

PRODUCT DATA SHEET

Sikagard®-63

2-part epoxy protective coating

DESCRIPTION

Sikagard®-63 is a solvent free, high build thixotropic epoxy resin based protective coating with high chemical resistance.

USES

- Abrasion resistant universal coating material designed for normal to highly aggressive chemical environments
- Chemical resistant protective layer on concrete, cementitious mortars and rendering, epoxy mortars (including Sika® EpoCem®) and steel
- For protective lining of storage tanks, silos and bund areas

- 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
- Solvent free

PRODUCT INFORMATION

Composition	Epoxy resin
Packaging	Part A: 3 kg containers Part B: 1 kg containers Part A+B: 4 kg ready to mix units
Shelf life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging.
Storage conditions	Store in dry conditions at temperatures between +5 °C and +35 °C.
Appearance and colour	Resin - Part A: coloured, liquid Hardener - Part B: brownish, liquid Available in ~RAL 7003 (Moss grey), 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.
Density	Part A : 1.6 kg/l Part B : 1.11 kg/l Mixed resin: ~ 1.5 kg/l All density values at +27°C.

TECHNICAL INFORMATION

Tensile adhesion strength	Substrate:	
	Concrete:> 1.5 N/mm ² (failure in concrete)	(DIN EN 13892-8)
	Steel (SA 2.5):~ 24 N/mm ²	(DIN EN 24624)

Temperature resistance	Exposure*	Dry heat
	Permanent	+60°C

*No simultaneous chemical and mechanical exposure.

Chemical resistance	Title 1	Title 2				
	Test medium	Temp.	24h	7d	42 d	6 m
	Acetone	30°C	A	A	A	A
	Ethanol 96%	30°C	A	A	A	A
	Formic acid 10%	30°C	A	A	A	A
	Acetic acid 20%	30°C	A	A	D	D
	Water	30°C	A	A	A	A
	NaOH 50%	30°C	A	A	A	A
	Nitric acid 20%	30°C	D	C		
	Hydrochloric acid 37%	30°C	D	D	D	D
	Sulphuric acid 50%	30°C	A	D	D	D

*acc. IS4631-1968

A = resistant, C = not resistant, D = resistant but with discolouration and/or loss of gloss

SYSTEM INFORMATION

Systems	Roller coating (concrete surface):	
	Primer*:	1 x Sikagard®-67/ Sikafloor®-93 EC Primer / Sikafloor®-161 HC
	Coating:	2 - 3 x Sikagard®-63
	Lamination (1.5 - 2.0 mm):	
	Primer*:	1 x Sikafloor®-93 EC Primer / Sikafloor®-161 HC
	1st lamination layer:	1 x Sikagard®-63 + glass fibre fabric
	2nd lamination layer:	1 x Sikagard®-63 + glass fibre fabric
	Seal coat:	1 x Sikagard®-63

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

APPLICATION INFORMATION

Mixing ratio	Part A : Part B = 3: 1 (by weight)
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Consumption

Coating System	Product	Consumption
Scratch coat (optional)	Sikadur®-31 / Sikadur®-41 Sikafloor®-161 HC + Silica flour / quartz sand	Refer to PDS
Primer	Sikagard®-67 / Sikafloor®-161 HC	0.2 - 0.4 kg/m ²
Roller coating	Sikagard®-63	0.3-0.5 kg/m ² per coat, dependent on substrate condition and required coating thickness
Lamination	Sikagard®-63 + Glass fiber fabric	1st layer: 0.7 kg/m ² 2nd layer: 0.6 kg/m ² Seal coat: 0.4 kg/m ² ~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.

Ambient air temperature	+8°C min. / +35 °C max.
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Relative air humidity	80% r.h. max.
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Dew point	Beware of condensation!
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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.

Substrate temperature	+8°C min. / +35 °C max.
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Substrate moisture content	< 4% moisture content.
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Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method.

No rising moisture according to ASTM (Polyethylene-sheet).

Pot Life	4 kg mass	
	Temperatures	Time
	+10°C	~ 90 minutes
	+20°C	~ 45 minutes
	+30°C	~ 35 minutes

Curing time	Temperature	Foot Traffic	Full cure
	+10°C	~ 24 hours	~ 15 days
	+20°C	~ 18 hours	~ 9 days
	+30°C	~ 12 hours	~ 7 days

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

Waiting time to overcoating	Before applying Sikagard®-63 on Sikafloor®-161 HC:		
	Substrate Temperature	Minimum	Maximum
	+10°C	24 hours	4 days
	+20°C	12 hours	2 days
	+30°C	6 hours	1 day
	Before applying Sikagard®-63 on Sikagard®-63		
	Substrate Temperature	Minimum	Maximum
	+10°C	9 hours	3 days
	+20°C	5 hours	2 days
	+30°C	4 hours	1 day

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

BASIS OF PRODUCT DATA

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.

IMPORTANT CONSIDERATIONS

- Do not apply Sikagard®-63 on substrates with rising moisture.
- Freshly applied Sikagard®-63 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 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.

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 Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

Sikagard®-63 must be thoroughly mixed using a low speed electric stirrer (300 - 400 rpm) or other suitable equipment.

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.

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.

To ensure thorough mixing pour the material into another container and mix again to achieve a consistent mix.

Over mixing must be avoided to minimize air entrapment.

After mixing allow the material to stand for 3 minutes.

APPLICATION

Prior to application, confirm substrate moisture content, r.h. and dew point.

If > 4% moisture content, Sikafloor® EpoCem® Mortars or Sikagard®-720 EpoCem should be applied as a Temporary Moisture Barrier (TMB) system.

Coating: Sikagard®-63, can be applied with a stiff brush or a short piled, solvent resistant roller.

Lamination: The fabric should be embedded in the 'wet' Sikagard®-63 using a special profiled roller.

CLEANING OF EQUIPMENT

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.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product 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.

SIKA BANGLADESH LIMITED

Skylark MAK 84, 8th floor
House No. 84, Block D, Road No. 11
Banani, Dhaka-1213, Bangladesh
Phone 1: +88 01313095060
Phone 2: +88 01313095061
ind.sika.com

Product Data Sheet

Sikagard®-63
September 2022, Version 01.02
020606010020000003

Sikagard-63-en-BD-(09-2022)-1-2.pdf

