

## PRODUCT DATA SHEET

# Sikagard<sup>®</sup>-190

(formerly MProtect 190)

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

### DESCRIPTION

Sikagard<sup>®</sup>-190 is a two-component solvent free, liquid epoxy polyurethane resin. The superior adhesion and chemical resistance of the epoxy resin, in combination with the flexibility of polyurethane and water resistant qualities of epoxy produce a system that will provide a high build, ultra dense coating to protect concrete, other cementitious substrates, and metal, against a wide range of aggressive media present in the sewerage environment. The coating will not support the growth of bacteria. Sikagard<sup>®</sup>-190 in appearance, is smooth, the unique formulation of the system with the aliphatic polyurethane modification exhibit some degree of the flexibility and better resistance to U.V. Sikagard<sup>®</sup>-190 is high gloss in finish, heavy bodied, ultra dense surface. Hygienic and easily cleaned. Standard colors are light grey, dark grey, black, white, red, green and blue.

### USES

Sikagard<sup>®</sup>-190 is particularly suitable for use in off-shore or marine environments and sewerage work applications such as aeration tanks clarifiers and permanent submerged condition where chemical resistance is of paramount importance. Sikagard<sup>®</sup>-190 is used to provide heavy-duty protective, waterproof, and flexible coating. Uses include the lining of tanks, pipes and ducting, coating concrete, asbestos cement, steel pipes and nonferrous metals.

### FEATURES

- No primer required.
- Limited UV resistance.
- High build coating.
- Easy application: brush, or roller.
- Economical.
- Excellent chemical resistance to aqueous media.
- Non-solvented.
- Excellent broad-spectrum chemical resistance.
- Abrasion resistant.
- Seamless finish.
- Pre-weighed components.
- Long-term corrosion protection.

### CERTIFICATES AND TEST REPORTS

BS 5493.

## PRODUCT INFORMATION

<b>Composition</b>	Two component, non-toxic, pigmented solvent less epoxy polyurethane resin based compound. D.F.T. 180 to 240 microns/ coat.
<b>Packaging</b>	supplied in 10 Liter.
<b>Shelf life</b>	12 months from production date
<b>Storage conditions</b>	Store under cover out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air conditioned environment. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Sika's Technical Services Department.
<b>Tensile strength</b>	9.6 N/mm <sup>2</sup> (BS 2782)
<b>Adhesion in peel</b>	2.2 N/mm <sup>2</sup>
<b>Shrinkage</b>	0.48mm (1.65%) (ASTM C531-85)
<b>Water absorption</b>	Nil % (ASTM C413-88)

## APPLICATION INFORMATION

<b>Pot Life</b>	30 mins at 30°C
<b>Tack free time</b>	approx. 4 hours at 35°C

### BASIS OF PRODUCT DATA

All technical data stated in this 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

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. For further information, refer to material safety data sheet.

### 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's Solutions SikaEmaco or Sikadur 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. 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 pin holing is evident these should be filled using Sikadur®-31 CF thixotropic epoxy resin filler. 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.

### 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.

## LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

## 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.

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### **Product Data Sheet**

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