

PRODUCT DATA SHEET

Sikafloor[®]-280

3-part epoxy mortar

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

Sikafloor[®]-280 may only be used by experienced professionals.

- 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.

PRODUCT INFORMATION

Composition	Epoxy										
Packaging	<table border="1"> <tr> <td>Part A:</td> <td>1.875 kg containers</td> </tr> <tr> <td>Part B:</td> <td>0.625 kg containers</td> </tr> <tr> <td>Part A+B:</td> <td>2.5 kg unipacks</td> </tr> <tr> <td>Part C:</td> <td>25 kg bag</td> </tr> <tr> <td>Part A+B+C:</td> <td>27.5 kg ready to mix units</td> </tr> </table>	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
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Appearance and colour	Resin - part A: transparent, liquid Hardener - part B: brownish, liquid Quartz sand - part C: grey, powder RAL 7032										
Shelf life	24 months from date of production.										
Storage conditions	The product should be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5°C										

FEATURES

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

CERTIFICATES AND TEST REPORTS

Suitable as a repair material for concrete roads acc. German standard MEB-3. Report No. P 1658, Polymer Institut, Germany.

and +30°C.

Density	Part A: ~ 1.10 kg/l Part B: ~ 1.02 kg/l Mixed mortar: ~ 2.2 kg/l All Density values at +23°C.	DIN EN ISO 2811-1
Solid content	Resin: ~ 100% (by volume) / ~ 100% (by weight)	

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% r.h.)	EN 196-1								
Tear strength	> 1.5 N/mm ² (failure in concrete)	EN 4624								
Temperature resistance	<table><tr><td>Exposure*</td><td>Dry heat</td></tr><tr><td>Permanent</td><td>+50°C</td></tr><tr><td>Short term max. 7 d</td><td>+80°C</td></tr><tr><td>Short trem max. 12 h</td><td>+100°C</td></tr></table> <p>Short-term moist/wet heat* up to +80°C where exposure is only occasional (i.e. during steam cleaning etc.). *No simultaneous chemical and mechanical exposure.</p>	Exposure*	Dry heat	Permanent	+50°C	Short term max. 7 d	+80°C	Short trem max. 12 h	+100°C	
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SYSTEM INFORMATION

System	<p>Mortar Screed (2 - 10 mm layer thickness) / Repair Mortar: Primer*: 1-2 x Sikafloor-156 Bonding bridge: 1 x Sikafloor-156 Screed: 1 x Sikafloor-280</p> <p><u>Coated mortar Screed (2 - 10 mm layer thickness) recommended for chemical exposure:</u> Primer*: 1-2 x Sikafloor-156 Bonding bridge: 1 x Sikafloor-156 Screed: 1 x Sikafloor-280 Impregnation: 1x Sikafloor-156 + Extender T Coating: e.g. Sikafloor-261 / -381 N / -390</p> <p>* only necessary for strongly absorbent substrates.</p>
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APPLICATION INFORMATION

Mixing ratio	Part A : part B : part C = 7.5 : 2.5 : 100 (by weight)																		
Consumption	<table><tr><td>Primer</td><td></td></tr><tr><td>Product</td><td>Consumption</td></tr><tr><td>1-2 x Sikafloor-156</td><td>1-2 x 0.3 - 0.5 kg/m²</td></tr><tr><td>Bonding bridge</td><td></td></tr><tr><td>Product</td><td>Consumption</td></tr><tr><td>Sikafloor-156</td><td>0.3 - 0.5 kg/m²</td></tr><tr><td>Mortar Screed (2 - 10 mm layer thickness)</td><td></td></tr><tr><td>Product</td><td>Consumption</td></tr><tr><td>Sikafloor-280</td><td>2.2 kg/m²/mm</td></tr></table>	Primer		Product	Consumption	1-2 x Sikafloor-156	1-2 x 0.3 - 0.5 kg/m ²	Bonding bridge		Product	Consumption	Sikafloor-156	0.3 - 0.5 kg/m ²	Mortar Screed (2 - 10 mm layer thickness)		Product	Consumption	Sikafloor-280	2.2 kg/m ² /mm
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Impregnation

