

PRODUCT DATA SHEET

Sikagard®-1825

(formerly MProtect 1825)

High chemical resistance, high-build phenol novolac epoxy resin protective coating

DESCRIPTION

Sikagard®-1825 is a two-component, high-build phenol novolac epoxy resin coating with excellent resistance to various chemicals, specifically developed to protect concrete.

USES

For the internal protection of concrete tanks containing various chemicals, oils, and fuels — particularly in oil refineries, paper mills, power stations, garages, hospitals, sugar refineries, aircraft hangars, laboratories, and sewage or wastewater treatment facilities, as well as most other liquid containment areas.
(For professional use only)

FEATURES

- High chemical resistance
- Easy application by brush, roller, or spray
- High-build coating
- Suitable for use in anti-slip finishing systems
- Solvent free
- Non-toxic once cured
- Hygienic and easy to clean
- High-gloss, ultra-dense surface

CERTIFICATES AND TEST REPORTS

- CE Marking and Declaration of Performance to EN 1504-2 - Surface protection product for concrete - Coating

PRODUCT INFORMATION

Composition	Epoxy resin				
Packaging	Sikagard®-1825 is available in 5.2 kg kits consisting of <table><tr><td>Part A</td><td>3.68 kg pail</td></tr><tr><td>Part B</td><td>1.52 kg pail</td></tr></table>	Part A	3.68 kg pail	Part B	1.52 kg pail
Part A	3.68 kg pail				
Part B	1.52 kg pail				
Colour	Grey				
Shelf life	12 months from the date of production when stored under the conditions specified below.				
Storage conditions	Sikagard®-1825 must be stored properly in original, unopened and undamaged sealed packaging, in dry conditions at temperatures between +5 °C and +30 °C. Protect from direct sunlight and freezing.				
Density	~1.3 kg/L (mixed, at +25 °C)				
Solid content by volume	> 98 %				

TECHNICAL INFORMATION

Shore D Hardness	> 90	(EN ISO 868)																				
Abrasion resistance	950 mg	(EN ISO 5470-1)																				
Resistance to impact	Class II: > 10 Nm	(EN ISO 6272-1)																				
Tensile adhesion strength	> 3.5 MPa to concrete	(EN 1542)																				
Reaction to fire	D-s2,d0	(EN 13501-1)																				
Chemical resistance	Sikagard®-1825 is resistant to intermittent spillages of the chemicals listed below. The temperature and concentration of the chemical are critical parameters that directly influence the coating's chemical resistance performance and may vary depending on the service conditions. Therefore, for detailed information on resistance to other chemicals, contact durations, and performance under specific service conditions, please consult Sika Technical Services <table><tr><td>Sulfuric acid (98%)</td><td>Sulfuric acid (70%)</td><td>Sulfuric acid (10%)</td><td>Acetic acid (25%)</td></tr><tr><td>Citric acid (50%)</td><td>Lactic acid (20%)</td><td>Tartaric acid (50%)</td><td>Hydrochloric acid (37%)</td></tr><tr><td>Hydrofluoric acid (25%)</td><td>Nitric acid (30%)</td><td>Sodium hydroxide (50% solution)</td><td>Skydrol</td></tr><tr><td>MIBK</td><td>Xylene</td><td>Toluene</td><td>Diesel fuel</td></tr><tr><td>Jet fuel</td><td>Bleach</td><td>Sewage water</td><td>Sea water</td></tr></table>		Sulfuric acid (98%)	Sulfuric acid (70%)	Sulfuric acid (10%)	Acetic acid (25%)	Citric acid (50%)	Lactic acid (20%)	Tartaric acid (50%)	Hydrochloric acid (37%)	Hydrofluoric acid (25%)	Nitric acid (30%)	Sodium hydroxide (50% solution)	Skydrol	MIBK	Xylene	Toluene	Diesel fuel	Jet fuel	Bleach	Sewage water	Sea water
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MIBK	Xylene	Toluene	Diesel fuel																			
Jet fuel	Bleach	Sewage water	Sea water																			
Permeability to water vapour	S _d > 50 m (Class III)	(EN ISO 7783)																				
Water penetration after capillary absorption	< 0.01 kg/(m ² ·h ^{0.5})	(EN 1062-3)																				

APPLICATION INFORMATION

Mixing ratio	Sikagard®-1825 is supplied in kits with the two parts in the correct mixing ratio.
Consumption	- Sikagard®-1825 must be applied in a minimum of two layers, with an approximate consumption of 0.3–0.4 kg/m² per layer. - A total dry film thickness (DFT) of approximately 400–500 microns is required to ensure the declared performance of Sikagard®-1825. - One 5.2 kg kit covers approximately 7.4 m² (based on the average achievable layer thickness).
Material temperature	+15 °C to +30 °C
Ambient air temperature	+10 °C to +35 °C
Relative air humidity	< 80 %
Dew point	The temperature of the contact surfaces must be at least 3 °C above the ambient dew point temperature.
Substrate temperature	+10 °C to +30 °C
Substrate moisture content	< 4 %
Pot Life	~ 30 minutes (at +23 °C)
Waiting time to overcoating	16 hours (at +23 °C)
Applied product ready for use	Fully cured after 7 days (at +23 °C).

BASIS OF PRODUCT DATA

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

IMPORTANT CONSIDERATIONS

IMPORTANT: Sikagard®-1825 is for professional use only!

Temperature Considerations:

Wait for the appropriate ambient and substrate temperature if it is less than +10 °C or more than +35 °C. Also, applications should not be made in very hot, rainy, or windy weather.

