

PRODUCT DATA SHEET

Sikagard®-63 N

2-PART EPOXY PROTECTIVE COATING

DESCRIPTION

Sikagard®-63 N is a total solid, two part epoxy resin coating.

USES

- Abrasion resistant universal coating material designed for normal to aggressive chemical environments
- For use on concrete, cementitious mortars and renderings, epoxy mortars (including Sika®-EpoCem), steel and aluminium
- For protective lining of storage tanks, silos and bund areas
- Anti-corrosion coating in food and beverage processing plants, sewage works, agricultural, chemical and pharmaceutical plants, bottling plants etc.

CHARACTERISTICS / ADVANTAGES

- Very good chemical and mechanical resistance
- Liquid proof (according to the products chemical resistance table)
- Easy application
- Solvent free

ENVIRONMENTAL INFORMATION

According to the EU-Directive 2004/42, the maximum allowed content of VOC (Product category IIA / j type Sb) is 140 g/l (limit 2010) for the ready to use product. The maximum content of Sikagard®-63 N is < 140 g/l VOC for the ready to use product.

APPROVALS / STANDARDS

2-part, solvent free, chemical resistant coloured coating according to CE-1504-2; 2004, DoP 02 06 06 01 003 0 000001 1008, certified by Factory Production Control Body No. 0921, certificate 0921-CPR-2017, provided with the CE-mark.

PRODUCT INFORMATION

Chemical Base	Epoxy resin	
Packaging	Part A:	8.70 kg countainers
	Part B:	1.3 kg drums
	Part A + B:	10.0 kg ready to mix units
Appearance / Colour	Resin - Part A:	Coloured, liquid
	Hardener - Part B:	Transparent, liquid
	Pebble grey (~ RAL 7032). Additional colour shades on request.	
	Under sun radiation it may come to discolouration and colour deviation; this has no influence to the function of the coating.	
Shelf Life	12 month from date of production if stored properly in undamaged sealed containers	
Storage Conditions	Stored properly in dry conditions at temperatures between +5°C and +30°C. Protected from direct sunlight.	

Density	Mixed resin ~ 1.35 kg/L	(EN ISO 2811-1)
Solid Content	~100 % (by volume), ~100 % (by weight)	

TECHNICAL INFORMATION

Tensile Adhesion Strength	~1.5 N/mm ² to concrete ~15 N/mm ² to steel (SA 2.5) ~10 N/mm ² to Aluminum	(ISO 4624) (EN 24624) (EN 24624)						
Chemical Resistance	For further information please contact Sika Technical Service.							
Thermal Resistance	<table border="1"> <thead> <tr> <th>Exposure</th> <th>Dry heat</th> </tr> </thead> <tbody> <tr> <td>Permanent</td> <td>+40 °C</td> </tr> <tr> <td>max. 3 days</td> <td>+60 °C</td> </tr> </tbody> </table> <p>Short-term humid heat* up to +80°C where exposure is only occasional (steam cleaning etc.). *No simultaneous chemical load.</p>	Exposure	Dry heat	Permanent	+40 °C	max. 3 days	+60 °C	
Exposure	Dry heat							
Permanent	+40 °C							
max. 3 days	+60 °C							
Diffusion Resistance to Water Vapour	μH ₂ O ~ 100 000	(EN ISO 7783-1)						
Thermal Expansion Coefficient	~75 x 10 ⁻⁶ per °K (temperature range: -10 °C to +40 °C)							

SYSTEM INFORMATION

System Structure	Roller coating:	
	Primer:	1 x Sikafloor®-156 or Sikafloor®-161
	Coating:	2 - 3 x Sikagard®-63 N
	With rendering:	
	Scratch coat:	Sikagard®-720 EpoCem
	Levelling layer:	Sikagard®-720 EpoCem
	Primer:	1 x Sikafloor®-156 or Sikafloor®-161
	Coating:	2 - 3 x Sikagard®-63 N

