

Product Data Sheet
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Sikafloor®-91 SLS

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3-component epoxy self-smoothing screed

Product Description Sikafloor®-91 SLS is a three part self smoothing screed based on epoxy resin. The product is formulated for application thickness 2-5 mm.

Uses As a self smoothing for:

- Levelling layer under epoxy, polyurethane and PMMA floor coatings / screeds, tiles, sheet floors, carpet or wooden floors.
- Levelling or patching horizontal concrete surfaces in new work or repairs, particularly in aggressive chemical environments

Characteristics / Advantages

- Economical
- Fast and easy application
- Excellent adhesion to substrate
- High strength
- High chemical resistance
- Good levelling properties
- Solvent free
- Seamless

Product Data

Form

Appearance / Colours

Resin - Part A:	clear, liquid
Hardener - Part B:	light yellow, liquid
Filler- Part C:	off white, powder

Packaging

Part A:	4 kg x 2 containers
Part B:	2 kg x 2 containers
Part C:	13 kg x 2 bag
Part A+B+C:	19 kg x 2 ready to mix units

Storage

Storage Conditions / Shelf-Life 12 months from date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +35°C.

Technical Data

Chemical Base Epoxy

Density

Part A:	~ 1.17 kg/l
Part B:	~ 1.03 kg/l
Part C:	~1.28 kg/l (bulk density)

Filled resin ~ 1.80 kg/l
All density values at +27°C.



Solid Content	~ 100% (by volume) / ~ 100% (by weight)		
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Mechanical / Physical Properties

Compressive Strength	~ 58 N/mm ²	(14 days / +27°C)	(According to IS 9162-1979)
Flexural Strength	~ 32 N/mm ²	(14 days / +27°C)	(According to IS 9162-1979)
Bond Strength	> 1.5 N/mm ² (failure in concrete)		(According to ISO 4624)
Shore D Hardness	76	(7 days / +27°C)	(According to DIN 53 505)
Abrasion Resistance	~ 0.3 mm thickness loss	(According to IS 1237 – 1980 and IS 9162 - 1979)	

Resistance

Chemical Resistance Resistant to many chemicals. Please ask for a detailed chemical resistance table.

Thermal Resistance

Exposure*	Dry heat
Permanent	+50°C

*No simultaneous chemical and mechanical exposure.

System Information

System Structure *Levelling/ Intermediate Layer*
 Layer thickness: 2-4 mm
 Primer: 1x Sikafloor®-93 EC Primer / Sikafloor®-94 Primer / Sikafloor®-161
 Levelling layer: 1x Sikafloor®-91 SLS

Application Details

Consumption / Dosage	Coating System	Product	Consumption
	Primer	Sikafloor®-93 EC Primer / Sikafloor®-94 Primer / Sikafloor®-161	0.2- 0.4 kg/m ²
	Levelling/ Intermediate layer (film thickness: 2-4mm)	Sikafloor®-91 SLS	1.8 kg/m ² /mm

Substrate Quality The concrete substrate must be sound and of sufficient compressive strength (minimum 20 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, scarifying or grinding 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®, Sikadui® 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.

Application Conditions / Limitations

Substrate Temperature	+8°C min. / +35°C max.
Ambient Temperature	+8°C min. / +35°C max.
Substrate Moisture Content	≤ 4% moisture content. Test method: Sika® Tramex meter, CM - measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene-sheet).
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.

Application Instructions

Mixing	Part A : Part B : Part C = 2 : 1: 6.5 (by weight)
Mixing Time	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, add part C 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®-91 SLS must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.
Application Method / Tools	Prior to application, confirm substrate moisture content, r.h. and dew point. If > 4% moisture content, Sikafloor® EpoCem® may be applied as a Temporary Moisture Barrier (TMB) system. Sikafloor®-91 SLS is poured, spread evenly by means of a serrated trowel. Roll immediately in two directions with a spiked roller to ensure even thickness and to remove entrapped air.
Cleaning of Tools	Clean all tools and application equipment with Sika® Colma Cleaner or any suitable thinner immediately after use. Hardened and/or cured material can only be removed mechanically.

Potlife 19 kg mass

Temperatures	Time
+10°C	~ 50 minutes
+20°C	~ 25 minutes
+30°C	~ 20 minutes

Waiting Time / Overcoating

Before applying Sikafloor®-91SLS on Sikafloor®-93 EC Primer / Sikafloor®-94 Primer / Sikafloor®-161 allow:

Substrate temperature	Minimum	Maximum
+10°C	24 hours	3 days
+20°C	12 hours	2 days
+30°C	6 hours	1 day

Before over coating on Sikafloor®-91SLS allow:

Substrate temperature	Minimum	Maximum
+10°C	30 hours	3 days
+20°C	24 hours	2 days
+30°C	16 hours	1 day

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

Notes on Application / Limitations

Do not apply Sikafloor®-91SLS on substrates with rising moisture.

Do not blind the primer.

Freshly applied Sikafloor®-91SLS must be protected from damp, condensation and water for at least 24 hours.

Avoid puddles on the surface with the primer.

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 CO₂ and H₂O water vapour, which may adversely affect the finish. For heating use only electric powered warm air blower systems.

Curing Details

Applied Product ready for use

Temperature	Foot traffic	Light traffic	Full cure
+30°C	~ 24 hours	~ 2 days	~ 7 days

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

Cleaning / Maintenance

Methods

When Sikafloor®-91SLS is used as underlay / screed, a seal coat of the Sikafloor range with suitable cleaning capabilities is advisable. Remove dirt using brush and / or vacuum. Do not use wet cleaning methods until the product is fully cured.

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.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet 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.

