

SikaTop® Seal-107 Standard

Waterproofing/damp-proofing cementitious slurry

Product Description

SikaTop® Seal-107 Standard is a two part polymer modified cementitious waterproof mortar slurry comprising of a liquid polymer and a cement based mix incorporating special admixtures.

Uses

SikaTop® Seal-107 Standard is used for:

- Interior and exterior waterproofing and damp-proofing of concrete, cementitious rendering, brickwork and blockwork
- Protection of concrete structures against the effects of de-icing salts and freeze-thaw attack
- Rigid waterproofing of basement walls in new construction and refurbishment
- Pore / blowhole filling
- Sealing fine "hairline" cracks in concrete structures (not subject to movement)
- Levelling mortar for concrete repair works

Characteristics / Advantages

- Easy to apply by brush or in thin trowel applications
- No water required
- Prebatched components
- Hand or spray applied
- Easy and fast mixing
- Very good adhesion
- Protects concrete against carbonation
- Protects against water penetration
- Non-corrosive to steel or iron
- Overpaintable

Tests

Approval / Standards

Conforms to the requirements of BS EN 1504-2:2004 Principles 2.2 & 8.2, Annex ZA2 Table ZA.2 DoP 02 07 01 01 002 0 000001 1088, certified by Factory Production Control Body 0086, Certificate 541325, and provided with the CE mark

Product Data

Form

Appearance / Colours

Part A: white liquid
Part B: grey or white powder
Mixed product: cement grey

Packaging

25 kg units (20 kg bag and 5 kg pail)

Construction



Storage

Storage Conditions/ Shelf-Life	9 months from date of production if stored properly in undamaged and unopened original sealed packaging in dry and cool conditions. Liquid component must be protected from frost.
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Technical Data

Chemical Base	Part A: liquid polymer and additive Part B: portland cement selected aggregate and admixtures
Density	Fresh mortar density: ~ 2.00 kg/l
Layer Thickness	0.75 mm min. 4.0 mm max.
Thermal Expansion	13×10^{-6} per °C
Carbon Dioxide Diffusion Coefficient (μCO_2)	$\mu\text{CO}_2 \sim 35.000$
Water Vapour Diffusion Coefficient ($\mu\text{H}_2\text{O}$)	$\mu\text{H}_2\text{O} \sim 500$

Mechanical / Physical Properties

Compressive Strength	(According to EN 196-1)	
	3 days	~ 20 N/mm ²
	28 days	~ 35 N/mm ²

Flexural Strength	(According to EN 196-1)	
	3 days	~ 6 N/mm ²
	28 days	~ 10 N/mm ²

Tensile Strength	Cured in water: ~ 3.2 N/mm ² after 14 days exposure Cured in air: ~ 4.5 N/mm ² after 14 days exposure	(According to DIN 53455)
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Bond Strength	2.0 to 3.0 N/mm ² (failure in substrate)
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E-Modulus	Static: ~ 8.4 kN/mm ²
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System Information

Application Details

Consumption / Dosage	Dependent on the substrate roughness, surface profile and thickness of the layer applied. As a guide, ~ 2.0 kg/m ² /mm (excluding allowances for loss wastage, surface profile and porosity, etc.). 1 unit of 25 kg yields ~ 12.5 l of mortar.
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Substrate Quality	The substrate must be structurally sound and free of all traces of contaminants, loose and friable particles, cement laitance, oils and grease etc. The concrete "pull off" (tensile adhesive) strength must be > 1.0 N/mm ² .
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Substrate Preparation	<p><i>General:</i> The substrate must be prepared by suitable mechanical preparation techniques such as high pressure water jetting, needle guns, blastcleaning, scabblers etc. and properly pre-wetted to a saturated surface dry condition.</p> <p><i>For pore / blowhole filling:</i> Blastclean to remove all contaminants including from within the pores / blowholes.</p> <p><i>As a levelling mortar:</i> Prepare and clean all surfaces by suitable mechanical means such as abrasive blast cleaning or equivalent to ensure cement laitance, surface contamination and all existing coatings are removed and all blowholes and honeycombed areas are exposed. The resultant surface must be profiled to achieve maximum bond strength.</p>
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Application Conditions / Limitations

Substrate Temperature	+8°C min. / +35°C max.
Ambient Temperature	+8°C min. / +35°C max.

