

PRODUCT DATA SHEET

Sikagard®-180

(formerly MProtect 180)

Epoxy-based two-part protective coating for concrete and steel.

DESCRIPTION

Sikagard®-180 is a non toxic, solvent-free, high build Epoxy based protective coating, especially developed to protect concrete and steel.

USES

- For the internal protection of concrete tanks containing drinking water, certain chemicals, oil and fuel. Please contact Sika representative for further advice.
- As an impervious, resilient and chemically resistant floor or wall coating in food manufacturing plants, breweries, canning and bottling factories.
- As gas and vapor barrier coating resistant to chemical materials.
- As a protective and decorative coating in laboratories, abattoirs, etc.
- Other usage areas including oil refineries, paper mills, power stations, garages, hospitals, sugar refineries, hangars and most liquid containment areas.

CHARACTERISTICS / ADVANTAGES

- Provides a glossy surface finish.
- Forms a surface structure that prevents the formation of micro-organisms.
- Easy to clean and creates hygienic environments.
- Exhibits high mechanical strength.
- Demonstrates superior chemical resistance compared to standard epoxy coatings.
- Applies easily using brush, roller, or spraying methods.
- Ensures water impermeability.
- Solvent free.

APPROVALS / STANDARDS

- Inspection Report No. 00216/N6.24/DG from Quatest 3. Evaluation of product for uses in contact with drinking water according to NSF/ANSI/CAN 61:2021.

PRODUCT INFORMATION

Chemical base	Epoxy resin
Packaging	13.5 kg set consisting of two parts: ▪ Part A: 11.767 kg pail ▪ Part B: 1.733 kg can
Colour	Light grey. For other colour options, please contact Sika Sales Representative.
Shelf life	12 months from the production date under appropriate storing conditions.
Storage conditions	Sikagard®-180 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	~1.50 kg/liter (at +25°C)

Tensile Adhesion Strength	To concrete (at 7 days)	$\geq 1.50 \text{ N/mm}^2$	(EN 1542/ ASTM D4541)
	To steel (at 7 days)	$\geq 2.50 \text{ N/mm}^2$	

APPLICATION INFORMATION

Mixing ratio	Part A : Part B ~ 6.79 : 1 (by weight)
Consumption	Sikagard®-180 is recommended to be applied in two coats. The coverage is approximately 0.30-0.60 kg/m ² /coat. The dry film thickness (DFT) is around 400 microns. Note: These figures are theoretical and do not include any additional material required due to surface porosity, surface profile, variations in level or wastage, etc.
Pot Life	~40 minutes (at +25°C)
Curing time	Initial curing: ~24 hours (at +25 °C) Final curing: ~7 days (at +25 °C)

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 CONSIDERATION

- Temperature Considerations: Wait for the appropriate ambient and substrate temperature if it is less than +5°C or more than +30°C. Also, applications should not be made in very hot, rainy, or windy weather.
- Cold Weather Applications: In cold weather, condition the packages in a temperature range of +20°C to +25°C to optimize the 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.
- UV Resistance: Note that the Sikagard®-180 has limited UV resistance.
- Exterior Surface Applications: When applying to exterior surfaces, protect them from sun, wind, frost, or rain during the initial 24 hours.
- Spraying Applications: If you prefer spraying applications, consult Sika 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 QUALITY

- The concrete substrate must be at least 28 days old, be sound and of sufficient compressive strength with a minimum pull-off strength of 1.5 N/mm².
- The substrate must be clean, dry (recommended substrate moisture $\leq 4\%$), and free of all contaminants such as dirt, oil, grease, coatings, and surface treatments, etc.
- Steel surfaces have to be cleaned of all kinds of oil, grease, and rust traces that can weaken adherence, and a suitable surface has to be obtained by sand-blasting to SA 2 ½.

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 leveling must be carried out using appropriate products from the Sikadur®, Sikagard® and Sikafloor® range of materials.
- All dust, loose, and friable material must be completely removed from all surfaces before application of the product, preferably by brush or vacuum.
- Steel surface need to be sandblasted to SA 2 ½, where can not be sandblasted, cleaning must be made by an air scraper gun or dish wire brush. When the surface is greasy and oily, oil removers are used. Right after the cleaning, Sikagard®-180 must be applied. The corrosion of the surface has to be prevented.

MIXING

Sikagard®-180 has two parts in pails, produced according to the right mixing ratio. Material temperature should be between 15°C to 25°C before mixing. Part B

should be added into Part A without any remaining material in the pail. It should be mixed using a proper mixer (~300rpm) for polymer mixing. Mix the parts for at least 3 to 5 minutes to have a homogenous mixture. After waiting for 3 to 5 minutes, the mixture is then mixed again for approximately 30 seconds and becomes ready to use.

APPLICATION

Sikagard®-180 can be applied using either a roller or a spray machine. It is recommended to apply the second layer before the first one is fully cured. If the interval between layers exceeds ~24 hours, the surface must be roughened.

For re-coating due to damage or other reasons, prepare the surface by roughening it with a wire brush or emery paper to ensure adequate mechanical adhesion. Remove any damaged coating entirely, and apply the new coating as if it were the initial application."

CLEANING OF TOOLS

Clean all tools with suitable solvent 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 can always refer to the most recent version of the local Product Data Sheet for the relevant product, available on our website. The information in any downloaded version is valid as of the time of download.

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Product Data Sheet

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