

SikaLatex®

Water resistant bonding agent and mortar additive

Product Description

SikaLatex® is a modified Styrene Butadiene Emulsion to be mixed with cement (neat) or cement / sand mortar for improved adhesion and water resistance properties.

Uses

- For higher strength floor screeds with less 'dusting', improved flexibility and resistance to cracking
- For wear resistant floor toppings in water treatment works, sewage systems, etc. together with Sika®-1 System
- As an additive to repair mortars for patching and filling
- As a bonding agent for rendering, tile fixing and masonry jointing mortars, etc.
- As a bonding grout between old and new concrete, as well as in construction joints

Characteristics / Advantages

- Increases adhesion, flexural and tensile strength
- Improved abrasion resistance (less dusting)
- Reduces water permeability
- Increases chemical resistance
- Non-toxic, non-corrosive and non-flammable
- Easy to use
- Does not re-emulsify even in high alkaline conditions

Product Data

Form

Appearance / Colour Milky white liquid

Packaging 20 litre pails and 200 litre drums (available upon request)

Storage

Storage Conditions / Shelf Life 12 months from the date of production when stored in original unopened packaging in a cool, dry place

Technical Data

Specific Gravity 1.0

Solid Content ~ 37%

Construction



System Information

Application Details

Consumption Guide

Approximate SikaLatex® requirement in litres per m² per 10 mm thickness. Mixing ratios by volume.

		SikaLatex® : Water													
		2 : 1		1 : 1		1 : 1.5		1 : 2		1 : 2.5		1 : 3		1 : 4	
W / C Ratio		0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8
Cement : Sand	1 : 1	3.0	4.0	2.3	3.0	1.8	2.4	1.5	2.1	1.3	1.7	1.1	1.5	0.9	1.2
	1 : 1.5	2.2	3.0	1.6	2.3	1.3	1.8	1.1	1.5	0.9	1.3	0.8	1.1	0.7	0.9
	1 : 2	1.9	2.5	1.4	1.9	1.1	1.5	0.9	1.3	0.8	1.1	0.7	1.0	0.6	0.8
	1 : 2.5	1.6	2.2	1.2	1.7	1.0	1.3	0.8	1.1	0.7	1.0	0.6	0.8	0.5	0.7
	1 : 3	1.4	2.0	1.1	1.5	0.8	1.2	0.7	1.0	0.6	0.9	0.5	0.8	0.4	0.6
	1 : 4	1.2	1.6	0.9	1.2	0.7	1.0	0.6	0.8	0.5	0.7	0.4	0.6	0.3	0.5

Example: Floor Screed – normal use
 SikaLatex® Solution: 1 part SikaLatex® : 3 parts water
 Cement / Sand: 1 part cement : 2.5 parts sand
 W / C Ratio: 0.5
 Screed Thickness: 100 mm

Based on the consumption guide above, SikaLatex consumption is 6 litres per m² for a 100 mm screed.

General Guidelines

Sand

Use only clean, washed and well graded sand. Grain size should suit application thickness and surface finish. As a guide, the following is recommended:

Application Thickness	Grain Size Diameter
Up to 2 mm	Up to 0.5 mm
2 to 5 mm	Up to 1.0 mm
5 to 15 mm	Up to 3.0 mm
Over 15 mm	Up to 6.0 mm

High Cement Mortar / Thick Applications

Thick mortar with high cement content (cement : sand = 1 : 1 to 1 : 2) should be applied in layers of up to 15 mm thickness per layer. Always work wet-on-wet.

Substrate Preparation

The substrate must be sound, clean and free from oil, grease, laitance, loose particles or dust. All absorbent substrates must be pre-wetted to saturated surface dry (SSD) condition.

Application Conditions / Limitations

Application Temperature Minimum + 5°C

Application Instructions

Mixing Mix sand and cement first, then add SikaLatex® solution as required (SikaLatex® solution is SikaLatex® diluted with water – see mix designs). Mix either by hand or with a low speed drill for no more than 2 minutes.

Cleaning of Tools Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be mechanically removed.

