BUILDING TRUST

PRODUCT DATA SHEET

Sikagard®-1817

(formerly MProtect 1817)

A non-toxic, flexible high build, epoxy polysulfide coating for wholesome water

DESCRIPTION

Sikagard®-1817 is a protective, flexible, high-build epoxy polysulfide resin coating specifically developed for applications where contact with potable water storage tanks or foodstuffs is envisaged. It protects concrete surfaces in liquid containment applications and process environments against oils, mild acids, and solvents, while offering a broad spectrum of chemical resistance.
Sikagard®-1817 cures to form a high-gloss finish, does not support bacterial growth, and has been tested in accordance with BS 6920, demonstrating its suitability for use in contact with potable water at temperatures up to +50 °C.

USES

- For the internal protection of concrete tanks containing potable water, other liquid containment structures containing certain chemicals, oils and fuel.
- As an impervious, resilient and chemically resistant floor or wall coating and as a gas and vapor barrier.
- As a protective and decorative coating in laboratories, abattoirs, etc. Other usage areas include oil refineries, paper mills, power stations, garages, hospitals and hangars.

Contact your Sika representative for further advice

FEATURES

- Non-toxic
- Tested for contact with potable water (BS 6920)
- Superior chemical resistance
- Waterproof and protective
- Suitable for immersion service
- Flexible with crack-bridging capability
- Good abrasion resistance
- High-build protective coating
- Excellent adhesion to concrete
- Durable
- Gas and vapour barrier
- Limited UV resistance
- Does not support microorganism growth
- Easy application by brush, roller or airless spray

CERTIFICATES AND TEST REPORTS

Tested in accordance with BS 6920 with results demonstrating suitability for contact with potable water up to +50 °C.

PRODUCT INFORMATION

Composition	Epoxy polysulphide
Packaging	12 kg kit (Part A + Part B) Part A - Pigmented base Part B - Hardener
Colour	Available in blue and light grey
Shelf life	12 months from production date

Storage conditions	Sikagard®-1817 shall be stored in dry conditions, where it is protected from direct sunlight and at temperatures between +5 °C and +30 °C.	
Density	Component A + B: ~ 1.2 kg/l (+23 °C)	(ASTM D 1475)
Solid content	~ 100 %	

TECHNICAL INFORMATION

Tensile strength	≥ 5.5 MPa at 7 days	(ASTM D 638)
Tensile adhesion strength	≥ 1.5 MPa or substrate failure	(ASTM D 4541)
Chemical resistance	Sikagard®-1817 is resistant to the various typically encountered chemicals: Ammonium hydroxide, Dilute Hydrochloric Acid, Dilute Phosphoric Acid, Sodium Chloride Saturated, Vegetable Oil, Sodium hydroxide, Deionized water, sea and brackish water. PLease Consult your local Sika office for project specific recommendations	
Water penetration under pressure	Nil at 5 bar pressure	(BS 12390-8)
Chloride ion permeability	Very low	(ASTM C1202)

APPLICATION INFORMATION

Consumption	As a guide: ~ 0.20 – 0.25 L/m²/coat, minimum two coats are recommended. Dry film thickness: 400 – 500 microns in two coats. Higher thickness shall be applied with multiple layers application. These figures are theoretical and do not include for any additional material required due to surface porosity, surface profile, variations in level and wastage, etc.
Ambient air temperature	+10 °C min. / +40 °C max.
Dew point	Beware of condensation! The substrate must be at least 3 °C above dew point to reduce the risk of condensation or blooming on the coating. Note: Low temperatures and high humidity conditions increase the probability of blooming.
Substrate temperature	+10 °C min. / +45 °C max.
Substrate moisture content	< 4 % pbw moisture content. Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method. No rising moisture according to ASTM D 4263 (Polyethylene-sheet).
Pot Life	~ 45 minutes at 25 °C Pot life is approximate and will be affected by changes in ambient conditions, particularly temperature and relative humidity.
Waiting time to overcoating	Minimum: ~ 9 hours / ~ 6 hours Maximum: ~ 24 hours / ~ 16 hours Temperature: 25 °C / 40 °C Times are approximate and will be affected by changes in ambient conditions, particularly temperature and relative humidity.

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. **These information shall be used for reference only. Field trials must be carried out to establish the project specific requirements.**

IMPORTANT CONSIDERATIONS

- Do not apply Sikagard®-1817 on substrates with rising moisture.
- Freshly applied Sikagard®-1817 should be protected from damp, condensation, and water for at least 24 hours.
- Do not thin under any circumstances. The addition of solvents, thinners, or other materials may adversely affect application characteristics, film build, cure, and performance properties.
- Apply on falling temperatures. If applied during rising

temperatures “pin holing” may occur from rising air.
- For potable water applications, local authorities / regulations need to be followed, especially regulations in terms of cleaning and disinfection procedures of the installed coating.
- When applied in wholesome water tanks, allow min. 14 days curing (at +25 ˚C) prior to use.

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

EQUIPMENT

For application by airless spray, use a 45:1 or higher ratio pump, minimum 9 mm dia. hoses and HD tip 19-23 thou. Prior to commencement of large-scale application, a site trial and mock-up shall be carried out using the proposed spray equipment, application parameters, and personnel. The trial area shall be assessed for material atomization, spray pattern consistency, film build, surface finish, adhesion, and achievement of the specified dry film thickness (DFT).

SUBSTRATE PREPARATION

All concrete surfaces shall be prepared by high-pressure water jetting, grit blasting, or other methods approved by the Engineer to provide a suitable mechanical key for optimum adhesion, as thorough surface preparation is essential to ensure the performance of the Sikagard®-1817 coating.
The concrete shall be sound, clean, and free from oil, grease, fats, curing compounds, laitance, dust, and other contaminants that may impair adhesion. Any contaminated areas shall be cleaned prior to commencement of surface preparation.
Remove laitance and other weak surface materials by light grit blasting or other approved methods to expose a sound substrate and reveal any blowholes or surface defects.
Any unsound concrete shall be cut back and repaired using suitable SikaEmaco®, Sika MonoTop®, or Sikadur® systems. Use of cementiouse repair mortar shall be considered for structural repair only.
Blowholes, voids, and other surface imperfections shall be made good using suitable Sikadur® soluitons prior to application of the coating. Concrete cracks must be treated using suitable Sika products and methodology. Please consult Sika technical deaprtment for recommendations.
Concrete shall be at least 28 days old, structurally sound, and have a moisture content below 4% before application.

On properly prepared, dense concrete surfaces, Sikagard®-1817 may be applied without a primer. Where the concrete is porous or highly absorbent, a primer coat of Sikafloor®-161 shall be applied and allowed to become tack-free prior to application of the Sikagard®-1817 coating.

MIXING

Sikagard®-1817 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. Transfer the mixed material to a clean container prior to the application.

APPLICATION

Sikagard®-1817 coating can be applied using good quality short haired rollers or paint brushes or by airless spray.
It is recommended that Sikagard®-1817 coating be applied in minimum two coats of contrasting colors to ensure complete coverage.
If application of the subsequent coat is delayed beyond 16 hours at +40 °C or 36 hours at +20 °C (with higher temperatures reducing the maximum overcoating interval), the previous coat shall be thoroughly abraded to provide a suitable mechanical key and solvent-wiped clean before application of the subsequent coat.
For wholesome water applications, allow for min. 14 days (at +25 °C) prior to use.
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 sandpaper to give an adequate mechanical key. Completely strip off any unsound coating and proceed with overcoating as for new work.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with suitable thinner (Xylene / MEK / Acetone) immediately after use. Hardened and/or cured material can only be removed mechanically.

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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