APPLICATION INFORMATION

Mixing Ratio	Part A : Part B = 87 : 13 by weight		
Consumption	Coating system	Product	Consumption
	Rendering (optional)		
	Scratch coat	Sikagard®-720 EpoCem	~2kg/m ² per mm thickness
	Levelling layer	Sikagard®-720 EpoCem	~2kg/m ² per mm thickness
	Primer	Sikafloor®-156 or Sikafloor®-161	0.3 - 0.4 kg/m ²
	Roller coating	Sikagard®-63 N	0.1 - 0.2 kg/m ² per coat, dependent on substrate condition and required coating thickness

Notes:

Sikagard®-720 EpoCem can be applied in a range from 0.5 mm to 3 mm thickness per layer.

For a theoretical dry film thickness of 100 microns (0.1 mm) of Sikagard®-63 N approx. 0.15 kg/m² must be applied taking in consideration the roughness of the concrete substrate.

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

Layer Thickness	~ 0.1 mm per layer
Ambient Air Temperature	+10 °C min, +30 °C max

Relative Air Humidity	< 80 %	
Substrate Temperature	+10 °C min, +30 °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 the dew point to reduce the risk of condensation or blooming on the floor finish.	
Pot Life	Temperature	Time
	+10 °C	~30 min.
	+20 °C	~20 min.
	+30 °C	~10 min.
Waiting Time / Overcoating	Before applying Sikagard®-63 N on Sikafloor®-156:	
	Substrate	Minimum Maximum
	+10 °C	24 hours 4 days
	+20 °C	16 hours 2 days
	+30 °C	12 hours 1 day
	Before applying Sikagard®-63 N on Sikagard®-63 N:	
	Substrate	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.	

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

The concrete substrate 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.

SUBSTRATE PREPARATION

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 Sikagard®, Sikafloor®, SikaDur® and Sika MonoTop® 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.

Steel Substrate

must be prepared by blast cleaning to Sa 2 ½ (ISO 8501-1) or SSPC-SP 10. All weld splatter has to be removed totally, joints and welds must be grinded in accordance with EN 14879-1. An average surface profile Rz > 50µm must be achieved. After blast cleaning remove all dust dirt and blasting material. In order to maintain the surface conditions after blast cleaning air-conditioning is recommended.

Aluminum Surface

must be prepared by sweep-blasting. An average surface profile Rz > 50µm must be achieved, the substrate has to be free from contaminants detrimental to adhesion, preferably by high pressure water jetting prior of sweep blasting.

MIXING TIME

Prior to mixing stir Part A mechanically. When all of Part B has been added to Part A continuously mix for 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 reduce air entrainment. After mixing allow the material to stand for 3 minutes.

MIXING TOOLS

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

APPLICATION

Prior to application, confirm substrate moisture content, r.h. and dew point. If > 4% moisture content Sikagard®-720 EpoCem should be applied as a T.M.B. (temporary moisture barrier) system.

Coating:

Sikagard®-63 N can be applied with a stiff brush, a short piled, solvent resistant roller or by airless spray.

CLEANING OF TOOLS

Clean all tools and application equipment with Thinner C immediately after use. Hardened/cured material can only be mechanically removed.

LIMITATIONS

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

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

If substrate moisture content is > 4%, Sikafloor® EpoCem® may be applied as a T.M.B. (temporary moisture barrier) system.

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 N 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.

For spray application the use of protective health & safety equipment is mandatory!

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.

Tools

Recommended Supplier of Tools:

PPW-Polyplan-Werkzeuge GmbH, Phone: +49 40/5597260, www.polyplan.com.

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.

LOCAL RESTRICTIONS

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

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.

DIRECTIVE 2004/42/CE - LIMITATION OF EMISSIONS OF VOC

According to the EU-Directive 2004/42, the maximum allowed content of VOC (Product category IIA / j type Sb) is 140 g/l (limit 2010) for the ready to use product.

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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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