Notes on Application / Limitations

- SikaLatex® mortar should be thoroughly mixed (but not longer than 1 – 2 minutes otherwise too much air may be entrained)
- **Do not use neat** SikaLatex® as a bonding coat. A delay in subsequent overcoating may result in a film forming on the substrate causing separation of subsequent layers. Use SikaLatex® as an additive to make up cementitious slurry or a cement / sand mortar.
- Over dilution of SikaLatex® solution, for e.g. more than 1 : 4 (SikaLatex® : Water) is not recommended as this will result in very little performance improvement.
- SikaLatex® mortar should not be applied at temperatures below + 5°C.
- SikaLatex® mortar is not resistant to constant contact with petrol, organic solvents and acids.
- When working with SikaLatex® mortar, observe the following working rules as if working with ordinary cement mortars:
 - Clean and prewet surface (saturated surface dry)
 - Use clean sand with suitable sieve grading curve (sieve distribution)
 - Use as little gauging water (SikaLatex® solution) as possible
 - For multi-layered application, always work wet-on-wet
 - Protect against rapid drying due to wind and extreme temperature (see section on “Curing”)

Curing Details

Curing Proper curing of cement based product is essential. Where overcoating of the screed / render / mortar is required apply Antisol®-A curing compound. In other cases, apply Antisol®-E, Antisol®-90 or other curing practices such as covering with polythene sheets or damp hessian.

Notes 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

Mix Designs For Specific Applications

(all mixing ratios given are by volume)

Bonding Coat For rendering on to difficult substrates, waterproof renderings with Sika-1 System, laying of floor screeds, concrete repair, patching & filling, bonding between new and old concrete, etc., a bonding coat of mortar or slurry with SikaLatex solution is recommended.

SikaLatex Solution: SikaLatex with water 1 : 1

Dry Mix: Cement with sand 1 : 1

Sand Grain Size: See "General Guidelines – Sand"

W / C Ratio: Mix to suit requirement / application. Generally, use as little gauging water (SikaLatex Solution) as possible.

Consumption: See "Consumption Guide" Table. (Approx. 0.23 – 0.3 litre of SikaLatex per m² per 1 mm thickness based on W / C Ratio of 0.5 – 0.8).

1. As A Bonding Coat For Rendering

Mix up a stiff mortar and place on a layer of 4 – 5 mm thickness. Ensure the layer is tack free before follow-on application of rendering coats of conventional render or ready-to-use mortar. For waterproof rendering with Sika-1 System, consult Sika-1 product data sheet.

2. For Bonding New To Old Concrete

Prepare a mortar of pasty consistency. Apply the mortar on to the wetted surface in 20 – 30 mm layer thickness and pour new concrete on to it immediately. Vibrate the concrete carefully to achieve satisfactory inter-mixing of the SikaLatex mortar and the concrete.

3. As A Bonding Coat For Floor Screeds, Patching & Filling Mortar and Other General Uses

Mix up a good brushable slurry and apply on to the substrate in 1 – 3 mm thickness. Work well into the substrate with a stiff brush. Follow-on screed, patching or filling mortar to be applied immediately, wet-on-wet. Neat cement may be used instead of a dry mix of cement and sand.

Repair And Patching Mortar, Masonry Joints, etc

SikaLatex Solution: SikaLatex with water

– 1 : 1 for mortar thickness below 10 mm

– 1 : 2 for mortar thickness above 10 mm

Dry Mix: Cement with sand 1 : 1 to 1 : 3

Sand Grain Size: See "General Guidelines – Sand"

W / C Ratio: Mix to suit requirement / application. Generally, use as little gauging water (SikaLatex Solution) as possible.

Consumption: See "Consumption Guide" table. (Approx. 0.7 – 2.3 litres of SikaLatex per m² per 10 mm thickness based on W / C Ratio of 0.5 – 0.8).

1. Repair And Patching Mortar

Apply the stiff plastic mortar on the well saturated substrate. For areas subject to heavy use or application on to very smooth substrates apply a bonding coat prior to application of mortar. Refer to Section A Part (3). Also see "General Guidelines – High Cement Mortar / Thick Applications".

2. Masonry Joints

Mix mortar into a paste-like consistency and place firmly into the previously wetted joints with a spatula or pointing trowel and finish off with a pointing trowel.

With a richer SikaLatex solution, e.g. SikaLatex : Water 2 : 1, a higher chemical resistance is achieved especially against urine, ammonia and diluted alkaline solutions.

Floor Screeds, Intermediate Coats And Wear Resistant Screeds

SikaLatex Solution: SikaLatex with water

– for hard wearing floors 1 : 1 to 1 : 2

– for normal use 1 : 2 to 1 : 4

Dry Mix: Cement with sand 1 : 2* to 1 : 3

Sand Grain Size: See "General Guidelines – Sand"

W / C Ratio: Mix to suit requirement / application. Generally, use as little gauging water (SikaLatex Solution) as possible.

