

Product Data Sheet
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Sikafloor®-91

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3-component heavy duty epoxy resin floor screed

Product Description	Sikafloor®-91 is a three component solvent-free floor screed based on epoxy resins containing special coarse aggregate. When applied to concrete surface, it provides a non-skid high strength flooring capable of withstanding extremely high loading and wear at 4- 15 mm thickness.	
Uses	<ul style="list-style-type: none"> ■ Levelling layer under epoxy, polyurethane and PMMA floor coatings / screeds. ■ Product can be used for patching and repairing industrial floors 	
Characteristics / Advantages	<ul style="list-style-type: none"> ■ High impact resistance ■ High abrasion resistance ■ High mechanical strength ■ Can be power floated ■ Good chemical resistance ■ Economical ■ Solvent-free ■ Slip resistant surface possible 	
Product Data		
Form		
Appearance / Colours	Resin - Part A:	clear, liquid
	Hardener - Part B:	yellowish, liquid
	Filler - Part C:	off white, powder
Packaging	Part A:	1.00kg x 2 containers
	Part B:	0.50 kg x 2 containers
	Part C:	12.50 kg x 2 bag
	Part A+B+C:	14.00 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:	~1.50 kg/l (bulk density)
	Filled resin	~ 2.1 kg/l
	All density values at +27°C.	
Solid Content	~ 100% (by volume) / ~ 100% (by weight)	



Mechanical / Physical Properties

Compressive Strength	~ 60 N/mm ²	(14 days / +27°C)	(According to IS 9162 - 1979)
Flexural Strength	~ 30 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	~1.35 mm thickness loss (average)		(According to IS 1237- 1980)
Chemical Resistance	Resistant to many chemicals. Please consult Sika® representative.		

Thermal Resistance

Exposure*	Dry heat
Permanent	+50°C

*No simultaneous chemical and mechanical exposure.

System Information

System Structure	<i>Mortar screed approx. 4-15 mm layer thickness:</i> Primer: 1 x Sikafloor®-94 Primer / Sikafloor®-161 Screed: 1 x Sikafloor®-91
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Application Details

Consumption / Dosage

Coating System	Product	Consumption
Primer	Sikafloor®-94 Primer / Sikafloor®-161	0.3 - 0.5 kg/m ²
Mortar screed (Film thickness ~ 5.0 mm)	Sikafloor®-91	11 kg/m ²

These figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.

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®, 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.

Application Conditions / Limitations

Substrate Temperature	+8°C min. / +35°C max.
Ambient Temperature	+8°C min. / +35°C max.

Substrate Moisture Content	<p>≤ 4% moisture content.</p> <p>Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method.</p> <p>No rising moisture according to ASTM (Polyethylene-sheet).</p>								
Relative Air Humidity	80% r.h. max.								
Dew Point	<p>Beware of condensation!</p> <p>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.</p>								
Application Instructions									
Mixing	Part A : Part B : Part C = 2 : 1 : 25 (by weight)								
Mixing Time	<p>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.</p> <p>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.</p> <p>To ensure thorough mixing pour materials into another container and mix again to achieve a consistent mix.</p> <p>Over mixing must be avoided to minimise air entrainment.</p>								
Mixing Tools	Sikafloor®-91 must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.								
Application Method / Tools	<p>Prior to application, confirm substrate moisture content, r.h. and dew point.</p> <p>If > 4% moisture content, Sikafloor® EpoCem® may be applied as a Temporary Moisture Barrier (TMB) system.</p> <p><i>Mortar screed:</i></p> <p>Apply mortar layer evenly on the still tacky, primer of Sikafloor®-94 Primer / Sikafloor®-161, using levelling boards and guide rails as necessary. After a short waiting time compact and smoothen with a trowel or Teflon coated power float (usually 20 - 90 rpm).</p>								
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	<p>14 kg mass</p> <table border="1"> <thead> <tr> <th>Temperatures</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>+10°C</td> <td>~ 50 minutes</td> </tr> <tr> <td>+20°C</td> <td>~ 25 minutes</td> </tr> <tr> <td>+30°C</td> <td>~ 20 minutes</td> </tr> </tbody> </table>	Temperatures	Time	+10°C	~ 50 minutes	+20°C	~ 25 minutes	+30°C	~ 20 minutes
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Waiting Time / Overcoating	<p>Before applying Sikafloor®-91 on Sikafloor®-94 Primer / Sikafloor®-161 allow:</p> <p>Sikafloor®-91 should be applied on tacky primer only.</p>								
Notes on Application / Limitations	<p>Do not apply Sikafloor®-91 on substrates with rising moisture.</p> <p>Do not blind the primer.</p> <p>Freshly applied Sikafloor®-91 must be protected from damp, condensation and water for at least 24 hours.</p> <p>Avoid puddles on the surface with the primer.</p> <p>The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.</p> <p>Under certain conditions, underfloor heating or high ambient temperatures combined with high point loading, may lead to imprints in the resin.</p> <p>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.</p>								

Curing Details

Applied Product ready for use

Temperature	Foot traffic	Light traffic	Full cure
+10°C	~ 30 hours	~ 5 days	~ 10 days
+20°C	~ 24 hours	~ 3 days	~ 7 days
+30°C	~ 16 hours	~ 2 days	~ 5 days

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

Cleaning / Maintenance

Methods

When Sikafloor®-91 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.

