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# PRODUCT DATA SHEET SikaTop<sup>®</sup> Seal -107

Polymer-modified Cementitious Waterproofing Slurry and Protective Coating

# PRODUCT DESCRIPTION

SikaTop<sup>®</sup> Seal -107 is a two part polymer modified cementitious waterproof slurry comprising of a liquid polymer and a cement based mix incorporating special admixtures. It is applied to concrete and mortar to prevent water infiltration. SikaTop<sup>®</sup> Seal -107 complies with the requirements of EN 1504-2 as protective coating.

#### USES

- 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
- Positive and negative pressure waterproofing
- Pore / blowhole filling
- Sealing fine "hairline" cracks in concrete structures (not subject to movement)
- Levelling mortar for concrete repair works/imperfections
- Protection against ingress

#### Areas of application

- Potable concrete water tanks/reservoirs
- Basements and cellars
- Terraces and balconies
- Retaining walls
- Swimming pools and fountains
- RC gutters and planter boxes
- Bathroom/toilets
- Lift pits
- Seawalls

#### **CHARACTERISTICS / ADVANTAGES**

- Easy to apply by brush or in thin trowel applications
- Prebatched components with consistance quality
- Hand or spray applied

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|                                     | <ul> <li>Increased frost and salt resistance</li> <li>Very good adhesion</li> <li>Protects against concrete carbonation</li> <li>Protects against water penetration</li> <li>Non toxic – approved for contact with drinking water</li> <li>Non-corrosive to steel or iron</li> <li>Overpaintable</li> </ul> |
|-------------------------------------|---|
| TESTS                               | Overpaintable     APPROVAL / STANDARDS  |
|                                     | <ul> <li>British Board of Agreement Certificate No.95/3174</li> <li>Contact with potable water according to WRAS Requirements</li> <li>Resistance to negative water pressure DIN 1048: Part 5: 1991</li> </ul>  |
| PRODUCT DATA                        |   |
| FORM                                | COLOURS   |
|                                     | Part A : white liquid   |
|                                     | Part B : grey or white powder   |
|                                     | Mixed product : cement grey or off-white  |
|                                     | <b>PACKAGING</b><br>25 kg set (20 kg bag and 5 kg pail)   |
| STORAGE                             | STORAGE CONDITIONS / SHELF-LIFE   |
|                                     | 6 months from date of production if stored properly in undamaged and<br>unopened original sealed packaging in cool dry conditions. Protect from<br>direct sunlight and frost.   |
| TECHNICAL DATA                      | CHEMICAL BASE   |
|                                     | Part A : liquid polymer and additive  |
|                                     | Part B : portland cement, selected aggregate and admixtures   |
|                                     | DENSITY   |
|                                     | Approx. 1.9 - 2 kg/litre (Freshly mixed mortar)   |
|                                     | VOC DATA  |
|                                     | VOC content (ready to use) not exceeding 10 gm/litre [Type of regulated paint under the Air Pollution Control (volatile organic compounds Regulation of Hong Kong: (waterproofing sealer)].   |
| MECHANICAL /<br>PHYSICAL PROPERTIES | COMPRESSIVE STRENGTH  |
|                                     | (According to EN 196-1)   |
|                                     | 3 days ~ 20 N/mm <sup>2</sup>   |
|                                     | 28 days ~ 35 N/mm <sup>2</sup>  |
|                                     | FLEXURAL STRENGTH   |
|                                     |   |
|                                     | (According to EN 196-1)   |
|                                     | (According to EN 196-1)<br>3 days ~ 6 N/mm <sup>2</sup>   |

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# **TENSILE STRENGTH**

Cured in water : ~  $3.2 \text{ N/mm}^2$  after 14 days exposure (According to DIN 53455) Cured in air : ~  $4.5 \text{ N/mm}^2$  after 14 days exposure

## **BOND STRENGTH**

~ 1 N/mm<sup>2</sup> (failure in substrate)

# THERMAL EXPANSION

13 x 10<sup>-6</sup> per °C

# CARBON DIOXYDE DFFUSION COEFFICIENT (µCO2)

~ 35,000

## WATER VAPOUR DIFFUSION COEFFICIENT (µH2O)

~ 500

## E-MODULUS

~ 8,4 kN/mm<sup>2</sup> (Static)

| SYSTEM INFORMATIO   | N  |
|---------------------|--|
| APPLICATION DETAILS | CONSUMPTION / COVERAGE   |
|                     | Dependent on the application area, substrate roughness, surface profile and thickness, consumption for one coat is : -   |
|                     | <ul> <li>Waterproofing for bathrooms, terraces and balconies, etc.</li> <li>~ 1.0 kg/m<sup>2</sup></li> </ul>  |
|                     | <ul> <li>Waterproofing coating over 1 m waterhead</li> <li>~ 2.0 kg/m<sup>2</sup></li> </ul>   |
|                     | Note:  |
|                     | <ul> <li>SikaTop<sup>®</sup> Seal -107 must be applied in minimum 2 coats.</li> <li>3 coats may be required in areas of extremely high infiltration.</li> </ul>  |
|                     | SURFACE QUALITY  |
|                     | The substrate must be structurally sound and free of all traces of<br>contaminants, loose and friable particles, cement laitance, sharp edges,<br>oils and grease, etc.  |
|                     | The concrete "pull off" (tensile adhesive) strength must be > $1 \text{ N/mm}^2$ .   |
|                     | SURFACE PREPARATION  |
|                     | General:   |
|                     | The substrate must be prepared by suitable mechanical preparation<br>techniques such as high pressure water jetting, needle guns, blastcleaning,<br>scabblers, etc. and properly pre-wetted to a saturated surface dry<br>condition. |



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#### For pore / blowhole filling:

Blast clean 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.

