

PRODUCT DATA SHEET

Sika® RainTite I

Superior performance acrylic based multipurpose polymer for waterproofing and repair

DESCRIPTION

Sika® RainTite I is a multifunctional acrylic polymer emulsion for enhancing the properties of mortar, concrete, grout or cement slurry. It provides a good adhesion, water resistance and improvement of several other properties.

USES

- Waterproofing of roof slab, sunken slabs, basements, water tanks, sunshades etc.
- Bonding agent for uses in repair and plastering
- Making polymer mortar for repairs mortars
- Treatment for leaching and saltpetre action
- Multipurpose mortar admixture for injection grouts
- Additives to cement based paints for waterproofing

CHARACTERISTICS / ADVANTAGES

- Improves impermeability
- Good bonding to most substrates
- Improves mechanical, flexural strength and abrasion resistance properties
- Makes mortar waterproof
- Improves external coating in combination with cement
- Improves impermeability, water repellence and anti-fungal property of the paint
- Dilute with water up to 2 times depending on application
- Improves resistance to salt permeation

PRODUCT INFORMATION

Chemical base	Acrylic copolymer and special additives
Packaging	250 g, 500 g, 1 kg, 5 kg, 10 kg, 20 kg, 50 kg, 200 kg container
Shelf life	18 months from date of production
Storage conditions	The product must be stored properly in undamaged and unopened original sealed packaging, in dry conditions at temperatures between +5 °C and +35 °C. Protect from frost and direct sunlight.
Appearance / Colour	Liquid / Milky white
Density	~1.03 kg/L at +27 °C
Solid content by weight	~28 %

TECHNICAL INFORMATION

Tensile adhesion strength	~0.5 N/mm ² (as bonding slurry)
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APPLICATION INFORMATION

Consumption	Application area	Mixing ratio	Consumption of mixture	Consumption of Sika® RainTite I
	Waterproof coating	Sika® RainTite I : Cement = 1 : 2	~500 g/m ² per coat	~200 g/m ² per coat
	Waterproof brush topping	Sika® RainTite I : Cement : Fine Silica Sand=1 : 2 : 2	~2 kg/m ² per mm thickness	~450 g/m ² per mm thickness
	Polymer modified cement mortar	Sika® RainTite I + adequate water : Cement : Fine Quartz Sand = 1 : 5 : 15	~2100 kg/m ³	~50 g per mm thickness
	Bonding slurry	Sika® RainTite I : Cement = 1 : 2	~600 g/m ²	~250 g/m ² for single coat
	Cement paint additive	10 % by weight of cement paint	As per paint suppliers PDS	~2.5 kg per 25 kg cement paint

NOTE:

The above stated consumption depends on substrate condition, porosity, level, application skills and mixing ratios. The ratios and consumptions mentioned above are based on trials done with Ordinary Portland Cement (OPC). In case of Portland Pozzolana Cement (PPC) or similar blended cements, the mixing ratios and consumptions may have to be modified slightly at site. In such cases it is advised to design a guide mix at job site and conduct field trials to ascertain the correct consistency required for the desired application. Small quantity of water may be added in case mix is not workable at higher temperatures.

Ambient air temperature	+10 °C min. / +40 °C max.		
Substrate temperature	+10 °C min. / +40 °C max.		
Application time	Base layer	Overcoating layer	Overcoating time
	Sika® RainTite I with cement	Sika® RainTite I with cement	~ 2 to 6 hours
	Sika® RainTite I with cement	Protection screed / tile adhesive	~5 to 7 days
NOTE: Use the mix in ~20 to 30 minutes at +30 °C when used as coating, mortar or bonding agent			

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.

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

SUBSTRATE QUALITY / PRE-TREATMENT

- The concrete substrate must be sound and with a minimum pull off strength of 1.0 N/mm².
- The substrate must be free of all traces of contaminants, loose and friable particles, cement laitance, oils and grease, wax, curing compounds, water repellent coatings etc.
- The substrate must be prepared by suitable mechanical preparation techniques such as high pressure water jetting, needle guns, grinding, blast cleaning etc.
- High spots must be removed by grinding.
- 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 levelling 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 and/or vacuum.
- Any wax based curing compounds or water repellent coatings must be fully removed by scraping or grinding.
- All intersections of horizontal and vertical surfaces should be profiled with a mortar fillet of minimum 25 mm × 25 mm.

