Construction

SikaTop® Seal-107

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.

Uses

SikaTop® Seal-107 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

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

British Board of Agreement Certificate No. 95/3174

Product Data

Form

Appearance /Colours

Part A: white liquid
Part B: grey or white powder

Mixed product: cement grey or off-white

Packaging

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

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.

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. 1.5 mm max.
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	~ 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)
Bond Strength	2.0 to 3.0 N/mm^2 (failure in substrate)	
E-Modulus	Static: ~ 8.4 kN/mm^2	

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.
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 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, applied by brush in crosswise direction to the first application as soon as first coat has hardened. *As a mortar:* When SikaTop® Seal-107 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 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 can be overpainted using solvent based primers or coatings.
SikaTop® Seal-107 must cure for a minimum of 7 days before overcoating.

Construction

Notes on Application / Limitations	SikaTop® Seal-107 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 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 2.0 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 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. 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 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 should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

Legal Notes

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