BUILDING TRUST

PRODUCT DATA SHEET

# SikaTop®-107 Seal ES

CEMENTITIOUS MORTAR FOR WATERPROOFING AND CONCRETE PROTECTION

## PRODUCT DESCRIPTION

SikaTop®-107 Seal ES is a two-component waterproofing mortar, cement based with special additives and modified polymers.

## USES

SikaTop®-107 Seal ES is used for:

- Interior and exterior waterproofing of concrete structures, mortar, concrete blocks or brick structures
- Waterproofing of basement walls in new construction and refurbishment works
- Concrete protective coating according to EN 1504-9:
  - Method 1.3 Coating for ingress protection
  - Method 2.2 Moisture control
  - Method 8.2 Increasing resistivity
- Protection of concrete structures against the effects of de-icing salts and freeze thaw attack
- Pore / blowhole filling
- Cracks bridging in concrete structures (not subject to movement)
- Waterproofing of water tanks

## CHARACTERISTICS / ADVANTAGES

- Protects against liquid water penetration
- Protects concrete against carbonation
- Allows water vapour transmission
- Easy to apply by brush or in thin trowel applications
- Pre-dosed components, no water required
- Manual or projected application
- Easy and fast mixing
- Non-corrosive to steel or iron
- Overpaintable
- Suitable for contact with drinking water to RD 847/2011 and the document "Assessment of Cementitious Products in contact with Drinking Water. 4MS Common Approach (April 2012)".

## APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 1504-2:2004 - Surface protection product for concrete

## PRODUCT INFORMATION

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|---|---|
| **Chemical Base** | Part A: Liquid polymer and additive<br>Part B: Portland cement, selected aggregate and admixture |
| **Packaging** | Part A: 5 kg pail<br>Part B: 20 kg bag |
| **Shelf Life** | 12 months from date of production |
| **Storage Conditions** | Store properly in undamaged and unopened original packaging in cool and dry conditions. Liquid component must be protected from frost. Protect from moisture and weather inclemencies. |
| **Appearance / Colour** | Part A: white liquid<br>Part B: grey powder<br>Mixed product: Grey |
| **Density** | ~ 1.9 kg/l |

## TECHNICAL INFORMATION

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|---|---|---|
| **Compressive Strength** | 3 days ~ 20 N/mm²<br>28 days ~ 35 N/mm² | EN 196-1 |
| **Modulus of Elasticity in Compression** | ~ 8,4 kN/mm² | EN 13412 |
| **Flexural Strength** | 3 days ~ 6 N/mm²<br>28 days ~ 10 N/mm² | EN 196-1 |
| **Tensile Strength** | Cured in water: ~ 3.2 N/mm² after 14 days exposure<br>Cured in air: ~ 4.5 N/mm² after 14 days exposure | DIN 53455 |
| **Crack Bridging Ability** | Class II > 250 µm Temperature -10ºC<br>Class III > 500 µm Temperature 23ºC | UNE-EN 1062-7 |
| **Tensile adhesion strength** | 2,1 MPa | UNE EN 1542:1999 |
| **Coefficient of Thermal Expansion** | ~ 13 x $10^{-6}$ per °C | EN 1770 |
| **Capillary Absorption** | 0.1 kg/m² $h^{0.5}$ | EN 1062-3 / EN 1062-1 |
| **Water permeability** | Class III (<0,1 kg/m²$h^{0,5}$) W = 0,02 kg/m²$h^{0,5}$ | EN 1062-3 / EN 1062-1 |
| **Water Penetration under Pressure** | 5 bar for 3 days ~ 26 mm | UNE-EN 12390-8 |
| **Permeability to Water Vapour** | Class I Sd = 0.69 m | EN ISO 7783-2 / EN 1602-1 |
| **Permeability to CO2** | Sd > 50 m | UNE-EN 1062-6:2003 |
| **Lap Shear Strength** | µ = 215037 | UNE EN 1062-6:2003 |
| **Reaction to Fire** | Class $A2_{fl}$-s1 | EN 13501-1:2019 |

