

PRODUCT DATA SHEET

Sikagard[®]-190

(formerly MProtect 190)

A two component solvent free high build flexible epoxy polyurethane resin coating system

DESCRIPTION

Sikagard[®]-190 is a two-component, solvent-free, liquid epoxy-polyurethane resin. The system combines the high adhesion and chemical resistance of epoxy with the flexibility and water-resistant properties of polyurethane, providing a high-build, ultra-dense coating for the protection of concrete, other cementitious substrates, and metals against aggressive media commonly found in sewerage environments. The coating is hygienic, does not support bacterial growth, and exhibits high gloss, heavy-bodied, and seamless surface characteristics. The aliphatic polyurethane modification imparts flexibility and improved UV resistance, ensuring long-term durability and ease of cleaning.

USES

Sikagard[®]-190 is designed for demanding environments, including offshore, marine, and sewerage applications. It is particularly suitable for:

- Aeration tanks, clarifiers, and areas under permanent submerged conditions.
- Lining of tanks, pipes, and ducting.
- Coating concrete, asbestos cement, steel pipes, and non-ferrous metals.

The product provides heavy-duty, waterproof, flexible protection with excellent chemical resistance.

FEATURES

- No primer required.
- Moderate UV resistance.
- High-build coating.
- Easy application by brush, roller, or spray.
- Economical.
- Excellent chemical resistance to aqueous media.
- Solvent-free formulation.
- Broad-spectrum chemical resistance.
- Abrasion resistant.
- Seamless, hygienic finish.
- Pre-weighed components for ease of mixing.
- Long-term corrosion protection.

PRODUCT INFORMATION

Composition	Two component, non-toxic, pigmented solvent free epoxy polyurethane resin based compound.
Packaging	5 kg kit
Colour	Standard colors are light grey, dark grey, black, white, red, green and blue.
Shelf life	Up to 12 months shelf life when stored in recommended conditions.

Storage conditions Store at ambient temperatures, out of direct sunlight, in cool, dry warehouse conditions and clear of the ground on pallets protected from rainfall prior to application. No permanent storage over +30 °C.

Thickness Dry film thickness of 180 - 240 microns per coat

TECHNICAL INFORMATION

Compressive strength	63 N/mm ²	(ASTM C579)
Flexural-strength	51 N/mm ²	(ASTM C580-18)
Tensile strength	≥ 10 N/mm ²	(ASTM D412)
Shrinkage	0.48 mm	1.65% (ASTM C531-85)
Tensile adhesion strength	3 N/mm ²	(ASTM D4541)

APPLICATION INFORMATION

Pot Life 30 mins at 30°C

Tack free time approx. 4 hours at 35°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 DOCUMENTATION

Sikagard®-190 is resistant to intermittent spillages of the following typically encountered chemicals:

- Formaldehyde, 40% solution
- Sulphuric Acid, 50% solution
- Hydrochloric Acid, 50% solution
- Hydrochloric Acid 5% solution
- Lactic Acid, 50% solution
- Nitric Acid, 10% solution
- Sodium Hydroxide, 50% solution
- Diesel oil - Wine - Sea and brackish water
- Aviation hydraulic fuels (Skydrol)
- Vegetable oils

Tests were carried out in accordance with ASTM D 1308 conducted at room temperature and specimens were soaked in the solution for a period of 7 days.

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®-190 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®-190 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®-190.

MIXING

Sikagard®-190 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.

APPLICATION

Sikagard®-190 coating can be applied using good quality rollers or short haired brushes or by airless spray. It is recommended that Sikagard®-190 coating be applied in two coats of contrasting colors to ensure complete coverage.

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.

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.

AIRLESS SPRAY

For application by airless spray, use a 45:1 or higher ratio pump, minimum 9mm dia. hoses and HD tip 19-23 thou.

OVERCOATING

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.

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.

Sika Egypt

1st Industrial Zone (A)
Section #10, Block 13035
El Obour City, Egypt
TEL: +202 44810580
FAX: +202 44810459
egy.sika.com



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