

Product Data Sheet
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Sikagard®-63/1

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2-part epoxy protective coating

Product Description Sikagard®-63/1 is a low solvent, high build thixotropic epoxy resin based chemical resistant protective coating.

- Uses**
- Abrasion resistant universal coating material designed for normal to highly aggressive chemical environments
 - For use on concrete, cementitious mortars and rendering, epoxy mortars (including Sika® EpoCem®) and steel
 - For protective lining of storage tanks, silos and bund areas
 - Used for protection of concrete in offshore and marine installation
 - As an anti-corrosion coating in food and beverage processing plants, sewage works, agricultural, chemical and pharmaceutical plants, bottling plants etc.
 - Also used as part of glass fibre reinforced self supporting linings with crack bridging properties for bund areas and storage tanks

- Characteristics / Advantages**
- Very good chemical and mechanical resistance
 - Liquid proof (according to the products chemical resistance table)
 - Easy application

Product Data

Form

Appearance / Colours Resin - Part A: coloured, liquid
Hardener - Part B: off white, liquid

Available in -RAL 7003 (Moss grey) and 7043 (Traffic grey B).

Under direct sun radiation there may be some discolouration and colour deviation; this has no influence to the function and performance of the coating.

Packaging Part A: 2 kg x 2 containers
Part B: 2 kg x 2 containers
Part A+B: 4 kg 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: ~ 1.30 kg/l Part B: ~ 1.46 kg/l Mixed resin: ~ 1.39 kg/l All density values at +27°C.
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Solid Content	~ 70% (by weight)
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Mechanical / Physical Properties

Bond Strength	<i>Substrate:</i> Concrete: > 1.5 N/mm ² (failure in concrete) (According to DIN EN 13892-8) Steel (SA 2.5): ~ 24 N/mm ² (According to DIN EN 24624)
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Resistance

Chemical Resistance	Test medium	T	24 h	3 d	7 d	42 d	90 d	6 m
	Acetone	30°C	A	A	A	A	A	A
	Ethanol 96%	30°C	A	A	A	A	A	A
	Acetic acid 5%	30°C	A	A	A	D	D	D
	Lactic acid 10%	30°C	C	C	C			
	NaOH 50%	30°C	A	A	A	A	A	A
	Nitric acid 10%	30°C	A	C	C	C	C	
	Hydrochloric acid 10%	30°C	A	A	AD	AD	AD	D
	Sulphuric acid 10%	30°C	A	C	C	C	C	C

*acc. IS 4631-1968

A = resistant

D = resistant but with discolouration and/or loss of gloss

C = not resistant

Thermal Resistance

Exposure*	Dry heat
Permanent	+50°C

*No simultaneous chemical and mechanical exposure.

System Information

System Structure

Roller coating (concrete surface):

Primer*: 1 x Sikagard[®]-67/ Sikafloor[®]-94 Primer / Sikafloor[®]-161

Coating: 2 - 3 x Sikagard[®]-63/1

Lamination (1.5 - 2.0 mm):

Primer*: 1 x Sikafloor[®]-94 Primer / Sikafloor[®]-161

1st lamination layer: 1 x Sikagard[®]-63/1 + glass fibre fabric

2nd lamination layer: 1 x Sikagard[®]-63/1 + glass fibre fabric

Seal coat: 1 x Sikagard[®]-63/1

*optional, only recommended for use on strongly absorbent surfaces.

Application Details

Consumption / Dosage

Coating System	Product	Consumption
Scrap coat (optional)	Sikadur®-31	Refer to PDS
	Sikafloor®-94 Primer + Silica flour / quartz sand	
Primer	Sikagard®-67 / Sikafloor®-94 Primer / Sikafloor®-161	0.2 - 0.4 kg/m ²
Roller coating	Sikagard®-63/1	0.3-0.5 kg/m ² per coat, dependent on substrate condition and required coating thickness
Lamination	Sikagard®-63/1	1 st layer: 0.7 kg/m ² 2 nd layer: 0.6 kg/m ² Seal coat: 0.4 kg/m ²
	Glass fiber fabric	~0.3 kg/m ² per layer

Notes: For a theoretical dry film thickness of 100 microns (0.1 mm) approx. 0.15 kg/m² must be applied.

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 ≤ 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 coating must be at least 3°C above dew point to reduce the risk of condensation or blooming on the coating surface.

Application Instructions

Mixing	Part A : Part B = 1 : 1 (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>To ensure thorough mixing pour the material into another container and mix again to achieve a consistent mix.</p> <p>Over mixing must be avoided to minimise air entrapment.</p> <p>After mixing allow the material to stand for 3 minutes.</p>
Mixing Tools	Sikagard®-63/1 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® Mortars or Sikagard®-720 EpoCem should be applied as a T.M.B. (temporary moisture barrier) system.</p> <p><i>Coating:</i> Sikagard®-63/1, can be applied with a stiff brush or a short piled, solvent resistant roller.</p> <p><i>Lamination:</i> The fabric should be embedded in the 'wet' Sikagard®-63/1 using a special profiled roller.</p>
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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.
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Potlife	4 kg mass								
	<table border="1"><thead><tr><th>Temperatures</th><th>Time</th></tr></thead><tbody><tr><td>+10°C</td><td>~ 180 minutes</td></tr><tr><td>+20°C</td><td>~ 90 minutes</td></tr><tr><td>+30°C</td><td>~ 60 minutes</td></tr></tbody></table>	Temperatures	Time	+10°C	~ 180 minutes	+20°C	~ 90 minutes	+30°C	~ 60 minutes
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Waiting Time / Overcoating	Before applying Sikagard®-63/1 on Sikafloor®-94 Primer / Sikafloor®-161:												
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Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

Notes on Application / Limitations

Do not apply Sikagard®-63/1 on substrates with rising moisture.

Freshly applied Sikagard®-63/1 must be protected from damp, condensation and water for at least 24 hours.

Avoid puddles on the surface with the primer.

Sag resistance: > 200 µm (wet film thickness).

The incorrect assessment and treatment of cracks may lead to a reduced service life and reflective cracking.

For exact colour matching, ensure Sikagard®-63/1 is applied from the same control batch numbers.

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	Full cure
+10°C	~ 36 hours	~ 15 days
+20°C	~ 24 hours	~ 9 days
+30°C	~ 20 hours	~ 7 days

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

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.