Product	Consumption
1 pbw Sikafloor-156 + 0.015 pbw Extender T	0.3 - 0.8 kg/m ²

Coating

Product	Consumption
e.g. Sikafloor-261 / -381 N / -390	Refer to product data sheet

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and 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	<table><thead><tr><th>Temperature</th><th>Time</th></tr></thead><tbody><tr><td>+10°C</td><td>~ 60 minutes</td></tr><tr><td>+20°C</td><td>~ 40 minutes</td></tr><tr><td>+30°C</td><td>~ 25 minutes</td></tr></tbody></table>	Temperature	Time	+10°C	~ 60 minutes	+20°C	~ 40 minutes	+30°C	~ 25 minutes
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Note: Times are approximate and will be affected by changing ambient conditions.

Curing time	Before applying Sikafloor-156 on Sikafloor-280 allow: <table><thead><tr><th>Substrate temperature</th><th>Minimum</th><th>Maximum</th></tr></thead><tbody><tr><td>+10°C</td><td>24 hours</td><td>4 days</td></tr><tr><td>+20°C</td><td>14 hours</td><td>2 days</td></tr><tr><td>+30°C</td><td>8 hours</td><td>1 day</td></tr></tbody></table>	Substrate temperature	Minimum	Maximum	+10°C	24 hours	4 days	+20°C	14 hours	2 days	+30°C	8 hours	1 day
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Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

Applied product ready for use	Note: Times are approximate and will be affected by changing ambient conditions. <table><thead><tr><th>Temperature</th><th>Foot traffic</th><th>Light traffic</th><th>Full cure</th></tr></thead><tbody><tr><td>+10°C</td><td>24 hours</td><td>~ 5 days</td><td>~ 10 days</td></tr><tr><td>+20°C</td><td>14 hours</td><td>~ 3 days</td><td>~ 7 days</td></tr><tr><td>+30°C</td><td>8 hours</td><td>~ 2 days</td><td>~ 5 days</td></tr></tbody></table>	Temperature	Foot traffic	Light traffic	Full cure	+10°C	24 hours	~ 5 days	~ 10 days	+20°C	14 hours	~ 3 days	~ 7 days	+30°C	8 hours	~ 2 days	~ 5 days
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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.

IMPORTANT CONSIDERATIONS

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.

Tools

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.

ECOLOGY, HEALTH AND SAFETY

CE MARK

See the Declaration of Performance

HEALTH AND SAFETY INFORMATION

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet 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**) is 500 g/l (Limit 2010) for the ready to use product. The maximum content of Sikafloor-280 is < 500 g/l VOC for the ready to use product.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

Substrate quality:

Concrete substrates 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.

If in doubt, apply a test area first.

Substrate preparation:

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.

MIXING

Prior to mixing, stir part A mechanically. When all of part B has been added to part A, mix continuously for 2 minutes until a uniform mix has been achieved. When parts A and B have been mixed, the quartz sand or if required the Extender T must be mixed with part A and B for a further 2 minutes until a uniform mix has again been achieved. Over mixing must be avoided to minimise air entrapment.

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, r.h. and dew point. If > 4% pbw moisture content, Sikafloor EpoCem may be applied as a T.M.B. (temporary moisture barrier) 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 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 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 EQUIPMENT

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

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.

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 Deutschland GmbH

Kornwestheimer Straße 103 - 107
D - 70439 Stuttgart
Telefon: 0711/8009-0
Telefax: 0711/8009-321
E-Mail: info@de.sika.com
www.sika.de

Wolman Wood and Fire Protection GmbH

Dr.-Wolman-Str. 31 – 33
76547 Sinzheim
Telefon: +49 7221 800-0
info.wolman@wolman.de
www.wolman.de



PRODUCT DATA SHEET

Sikafloor®-280

August 2024, Version 05.01
020811020020000039

Sikafloor-280-en-DE-(08-2024)-5-1.pdf