

PRODUCT DATA SHEET

Sikagard[®]-180

(formerly MProtect 180)

Epoxy-Based Two-Part Protective Coating

DESCRIPTION

Sikagard[®]-180 is an epoxy-based two-part coating material developed especially to protect concrete

USES

- Concrete tanks
- Walls: as gas and vapor barrier coating resistant to chemical materials
- Power stations, sugar factories, hangars, and liquid storage areas in drinking water depots
- Petroleum refineries and paper factories*
- Beer, wine, and raisin industry*
- Soft drink and fruit juice industry*
- Milk, cheese, and yogurt industry*
- Tomato paste and canned food industry*
- Meat and fish industry*
- Medicine, paint, paper, battery, and fertilizer industry*
- Printing houses, kitchens, and laundries of hotels*
- Laboratories of hospitals, mess halls, wet volumes, and hygienic environments*

* Used only walls

CHARACTERISTICS / ADVANTAGES

- Provides a glossy surface finish
- Forms a surface structure that prevents the formation of microorganisms
- 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

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

PRODUCT INFORMATION

Chemical Base	Epoxy resin
Packaging	5 kg set consisting of two parts: <ul style="list-style-type: none">▪ Part A: 4.36 kg tin▪ Part B: 0.64 kg tin
Colour	RAL 7032 (pebble grey), for other colour options, please contact the technical department
Shelf Life	12 months after 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	1,05 kg/liter
Tensile Adhesion Strength	Adhesion Strength (EN 1542) to concrete (at 7 days) >2,50 N/mm ²
Dry film thickness	125-250 microns (in each layer)

APPLICATION INFORMATION

Mixing Ratio	Part A : Part B = 6,813 : 1 (by weight)
Consumption	Sikagard®-180 is recommended to be applied in two layers. The coverage is approximately 0.20-0.40 kg/m ² for each layer. A dry film thickness of around 125 to 250 microns is sufficient for Sikagard®-180.
Ambient Air Temperature	+5 °C Minimum +30 °C Maximum
Relative Air Humidity	< 80 %
Dew Point	Apply Sikagard®-180 at least 3 °C above the dew point
Substrate Temperature	+5 °C Minimum +30 °C Maximum
Substrate Moisture Content	< 4 %
Pot Life	45 minutes
Curing Time	Initial curing: 12 hours (at +23 °C) Final curing: 7 days (at +23 °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.

FURTHER DOCUMENTS

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.

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 SikaTop® WP 666 before applying Sikagard®-180.

UV Resistance:

Note that the Sikagard®-180 has limited UV resistance.

Spraying Applications:

If you prefer spraying applications, consult Technical Service for guidance.

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 (MSDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

- The substrate must be sound and of sufficient compressive strength 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.
- 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 Sikafloor®, Sikadur®, and

Sikagard® 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.

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 Thinner C 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 performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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Product Data Sheet

Sikagard®-180

October 2024, Version 03.02
02030300000002037

Sikagard-180-en-HK-(10-2024)-3-2.pdf