Construction

SikaTop® Seal-107 ZA

Waterproofing, damp-proofing, cementitious slurry

Product Description

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

SikaTop® Seal-107 complies with the requirements of EN 1504-2 as protective coating.

Uses

SikaTop® Seal-107 ZA 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
- Waterproofing basement and cellars (not subject to hydrostatic water pressure)
- Sealing fine “hairline” cracks in concrete structures (not subject to movement)
- Levelling mortar for concrete repair works

SikaTop® Seal-107 can be used for concrete protection. in particular it is:

√ Suitable for protection against ingress (Principle 1, method 1.3 of EN 1504-9),

√ Suitable for moisture control (Principle 2, method 2.2 of EN 1504-9)

Suitable for increasing the resistivity (Principle 8, method 8.2 of EN 1504-9)

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
- Approved for potable water contact

Tests

Approval / Standards

Product Data

Form

Appearance /Colours	Part A:	white liquid
	Part B:	grey or white powder
	Mixed product:	cement grey or off-white
Packaging	25kg units (20 kg bag and 5 kg pail)	

Storage

Storage Conditions / Shelf-Life	12 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.

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	Min. 0.75mm min – max. 1.5mm	
Thermal Expansion	13 x 10^{-6} per °C	
Carbon Dioxyde Diffusion Coefficient (μCO_2)	μCO_2 ~ 35.000	
Water Vapour Diffusion Coefficient (μH_2O)	μH_2O ~ 500	

Mechanical / Physical Properties

Compressive Strength (According to EN 196-1)

3 days	~ 7 N/mm^2
28 days	~ 20 N/mm^2

Bond Strength	2.0 to 3.0 N/mm^2 (failure in substrate)

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 25kg yields ~ 12.5 litres of mortar.
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.

Substrate Preparation	*General:* 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. *For pore/blowhole filling:* Blastclean to remove all contaminants including from within the pores/blowholes. *As a levelling mortar:* 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.

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 (parts by weight)
Mixing Time	~ 3 minutes
Mixing Tools	SikaTop® Seal-107 ZA 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	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. *As a slurry:* Apply the mixed SikaTop® Seal 107 either mechanically, by spray or by hand using a stiff brush. Applied in the same direction. Apply the 2nd coat of SikaTop® Seal-107 ZA, applied by brush in crosswise direction to the first application as soon as first coat has hardened. *As a mortar:* When SikaTop® Seal-107 ZA is applied by trowel (e.g. for a smooth surface finish), the product must be mixed with a 10% reduction of part A (~ 1A : 4.5B). Apply the 2nd coat of SikaTop® Seal-107 ZA as soon as the first coat has hardened. For pore/blowhole filling, tightly trowel into the pores/blowholes of the surface.
Cleaning of Tools	Clean all tools and application equipment with clean water immediately after use. Hardened / cured material can only be removed mechanically.
Potlife	~ 30 minutes at +20°C
Waiting Time / Overcoatability	*Waiting time between coats*

+10°C	~ 12 hours
+20°C	~ 6 hours
+30°C	~ 3 hours

If waiting time period exceeds 24 hours, lightly blastclean the surface.

SikaTop® Seal-107 ZA can be overpainted using solvent based primers or coatings.
SikaTop® Seal-107 ZA must cure for a minimum of 7 days before overcoating.

Construction

Notes on Application / Limitations	SikaTop® Seal-107 ZA 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. Where SikaTop® Seal-107 ZA will be visible after completion of the works, then the off-white colour, which is aesthetically more pleasing, should be used. 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 2.0mm. In areas of severe water penetration, three coats might be required. Protect freshly applied material from freezing conditions and rain etc. SikaTop® Seal-107 ZA does not provide a traffickable finish. Protect with a 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® -11 FC etc. When used in contact with drinking structures, ensure that all associated Sika® products and construction materials also comply with the local regulations for drinking water contact.

Curing Details

Curing Treatment	It is essential to cure SikaTop® Seal-107 ZA 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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