02 007 0000001 1008, certified by notified factory production control certification body 0921, certificate of conformity of the factory production control 2017, 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 0000001 1008, certified by notified factory production control certification body 0921, certificate of conformity of the factory production control 2017, and provided with the CE marking.
- Suitable as a repair material for concrete roads acc. German standard MEB-3. Report No. P 1658, Polymer Institut, Germany.

PRODUCT INFORMATION

Chemical Base	Epoxy	
Packaging	Part A:	1.875 kg containers
	Part B:	0.625 kg containers
	Part A+B:	2.5 kg unipacks
	Part C:	25 kg bag
	Part A+B+C:	27.5 kg ready to mix units
Appearance / Colour	Resin - part A	transparent, liquid
	Hardener - part B	brownish, liquid
	Quartz sand - part C	grey, powder
	Grey	

Shelf Life	24 months from date of production		
Storage Conditions	The product must be stored 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	~1.40 kg/l	
All Density values at +23 °C.			
Solid content by weight	~100 %		
Solid content by volume	~100 %		

TECHNICAL INFORMATION

Compressive Strength	~80 N/mm ² (7 days / +23 °C)	(EN 196-1)
Flexural Strength	~30 N/mm ² (7 days / +23 °C / 50 %)	(EN 196-1)
Tensile Adhesion Strength	>1.5 N/mm ² (failure in concrete)	(ISO 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.).		
*No simultaneous chemical and mechanical exposure		

APPLICATION INFORMATION

Mixing Ratio	Part A : part B : part C= 7.5 : 2.5 : 100 (by weight)		
Consumption	~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.		
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	+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).		
Pot Life	Temperature	Time	
	+10 °C	~60 minutes	
	+20 °C	~40 minutes	
	+30 °C	~25 minutes	
Curing Time	Before applying Sikafloor®-156/-161 on Sikafloor®-280 allow:		
	Substrate temperature	Minimum	Maximum
	+10 °C	24 hours	4 days
	+20 °C	14 hours	2 days
	+30 °C	8 hours	1 day

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®-280 (part A + B) must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

For Sikafloor®-280 (part A + B + C) mortars use a forced action mixer of rotating pan, paddle or tough type.

APPLICATION

Prior to application, confirm substrate moisture content, relative humidity and dew point.

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

For strongly absorbent substrates apply a primer coat. The primer has to be cured tack free before the bonding bridge is applied.

Primer:

Make sure that a continuous, pore free film covers the substrate.

Apply Sikafloor®-156/-161 by brush, roller or squeegee.

Preferred application is by using a squeegee and then backrolling crosswise.

Bonding bridge / impregnation:

Make sure that a continuous, pore free film covers the substrate.

Apply Sikafloor®-156/-161 by brush, roller or squeegee.

Preferred application is by using a squeegee and then backrolling crosswise.

Mortar screed:

Apply the mortar screed evenly on the tacky bonding bridge, using levelling boards and guide rails as necessary. After a short waiting time compact and finish the mortar with a trowel or Teflon coated power float (usually 20 - 90 rpm). Power floats can only be used on mortar layers > 8 mm.

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.

LIMITATIONS

- Do not apply Sikafloor®-280 on substrates with rising moisture.
- Freshly applied Sikafloor®-280 should be protected from damp, condensation and water for at least 24 hours.
- Sikafloor®-280 mortar screed is not suitable for frequent or permanent contact with water unless sealed.
- For exact colour matching, ensure the quartz sand in each area has the same colour (sand is a natural product and colour differences can occur).
- 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.

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/CE, the maximum allowed content of VOC (product category IIA / x type xx) is 500 g/l (Limits 2010) for the ready to use product.

The maximum content of Sikafloor®-280 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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