BUILDING TRUST

PRODUCT DATA SHEET

Sikafloor®-91

3-PART EPOXY SCREED

PRODUCT DESCRIPTION

Sikafloor®-91 is a coloured 3-component solvent free epoxy resin based mortar for patching and screeding industrial floors subject to heavy traffic. All components are prebatched in the correct mixing ratio.

USES

Sikafloor®-91 may only be used by experienced professionals.
Epoxy screeds with a layer thickness of 3–40 mm in areas requiring resistance to heavy mechanical wear such as:

- Warehouses
- Machine shops
- Workshops
- Chemical plants
- Water treatment plants
- Storage areas
- Plant rooms
- Breweries
- Pharmaceutical plants
- Steel works

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

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 properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5 °C and +30 °C.

Density			(DIN EN ISO 2811-1)
	Part A:	~ 1.10 kg/l at +23°C	
	Part B:	~ 1.02 kg/l at +23°C	
	Mixed mortar:	~ 2.2 kg/l at +23°C	

Solid content by weight	~100 %
Solid content by volume	~100 %

TECHNICAL INFORMATION

Compressive Strength	~ 80 N/mm² (7 days / +23°C)	(EN 196-1)
Flexural Strength	~ 40 N/mm² (7 days / +23°C / 50% R.H.)	(EN 196-1)
Tensile Adhesion Strength	> 1.5 N/mm² (failure in concrete)	(EN 4624)

Thermal Resistance

Exposure	Dry Heat
Permament	+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 (i.e. during 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	~2.2kg/m²/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 mortar must be at least 3ºC above the dew point to reduce the risk of condensation or blooming on the mortar finish.
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

Temperatures	Time
+10 °C	~ 60 minutes
+20 °C	~ 40 minutes
+30 °C	~ 25 minutes

Curing Time

Before applying Sikafloor coating on Sikafloor®-91 allow:

Substrate Temperature	Minimum	Maximum
+10 °C	24 hours	4 days
+20 °C	14 hours	2 days
+30 °C	8 hours	1 day

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

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

- The 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.
- 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.
- 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. 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 entrapment.

Mixing Tools
Sikafloor®-91 (part A + B) must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.
For Sikafloor®-91 (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®-91 on substrates with rising moisture.
- Freshly applied Sikafloor®-280 should be protected from damp, condensation and water for at least 24 hours.
- Sikafloor®-91 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 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.

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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