

PRODUCT DATA SHEET

Sikafloor®-280

3-PART EPOXY RESIN FLOORING MORTAR

PRODUCT DESCRIPTION

Sikafloor®-280 is a 3-part epoxy, high strength, thixotropic, resin flooring mortar for screeds, coving and detailing. It has high mechanical strengths, good abrasion and impact resistance. Layer thickness: 2–10 mm. Internal and external use.

USES

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

- Epoxy screeds with a layer thickness of 2–10 mm
- Heavy mechanical wear conditions (e.g. metal industry, print shops, loading ramps)
- Repair mortar for floors, bridge and car park decks, concrete roads

CHARACTERISTICS / ADVANTAGES

- Very high abrasion resistance
- Very high impact resistance
- High compressive and flexural strengths
- High adhesion to substrate
- Supplied in prebatched units

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 1504-2 - Surface protection product for concrete - Coating
- CE Marking and Declaration of Performance to EN 13813 - Resin screed material for internal use in buildings
- Suitability as a Repair Material for Concrete Roads MEB-3, Sikafloor®-280, Polymer Institut, Test report No. P 1658

PRODUCT INFORMATION

Chemical Base	Epoxy	
Packaging	Part A	1.875 kg container
	Part B	0.625 kg container
	Part A+B	2.5 kg unipacks
	Part C	25 kg bag
	Part A+B+C	27.5 kg ready to mix unit
Refer to current price list for packaging variations		
Appearance / Colour	Final appearance: Semi- gloss finish	
	Resin - Part A	transparent, liquid
	Hardener - Part B	brownish, liquid
	Quartz sand - Part C	coloured, powder
Standard colours: ~RAL 7032		
Colour deviations may occur due to filling with quartz sand.		
When product is exposed to direct sunlight, there may be some discolouration and colour variation, this has no influence on the function and performance of the coating.		

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. Always refer to packaging.	
Density	Part A	~1,10 kg/l (DIN EN ISO 2811-1)
	Part B	~1,02 kg/l
	Resin mixed	~1,40 kg/l
	All Density values at +23 °C.	
Solid content by weight	~100 %	
Solid content by volume	~100 %	
Product Declaration	EN 1504-2: Surface protection product for concrete - Coating EN 13813: Resin screed material for internal use in buildings	

TECHNICAL INFORMATION

Abrasion Resistance	Refer to Polymer Institut, Test report No. P 1658. Also includes impact resistance values.	
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	

SYSTEM INFORMATION

Systems	Refer to the following System Data Sheets: ▪ Sikafloor® MultiDur ES-43
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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. For detailed information, refer to the System Data Sheets: Sikafloor® MultiDur ES-43.
Layer Thickness	~2 min. / 10 mm max. Additional layer thickness's can be applied in successive layers once each layer has cooled and hardened sufficiently. The surface of the freshly applied intermediate layers must be scratched to form a key for subsequent layers.
Ambient Air Temperature	+10 °C min. / +30 °C max.
Relative Air Humidity	80 % max.
Dew Point	Beware of condensation. The substrate and uncured applied floor material must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the floor finish.

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

Substrate Temperature	+10 °C min. / +30 °C max.		
Substrate Moisture Content	≤ 4 % parts by weight 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	
	Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.		
Curing Time	Before applying Sikafloor®-150/-151 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

Cementitious substrates (concrete / screed) must be structurally sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum tensile strength of 1.5 N/mm².

Substrates must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.

Cementitious substrates must be prepared mechanically using suitable abrasive blast cleaning or planing / scarifying equipment to remove cement laitance and achieve an open textured gripping surface profile.

Weak cementitious substrates must be removed and surface defects such as blow holes and voids must be fully exposed.

All dust, loose and friable material must be completely removed from all surfaces before application of the product and associated system products, preferably by vacuum extraction equipment.

MIXING

Prior to mixing all parts, mix separately part A (resin) using a low speed single paddle electric stirrer (300 - 400 rpm). Add Part B (hardener) to Part A and mix Part A + B continuously for 3 minutes until a uniform mix has been achieved. When parts A and B have been mixed. Using a double paddle (axis) electric stirrer (>700W), pan type revolving or forced action mixer or other suitable equipment (free fall mixers must not be used). Gradually add Part C quartz sand and if required Extender T. 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 smooth consistent mix. Excessive mixing must be avoided to minimise air entrainment. 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.

Mix full units only. Mixing time for A+B+C = 5 minutes.

APPLICATION

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

Prior to application, confirm substrate moisture content, relative air humidity, dew point, substrate, air and product temperatures. If moisture content > 4% parts by weight, Sikafloor® EpoCem® may be applied as a Temporary Moisture Barrier (T.M.B.) system.

PRIMER APPLICATION

Porous substrates

Pour mixed Sikafloor®-150/-151 primer onto the prepared substrate and apply by brush, roller or squeegee. Ensure a continuous, pore free coat covers the substrate.

Confirm primer waiting /overcoating time has been achieved before applying subsequent products. Refer to individual primer Product Data Sheet.

Bonding bridge / impregnation:

Pour mixed Sikafloor®-150 primer onto the prepared substrate and apply by brush, roller or squeegee. Ensure a continuous, pore free coat covers the substrate. Confirm primer waiting /overcoating time has been achieved before applying subsequent products. Refer to individual primer Product Data Sheet.

Screed mortar:

Apply the screed mortar evenly onto the tacky bonding bridge, using levelling boards, guide rails as necessary and suitable application tools. After a short waiting time and allowing mortar to start hardening, compact and finish the screed with a trowel or teflon coated power float (usually 20–90 rpm). Power floats must only be used on mortar layers > 8 mm.

Repair mortar:

The repair mortar must be applied onto the tacky bonding bridge between the minimum and maximum layer thicknesses without the formation of voids. Where layers are to be built up, each layer must be al-

lowed to harden before applying subsequent layers “wet on wet”.

CLEANING OF TOOLS

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

FURTHER DOCUMENTS

- System Data Sheet: Sikafloor® MultiDur ES-43

LIMITATIONS

- Freshly applied Sikafloor®-280 must be protected from damp, condensation and direct water contact (rain) for at least 24 hours.
- Sikafloor®-280 screed mortar is not suitable for frequent or permanent contact with water unless sealed.
- For exact colour matching, ensure the quartz sand in each area is used from the same control batch numbers. (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 indentations in the resin.
- If temporary 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.
- Do not apply Sikafloor®-280 on substrates with rising moisture.

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.

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Product Data Sheet

Sikafloor®-280
February 2020, Version 03.01
020811020020000039

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 / j type SB) 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.

Sikafloor-280-en-GB-(02-2020)-3-1.pdf