

## 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 and steel

### USES

- Metal or 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

### FEATURES

- 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

### CERTIFICATES AND TEST REPORTS

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

### PRODUCT INFORMATION

<b>Composition</b>	Epoxy resin
<b>Packaging</b>	5 kg set consisting of two parts: <ul style="list-style-type: none"> <li>▪ Part A: 4.36 kg tin</li> <li>▪ Part B: 0.64 kg tin</li> </ul>
<b>Colour</b>	RAL 7032 (pebble grey), for other colour options, please contact the technical department
<b>Shelf life</b>	12 months after the production date under appropriate 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** ~ 1.05 kg/L

## TECHNICAL INFORMATION

**Abrasion resistance** Pass  
72 mg/1000 cycles

**Resistance to impact** Pass at 6 J

**Flexural-strength** ≥ 21 N/mm<sup>2</sup> (ASTM C722)

**Tensile strength** ~ 15 N/mm<sup>2</sup> (ASTM C722)

**Shrinkage** ≤ 0.18% (ASTM C722)

**Tensile adhesion strength** ≥ 2.5 N/mm<sup>2</sup> (EN 1542)

**Chemical resistance** Sikagard®-180 is resistant to intermittent spillages of the following typically encountered chemicals:

<b>Chemical</b>	<b>Exposure</b>	<b>Result</b>
1% Sulfuric Acid	30 Days	Pass
10% Sulfuric Acid	14 Days	Pass
1% Sodium Hydroxide	30 Days	Pass
20% Sodium Hydroxide	14 Days	Pass
2% Acetic Acid	7 days	Pass
Organic Solvent		Pass
Hot Water (98 ± 2 °C)	24 Hours	Pass

Tests were carried out in accordance with ASTM C722 conducted at room temperature.

**Coefficient of friction** Pass (ASTM C722)

**Water absorption** Pass (ASTM C722)

**Contact with water** Sikagard®-180 is suitable for contact with potable water according to BS 6920.

## APPLICATION INFORMATION

**Consumption** Sikagard®-180 is recommended to be applied in two layers. The coverage is approximately 0.20-0.40 kg/m<sup>2</sup> for each layer.

**Pot Life** 45 minutes

**Curing time**  
Initial Curing 12 hours (at +23 °C)  
Final Curing 7 days (at +23 °C)

**Dry film thickness** 125-250 microns (in each layer)

## 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 CONSIDERATIONS

- Ensure that ambient and substrate temperatures are between 5°C and 30°C, and avoid applying the product in very hot, rainy, or windy conditions.

- In colder weather, condition the product packaging at +20°C to +25°C to maintain optimal workability.
- The working and curing times of epoxy resin-based systems are influenced by substrate temperature and humidity. Always make sure that both environment and substrate temperatures remain within the recommended values to achieve proper curing.
- When working on exterior surfaces, protect them from sun, wind, frost, or rain for the first 24 hours.
- For water tanks or structures subject to movement, consult Sika Technical Service for guidance.

- Sikagard®-180 has limited UV resistance; consider protective measures if exposure to sunlight is expected.
- For spray applications, consult Sika Technical Service to ensure correct application.

## 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.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

The substrate should be a smooth or semi-smooth sound surface such as concrete or metal. It is most important to ensure that thorough surface preparation is undertaken prior to application of the Sikagard®-180 coating.

#### CONCRETE

Ensure concrete is free from excessive laitance, grease, oil, curing compound, etc. Ensure concrete is sound, cutting back where necessary and making good using suitable Sika repair systems. Ensure all blow holes and surface imperfections are made good prior to application of the Sikagard®-180 coating. Ensure concrete is at least 28 days old. Contamination by oil, grease, fats etc. must be removed before other forms of preparation begin. Remove laitance to expose blow holes, by light grit blasting.

#### STEEL

All previous surface treatments should be removed taking the surface back to base metal. The base metal should be abraded and preferably shot blasted with grit, steel shot or proprietary abrasive. Where shot blasting is impractical pre-treatment may be carried out with pneumatic de-scaling guns, tap hammers, rotary wire brushes or by flame scaling. Cleaning with solvent or a strong detergent is advisable to ensure surface is free from grease etc. Do not allow surface to re-oxidise before application of Sikagard®-180.

### MIXING

Sikagard®-180 is supplied in two pre-weighed components, base and reactor. No additions or omissions are required. Add reactor contents to the base component and mix thoroughly for using a slow speed drill fitted with a suitable mixing paddle until a uniform streak free color is achieved.

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November 2025, Version 05.01  
02030300000002037

## APPLICATION

Sikagard®-180 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended to apply the second layer before the first one is fully cured. If the application is delayed more than 16 hours at 40°C or 36 hours at 20°C after the previous coat (the higher the ambient temperature, the shorter the maximum period), then the previous coat must be thoroughly abraded to give an adequate mechanical key and solvent wiped. Where areas need to be overcoated due to damage etc. it is important that the areas to be treated are well abraded using a stiff rotary wire brush or coarse sand paper to give an adequate key. Completely strip off any unsound coating and proceed with overcoating as for new work. Prior to the application of each coat the surface should be examined for signs of pin-holing, etc. Where pinholing is evident these should be filled using appropriate Sika solution. For airless spray application, contact Sika Technical Department for recommended procedures.

### CLEANING OF EQUIPMENT

Clean all tools and equipment with a suitable solvent immediately after use. Hardened 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.