Absorbent surfaces have to be thoroughly saturated with water prior to application of first coat of SikaTop<sup>®</sup> Seal -107. However no standing water should be on the surface before application.

All intersections of horizontal and vertical surfaces should be profiled with a mortar fillet of 25mm x 25mm

#### SUBSTRATE TEMPERATURE

+8°C min. / +35°C max.

#### AMBIENT TEMPERATURE

+8°C min. / +35°C max.

#### APPLICATION INSTRUCTIONS

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.

#### **MIXING RATIO**

MIXING

Used as slurry : A : B = 1 : 4 (by weight) Used as mortar: A : B = 1 : 4.5 (by weight)

#### **MIXING TIME**

~ 3 minutes

#### **MIXING TOOLS**

SikaTop<sup>®</sup> 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**

The surface must be pre-wetted to a saturated surface dry condition with no standing water at time of application.

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#### As a slurry:

Apply the mixed SikaTop<sup>®</sup> Seal -107 by hand or spray using a stiff brush or roller or broom in the same direction. Apply the second coat of SikaTop<sup>®</sup> Seal -107 in crosswise direction to the first application as soon as first coat has hardened.

#### As a mortar:

When SikaTop<sup>®</sup> 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 (A : B =1 : 4.5). Apply the second coat of SikaTop<sup>®</sup> Seal -107 as soon as the first coat has hardened. For pore / blowhole filling, tightly trowel into the pores / blowholes of the surface.

For floor applications, it is recommended to apply the second coat within 24 hours to avoid damage to the first coat. If the second coat is applied 12 hours or later, the first coat shall be slightly prewetted, preferably by using a fine spray. A better finish can be achieved by rubbing down with a soft, dry sponge after applying the second coat.

For more details, please contact our Technical Services Department.

#### POT LIFE

~ 30 minutes at +30°C.

(Pot life will be shortened at higher temperatures.)

#### WAITING TIME

Waiting time between coats:

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

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

#### OVERCOATING

For overcoating with cementitious materials, please ensure SikaTop<sup>®</sup> Seal - 107 is hardened and strong enough to hold the topping materials.

For use in water-retaining structures or for applying renders over it or for overcoating with non-cementitious materials, please consult our Technical Services Department.

#### CURING

For cement based products, proper curing is important. Protect newly applied SikaTop<sup>®</sup> Seal -107 against direct sunlight, wind, rain and frost to ensure full cement hydration and minimise cracking.

#### **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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| NOTES ON APPLICATION / | SikaTop <sup>®</sup> Seal -107 is not a decorative treatment and may display signs of  |
|------------------------|--|
| LIMITATIONS            | " blooming" after rain or in damp weather. This does not affect the performance of the coating, in any way. Where SikaTop <sup>®</sup> Seal -107 will be |
|                        | visible after completion of the works, then the off-white colour, which is   |
|                        | aesthetically more pleasing should be used. Where a decorative finish is   |
|                        | required, overpaint SikaTop <sup>®</sup> Seal-107 with approved protective and   |
|                        | decorative coating is recommended.   |
|                        | Avoid application in direct sun and /or strong wind. Do not add water in any   |
|                        | circumstances. Apply only to sound, prepared substrates and surfaces   |
|                        | should be well dampened but free of surface water and leaks.   |
|                        | Protect freshly applied material from direct rain for at least 4 hours.  |
|                        |  |
|                        | SikaTop <sup>®</sup> Seal-107 does not provide a trafficable finish, it should cover with protective screed where necessary.                             |
|                        | protective screed where necessary.   |
|                        | Sika Seal Tape S is recommended to be used as a component of a composite   |
|                        | sealing system in conjunction with waterproof tile adhesive and ceramic  |
|                        | tiles to achieve water tightness in wet rooms and around wet areas.  |
|                        | SikaTop <sup>®</sup> Seal -107 will not bond well to surfaces that have been treated   |
|                        | previously with water repellent.   |





| 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<br>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-<br>use of Sika products, are given in good faith based on Sika's current knowledge and experience<br>of the products when properly stored, handled and applied under normal conditions in<br>accordance with Sika's recommendations. In practice, the differences in materials, substrates<br>and actual site conditions are such that no warranty in respect of merchantability or of fitness<br>for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be<br>inferred either from this information, or from any written recommendations, or from any other<br>advice offered. The user of the product must test the product's suitability for the intended<br>application and purpose. Sika reserves the right to change the properties of its products. The<br>proprietary rights of third parties must be observed. All orders are accepted subject to our<br>current terms of sale and delivery. Users must always refer to the most recent issue of the local<br>Product Data Sheet for the product concerned, copies of which will be supplied on request. It<br>may be necessary to adapt the above disclaimer to specific local laws and regulations. Any<br>changes to this disclaimer may only be implemented with permission of Sika <sup>®</sup> Corporate Legal<br>in Baar. |

# FOR MORE PRODUCT NAME® INFORMATION:







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