Application Instructions

Mixing	Used as slurry: A : B = 1 : 4 (parts by weight) Used as mortar: A : B 1 : 4.5 - 5.1 (parts by weight)
Mixing Time	~ 3 minutes
Mixing Tools	SikaTop® Seal-107 Standard must be mechanically mixed using a forced action mixer or in a clean drum using a drill and paddle (max. 500 rpm). A normal concrete free fall mixer is NOT suitable.

Application Method / Tools	<p>Shake part A before using it. Pour approximately half of part A into the mixing container and add part B slowly while mixing. Add the remainder of part A and continue mixing until a uniform lump free consistency is achieved. The surface must be pre-wetted to a saturated surface dry condition before application.</p> <p><i>As a slurry:</i> Apply the mixed SikaTop® Seal 107 Standard either mechanically, by spray or by hand using a stiff brush. Applied in the same direction. Apply the 2nd coat of SikaTop® Seal-107 Standard, applied by brush in crosswise direction to the first application as soon as first coat has hardened.</p> <p><i>As a mortar:</i> When SikaTop® Seal-107 Standard is applied by trowel (e.g. for a smooth surface finish), the product must be mixed with a 10% reduction of part A (~ 1A : 4.5 – 5.1B).</p> <p>Apply the 2nd coat of SikaTop® Seal-107 Standard as soon as the first coat has hardened. For a smoother finish apply at 1.5mm maximum. For pore / blowhole filling, tightly trowel into the pores / blowholes of the surface before main application.</p>
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Cleaning of Tools	Clean all tools and application equipment with clean water immediately after use. Hardened / cured material can only be removed mechanically.
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Potlife	~ 30 minutes at +20°C
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Waiting Time / Overcoating	<i>Waiting time between coats</i>	
	+10°C	~ 12 hours
	+20°C	~ 6 hours
	+30°C	~ 3 hours
<p>If waiting time period exceeds 24 hours, lightly blastclean the surface.</p> <p>SikaTop® Seal-107 Standard can be overpainted using solvent based primers or coatings. SikaTop® Seal-107 Standard must cure for a minimum of 7 days before overcoating.</p>		

Notes on Application / Limitations

SikaTop® Seal-107 Standard is not a decorative treatment and may display signs of “blooming” after rain or in damp weather. This does not affect the performance of the coating, in any way. Trial areas should be conducted prior to application to ensure the required application can be achieved.

Avoid application in direct sun and/or strong wind. Do not add water in any circumstances. Apply only to sound, prepared substrates. Do not exceed maximum layer thickness.

For waterproofing or damp proofing application, always use at least 2 coats to give a total thickness of between 1.5 to 2.0 mm. In areas of severe water penetration, three coats might be required.

Protect freshly applied material from freezing conditions and rain etc.

SikaTop® Seal-107 Standard does not provide a traffickable finish. Use Sika®-1 Finishing Mortar for trafficked surface or protect with a SikaTop®-77, SikaCem®-810 or SikaLatex® bonded screed.

For waterproofing / damp-proofing works, special attention is required to avoid puncturing the waterproof coating with fixings. These must be accommodated by surface bonding with either Sikadur®-31 or Sikaflex® PRO-11 FC etc.

Curing Details

Curing Treatment

It is essential to cure SikaTop® Seal-107 Standard immediately after application for a minimum of 3 to 5 days to ensure full cement hydration and to minimise cracking. Use polythene sheeting or similar approved methods.

Value Base

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.

Local Restrictions

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

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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