Consumption: See "Consumption Guide" Table. (Approx. 0.4 – 1.9 litres SikaLatex per m² per 10 mm thickness based on W / C Ratio of 0.5 – 0.8).

After applying the bonding coat on to the substrate (refer to Section A, Part 3), place the mortar wet-on-wet in layers of 15 – 30 mm thickness*. Compact well and rub down. Pay attention to the arrangement of expansion and construction joints. Observe normal curing practice.

When no curing compound is available at site, curing may be done by spraying the surface with SikaLatex solution (1 part SikaLatex to 1 part water) **as soon as the mortar has started to harden**. After 24 hours, keep the surface wet by spraying water on it.

Also see "General Guidelines – High Cement Mortar / Thick Applications".

Rendering

SikaLatex is added to the rendering mortar where properties such as improved adhesion, better flexibility, reduced shrinkage and water permeability are required.

1. *Normal Rendering With Hydraulic Lime Mortar*
SikaLatex Solution: SikaLatex with water 1 : 2 to 1 : 4
Dry Mix: Binder with sand 1 : 25 to 1 : 4
Sand Grain Size: 0.3 – 0.8 mm
W / C Ratio: Mix to suit requirement / application. Generally, use as little gauging water (SikaLatex Solution) as possible.
Consumption: See “Consumption Guide” Table. (Approx. 0.3 – 1.1 litres SikaLatex per m² per 10 mm thickness based on W / C Ratio of 0.5 – 0.8).

2. *Cement / Sand Rendering*
SikaLatex Solution: SikaLatex with water 1 : 1 to 1 : 2
Dry Mix: Cement sand 1 : 3 to 1 : 4
Sand Grain Size: 0.3 – 0.8 mm
W / C Ratio: Mix to suit requirement / application. Generally, use as little gauging water (SikaLatex Solution) as possible.
Consumption: See “Consumption Guide” Table. (Approx. 0.7 – 1.9 litres SikaLatex per m² per 10 mm thickness based on W / C Ratio of 0.5 – 0.8).

Apply the bonding coat according to Section A, Part (1). The rendering is then applied on to the tack-free bond coat in accordance with good rendering practice.

Adhesive Mortar (e.g. as a tile adhesive)

SikaLatex Solution: SikaLatex with water 1 : 2
Dry Mix: Cement with sand 1 : 2
Sand Grain Size: 0 – 2 mm with higher proportion of fine sand under 0.2 mm
W / C Ratio: Mix to suit requirement / application. Generally, use as little gauging water (SikaLatex Solution) as possible.
Consumption: See “Consumption Guide” Table. Approx. 0.7 – 1.0 litres SikaLatex per m² per 10 mm thickness based on W / C Ratio of 0.5 – 0.8.

Mix us a mortar for application by trowel and fix tiles according to good application practice (thin layer method), onto a smooth concrete or rendering / screed finish.

For waterproof **joint-grouting**, a mixture of pure cement and SikaLatex shall be used.

Typical Results

The following results are based on a SikaLatex mortar produced with good quality normal Portland cement; clean, sharp, well graded sand and a controlled W / C ratio (wetness of the sand must be taken into consideration).

Mix Design:	Cement : Sand	1 : 3
	SikaLatex : Water	1 : 3
	W / C Ratio	~ 0.6
	<i>(Portland cement type 1, sand well graded 0 – 4 mm)</i>	
Results at 28 days:	Compressive Strength	± 35 N / mm ²
	Flexural Strength	± 6.5 N / mm ²
	Bond Strength	± 1.5 N / mm ² (pull-off strength test)

Health and Safety Information

Protective Measures

Wear gloves and goggles during application. If in contact with skin, wash thoroughly with soap and water. If in contact with eyes or mucous membrane, flush immediately with plenty of water and seek medical attention without delay.

Local regulations as well as health and safety advice on packaging labels must be observed.

Important Notes

Uncured material must be disposed according to local regulations. Fully cured material can be disposed as household waste under agreement with the responsible local authorities.

Detailed health and safety information as well as detailed precautionary measures e.g. physical, toxicological and ecological data can be obtained from the Material Safety Data Sheet (available upon request).

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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