EQUIPMENT

Mixing

- Electric drill paddle mixer (> 700 W, 300 to 500 rpm)

Application

- Hard bristled brush

MIXING

1. Mix Sika® RainTite I with the correct amount of water to produce a gauging solution.
2. Pour part of the gauging solution into a suitable mixing container.
3. While stirring slowly, add the cement or cement-sand mix to the gauging solution and mix thoroughly until a smooth, uniform and lump-free mix is achieved.
4. Within the mixing time add additional gauging solution to adjust to the desired consistency. Mix either by hand or with a low speed drill for not more than 2 minutes.

APPLICATION

Waterproofing coating

1. Thoroughly pre-wet the prepared substrate (2 hours recommended) before application. Keep the surface wet and do not allow to dry. Before application remove excess water, e.g. with a clean sponge. The surface must appear a dark matt appearance without shining and surface pores and cavities must not contain water.
2. Prepare the waterproofing coating as indicated in the consumption table. Apply the first coat of Sika® RainTite I coating with a hard bristled brush applied in the same direction and leave to harden for 2 to 6 hours.
3. (Optional) Wherever coating is to be reinforced with glass fabric, lay Sika® Fabric-50 into the freshly applied base coat and embed firmly into the wet coat with brush.
4. Apply the second coat of Sika® RainTite I coating in crosswise direction to the first application as soon as first coat has hardened. NOTE: If the second coat is

applied 12 hours or later to first coat, the first coat shall be slightly pre-wetted by using a fine spray.

5. Protect with screed on top for longer life.

IMPORTANT

Slight fabric marks may be visible after application of the second coat, but it will have no adverse bearing on the performance of the waterproofing system. Apply third coat wherever necessary.

Protection

1. The top layer while wet, sprinkle clean quartz sand.
2. Once top layer has sufficiently cured, apply protection plaster, mortar, screed or any other adhesive layer. A bonding agent may be necessary.
3. Alternatively, a separation layer like PE sheet or geotextile can be used before any screed or interlocking paver blocks.

Waterproof brush topping

1. Thoroughly pre-wet the prepared substrate (2 hours recommended) before application. Keep the surface wet and do not allow to dry. Before application remove excess water, e.g. with a clean sponge. The surface must appear a dark matt appearance without shining and surface pores and cavities must not contain water.
2. Prepare the waterproof brush topping as indicated in the consumption table. Apply the Sika® RainTite I brush topping with a hard bristled brush.
3. Protect with screed on top for longer life.

Polymer modified cement mortar

1. Thoroughly pre-wet the prepared substrate (2 hours recommended) before application. Keep the surface wet and do not allow to dry. Before application remove excess water, e.g. with a clean sponge. The surface must appear a dark matt appearance without shining and surface pores and cavities must not contain water.
2. Prepare the polymer modified cement mortar as indicated in the consumption table.
3. Apply the bonding slurry as indicated in the consumption table. Using a hard bristled brush work the mix vigorously onto the substrate, forming a thin layer filling all unevenness, pits and pores.
4. When the bond slurry is still fresh and sticky, apply the polymer modified cement mortar.

Bonding slurry

IMPORTANT

Never use pure Sika® RainTite I or Sika® RainTite I-water mix directly onto the substrate as bonding agent, always add cement and sand to the mix.

1. Thoroughly pre-wet the prepared substrate (2 hours recommended) before application. Keep the surface wet and do not allow to dry. Before application remove excess water, e.g. with a clean sponge. The

surface must appear a dark matt appearance without shining and surface pores and cavities must not contain water.

2. Prepare the bonding coat as indicated in the consumption table. Using a hard bristled brush, work the mix vigorously onto the substrate, forming a thin layer filling all unevenness, pits and pores.
3. When the bond coat is still fresh and sticky, apply the mortar or concrete. Vibrate carefully to achieve satisfactory interpenetration of mortar and concrete.

CURING TREATMENT

- Avoid rapid evaporation of the water from mortars prepared with Sika® RainTite I. Cover the surface with a polyethylene film, use wet burlap, gunny bag or hessian cloth or water misting or apply Sika Anti-sol® curing compound.
- Cure for minimum 3–5 days. DO NOT pond with water before 5 days of curing.
- During adverse weather conditions (high temperatures, low relative humidity, wind, sun etc.) take particular care with curing treatment.

Additive to cement paint

IMPORTANT

When Sika® RainTite I is used as an additive to cement based paints it is recommended that the same should be done for preferably light shades only. However, pre-test for consistency of colour shade is recommended through site trials before application.

1. Apply 1-2 coats with a brush on a dry surface.

CLEANING OF TOOLS

Clean all tools and application equipment with clean water immediately after use. Hardened 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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