Adverse Weather Applications:

In cold or hot weather, condition the packages of Sikagard®-1825 in a temperature range of +20 °C to +25 °C to optimize workability.

Epoxy Resin Systems:

The working and reaction time of epoxy resin-based systems depend on environmental conditions such as ground temperature and relative humidity. Low temperatures slow down the chemical reaction, prolonging working and coating times. Conversely, high temperatures accelerate the reaction. Ensure that environment and ground temperatures do not fall below the minimum allowed value for proper curing.

Exterior Surface Applications:

When applying to exterior surfaces, protect them from sun, wind, frost, or rain during the initial 24 hours.

Water Tanks and Movement:

For water tanks where movement is expected, consider using crack-bridging Sika solutions.

UV Resistance:

Sikagard®-1825 has limited UV resistance.

Spraying Applications:

In case of spray applications, consult Technical Service for guidance.

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Concrete / Mineral substrates

- The substrate must be sound and of sufficient compressive strength with a minimum pull-off strength of 1.5 MPa.
- The substrate must be clean, dry, and free of all contaminants such as dirt, oil, grease, coatings, and surface treatments, etc.
- 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 leveling must be carried out using appropriate Sika products.
- All dust, loose, and friable material must be completely removed from the surface before application of the product, preferably by brush or vacuum cleaning.

Steel

- Remove all previous surface treatments and corrosion products by sand/shot blasting to SA 2½ finish or to bright metal finish.
- Application of Sikagard®-1825 should be executed as soon as the steel is prepared to avoid surface rusting.

MIXING

- Sikagard®-1825 is supplied in pre-measured kits containing the two components in the correct mixing ratio.
- The material temperature should preferably be between +15 °C and +25 °C prior to mixing.
- Add Part B completely into Part A, ensuring no material remains in the Part B container. Scrape the sides of both containers thoroughly to ensure complete transfer and full chemical reaction.
- Mix the combined components for 3 minutes using a slow-speed electric drill fitted with a wing-type mixing paddle at 300–400 rpm, until a fully homogeneous colour and consistency are achieved. Keep the mixing paddle below the surface at all times to prevent air entrapment.
- **Do not mix by hand.**
- **Do not add solvent.**
- No additions or omissions are permitted; use the product exactly as supplied.

APPLICATION

- Sikagard®-1825 can be applied using good-quality rollers, short-haired brushes, or suitable airless spray equipment. The coating must be applied in a minimum of two layers, with an approximate consumption of 0.30–0.40 kg/m² per layer, depending on substrate profile and desired final thickness.
- Additional layers may be required under severe exposure conditions or when an extended service life is required.

Priming

Depending on the substrate condition, Sikagard® P-770 or epoxy-based Sika® Primer, and Sikafloor® primers may be used. For detailed information, please consult Sika Technical Services.

Inspection Between Layers

- Before applying each new layer, the surface must be inspected for pinholes or surface defects.
- Each subsequent layer must be applied within the specified overcoating interval of the previous layer.
- If the overcoating interval is exceeded, the surface must be solvent-wiped, then mechanically abraded to create an adequate mechanical key, followed by another solvent wipe prior to overcoating.

Glass Fibre Reinforcement (Optional)

For enhanced mechanical and crack-bridging properties, Sikagard®-1825 can be used in combination with

glass fibre reinforcement fabric (Please consult Sika Technical Services.).

- The glass fabric is embedded into the second layer while still wet.
- A third layer of Sikagard®-1825 must then be applied as the final finish.
- Multiple layers of glass fabric may be used to achieve DFT values exceeding 1.0 mm, when required.

Non-Slip Finishes (Horizontal Surfaces)

To obtain a non-slip finish:

- Apply the first layer of Sikagard®-1825.
- While still tacky, broadcast Sika quartz aggregate at approx. 600 g/m².
- Apply the final topcoat by roller or airless spray at 300–500 µm WFT.

Airless Spray Application

When applying Sikagard®-1825 by airless spray:

- Use a 45:1 (or higher) ratio pump
- Minimum 9 mm diameter hoses

Important:

Due to the product's relatively short pot life, especially at elevated temperatures:

- Do not mix more than one kit at a time unless the spray system can discharge the material very rapidly (e.g., multiple spray guns).
- Large mixed volumes that cannot be sprayed immediately may gel prematurely.

CLEANING OF EQUIPMENT

Clean all tools with a suitable solvent-based cleaner immediately after use. Hardened and/or cured material can only be removed mechanically.

MAINTENANCE INSTRUCTIONS

- Where areas require overcoating due to damage, the affected surfaces must first be solvent-wiped, then mechanically abraded using a stiff rotary wire brush or coarse sandpaper to provide an adequate mechanical key. After abrasion, the surface must be solvent-wiped again.
- Any unsound or poorly bonded coating must be completely removed. The substrate shall then be prepared and overcoated following the same procedure as for new applications.

Note: Higher concentrations of mineral acids may cause surface matting and colour changes.

LOCAL RESTRICTIONS

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

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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ISO 9001, 14001 – TÜV
Sika MB Construction Chemicals LLC
Sika Construction Chemicals
for Manufacturing LLC
ISO 9001 – LMS
Sika MB LLC

All products are supplied under
a management system certified
to conform to the requirements
of the quality, environmental
and occupational health &
safety standards ISO 9001, ISO
14001 and ISO 45001.



Product Data Sheet
Sikagard®-1825
December 2025, Version 01.01
02030300000002048

Sikagard-1825-en-AE-(12-2025)-1-1.pdf

