

PRODUCT DATA SHEET

Sikagard®-180

(formerly MProtect 180)

Two-Part Epoxy-Based Protective Coating, solvent-free, non toxic

DESCRIPTION

Sikagard®-180 is a two-part epoxy resin product, comprising a pigmented base and a hardener, specifically formulated to protect concrete and steel. On mixing of the two components, it yields a high build, chemical resistant, protective coating, which cures to a semi glossy, ultra dense surface that is easily cleaned, hygienic and safe for contact with potable water.

USES

- For the internal protection of concrete tanks containing water, certain chemicals, oils and fuel.
- As an impervious, resilient and chemically resistant floor or wall coating in food manufacturing plants, breweries, canning and bottling factories.
- As a gas and vapour barrier.
- As a protective and decorative coating in laboratories, abattoirs, etc.
- Other usage areas include 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 microorganisms
- Easy to clean and creates hygienic environments
- Certified for use in contact with potable water
- Exhibits high mechanical strength
- Demonstrates superior chemical resistance compared to standard epoxy coatings
- Easy to apply for brush, roller or spray
- Impermeable to liquids
- Solvent free and non-toxic

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	Sikagard®-180 is supplied in kits (A + B) of 10 kg & 13.5 kg.
Colour	Light/White Grey
Shelf life	12 months after the date of production at below mentioned storage 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	~1.5 kg/l (mixed, at +25 °C)

TECHNICAL INFORMATION

Tensile Adhesion Strength	On dry concrete after 7 days	≥ 1.5 MPa	(EN 1542)
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CHEMICAL RESISTANCE	For chemical resistance data please contact Sika Technical Department.		
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APPLICATION INFORMATION

Mixing ratio	Sikagard®-180 is supplied in kits with the two parts in the correct mixing ratio.		
Consumption	Sikagard®-180 must be applied in minimum two layers with an approximate consumption of 0.3 – 0.4 kg/m² per layer. A total dry film thickness (DFT) of minimum 400 microns is required to insure stated performance of Sikagard®-180. Note: These consumptions are theoretical and can vary according to the absorption and roughness of the substrate. It is essential to carry out representative trials on site to evaluate the exact consumption.		
Product Temperature	+15 °C to +30 °C		
Ambient Air Temperature	+10 °C to +35 °C		
Relative Air Humidity	< 80 %		
Dew Point	Apply Sikagard®-180 at least 3 °C above the dew point.		
Substrate Temperature	+10 °C to +30 °C		
Substrate Moisture Content	≤ 4 %		
Pot Life	~ 40 minutes (at +25 °C)		
Waiting Time / Overcoating	12 - 18 hours (at +25 °C). Do not exceed 24 hours at +25 °C, or 16 hours at +35 °C.		
Applied Product Ready for Use	Initial cured after 24h (at +25 °C) Fully cured after 7 days (at +25 °C).		

SYSTEM INFORMATION

Dry film thickness	Sikagard®-180 must be applied in minimum two layers. A total dry film thickness (DFT) of minimum 400 microns is required to ensure stated performance of Sikagard®-180.
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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

IMPORTANT: Sikagard®-180 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®-180 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®-180 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®-180 should be executed as soon as the steel is prepared to avoid surface rusting.

MIXING

Sikagard®-180 is supplied in kits with the two parts in the correct mixing ratio. Material temperature should be preferably between +15 °C to +25 °C before mixing. Add Part B into Part A without any remaining material in the pail. Ensure to scrape the sides of the containers to ensure a complete reaction. Mix properly for 3 minutes with a slow-speed drill and wing style mixing paddle at 300-400 rpm until a homogeneous colour is achieved. Keep the paddle below the surface to avoid entrapping air. Do not mix by hand!

No additions or omissions are required. Do not add solvent!

APPLICATION

Sikagard®-180 can be applied using short nap roller, short-haired brushes or by airless spray. Apply in minimum two coats, each at a wet film thickness of minimum 200 to 250 microns, the second coat applied cross-wise to the first coat after it has dried (after 12 - 18 hours at 25°C).

If the interval between layers exceeds 24 hours at +25 °C, the surface must be roughened before the application of the second coat. Refer to waiting time for overcoating in the Application Information Section. 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 a suitable solvent-based cleaner 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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