## SYSTEM INFORMATION

**System Structure**

The mortar can be placed with Armatop®-100 reinforcement.
Armatop®-100:

| | |
|---|---|
| Material | Anti-alkali fiberglass mesh |
| Weight | 0.172 kg/m² |
| Thickness | 0.8 mm |
| Tensile strength | Warp: 180 daN/5 cm |
| | Plot: 180 daN/5 cm |
| Packing | Roll of 1 m x 50 m. |

## APPLICATION INFORMATION

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|---|---|
| **Mixing Ratio** | A:B 1:4 (parts by weight) by trowel<br>A:B 1:3,5 (parts by weight) by brush |
| **Fresh mortar density** | ~ 2.00 kg/l |
| **Consumption** | ~ 2.0 kg/m² per mm of thickness (excluding allowances for loss wastage, surface profile and porosity, etc.)<br>1 unit of 25 kg yields ~ 12.5 liters of mortar |
| **Layer Thickness** | 0.75 mm min.<br>1.5 mm max. |
| **Substrate Temperature** | +8 ºC min. / +35 ºC max. |
| **Pot Life** | ~ 30 minutes at +20 ºC |
| **Waiting time** | Waiting time between coats<br>+10 ºC ~ 12 hours<br>+20 ºC ~ 6 hours<br>+30 ºC ~ 3 hours<br>If waiting time period exceeds 24 hours, lightly blastclean the surface.<br>SikaTop®-107 Seal ES can be overpainted using solvent based primers or coatings.<br>SikaTop®-107 Seal ES must cure for a minimum of 7 days before overcoating. |

## VALUE BASE

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handing, 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

## APPLICATION INSTRUCTIONS

### NOTES ON INSTALLATION

- SikaTop®-107 Seal ES 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.
- 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 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®-107 Seal ES does not provide a trafficable finish
- Avoid application in abrasive environment

### EQUIPMENT

Electrical mixer, trowel, hard-haired brush and roller

### SUBSTRATE QUALITY

The concrete "pull off" (tensile adhesive) strength must be > 1.0 N/mm²

### SUBSTRATE PREPARATION

Remove deteriorated concrete by mechanical means, sandblasting or pressurized water, until a healthy androught, cohesive substrate is obtained. The substrate must be sound, clean, free of grease, oil, friable parts, laitance.
In case of irregularities in the substrate, it can be first regularized with SikaMonotop®-125 Thick ES or another from SikaMonotop® range.
All singular points should be treated first with SikaMonotop®-125 Thick ES or another from SikaMonotop® appropiate range.
Before applying SikaTop®-107 Seal ES, the substrate must be moistened until saturated without flooding it.

### MIXING

SikaTop®-107 Seal ES must be mechanically mixed with a low speed (< 500 rpm) electrical mixer.
Mix for 3 minutes until you get a homogeneous paste. It is not suitable to use a concrete mixer.

### 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 continue mixing until a uniform lump free consistenciy is achieved. The surface must be pre-wetted to a saturated surface dry condition before application.
*As a slurry:*
Predosing A:B = 1:3,5. Apply the mixed SikaTop®-107 Seal ES either mechanically, by spray or by hand using a stiff brush. Applied in the same direction.
Apply the second coat of SikaTop®-107 Seal ES, applied by brush in crosswise direction to the first application as soon as first coat has hardened.
*As a mortar:*
Predosing A:B = 1:4. Apply SikaTop®-107 Seal ES by trowel in the same direction.
Apply the second coat of SikaTop®-107 Seal ES in crosswise direction to the first application as soon as the first coat has hardened.
For pore / blowhole filling, tightly trowel into the pores / blowholes of the surface.
The application must be done covering the whole surface of the substrate with uniform thickness.

### CURING TREATMENT

Protect the fresh mortar immediately from premature drying using an appropiate curing method, e.g. SikaAntisol® E, moist geotextil membrane, polythene sheet, etc.

### CLEANING OF TOOLS

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