



SikaTop® Seal 107

Flexible, waterproofing and protective slurry mortar

DESCRIPTION

SikaTop Seal 107 is a two-component, polymer-modified, cementitious waterproofing and protective slurry mortar for concrete. It is slightly flexible to tolerate fine cracks and suitable in both interior and exterior applications.

ADVANTAGES

- SikaTop Seal 107 provides the following beneficial properties:
- s Improves the watertightness of water-containing concrete tanks, reservoirs, and clearwells.
 - s Protects against water penetration, yet water vapor permeable (breathable).
 - s Excellent freeze/thaw resistance.
 - s Good adhesion to sound, prepared substrates.
 - s Easy and fast mixing and application.
 - s Good abrasion resistance.
 - s Protects against concrete carbonation (80 mils SikaTop Seal 107 is equivalent to 6 inches of concrete).
 - s Can be mixed to slurry or trowelable consistency.
 - s Improves concrete/masonry appearance.
 - s Available in concrete gray and off-white.
 - s Approved for potable water contact.

WHERE TO USE

- s Horizontal surfaces subjected to light foot traffic (balconies).
- s For waterproofing of drinking water, tanks, reservoirs, and clearwells.
- s For internal and external waterproofing and dampproofing concrete, mortar blockwork and brickwork.
- s For protection of concrete structures against the deleterious effects of deicing salts and freeze/thaw cycles.
- s For sealing "hairline" cracks in concrete structures not subject to movement surfaces.
- s For interior and exterior waterproofing of basements.
- s Vertical surfaces.

COVERAGE

- s For dampproofing: apply one coat at 40 mils.
- s For waterproofing: apply two coats at 40 mils per coat.

Theoretical thickness (wet film) on smooth substrates:
 40 sq.ft./gal. = 40 mils (2 kg/m² = 1 mm)
 The above figures are theoretical and do not allow for substrate profile and wastage. Three coats may be required in areas of extremely high water infiltration.

- s Balcony waterproofing: apply one coat at 25 sq.ft./gal.

TYPICAL DATA FOR SIKATOP SEAL 107 (Material and curing conditions @ 73F and 50% R.H.)																											
SHELF LIFE	1 year when unopened. Protect Component 'A' from freezing and Component 'B' from moisture.																										
STORAGE CONDITIONS	Store dry at 40-95F (4-35C). Condition material to 65-75F before using.																										
COLORS	Concrete gray and off white.																										
MIXING RATIO	Component 'A': Component 'B' Slurry consistency 1:4.1 by weight (full unit) Trowelable consistency 1:4.5 by weight (90% liquid to full bag)																										
DENSITY (WET MIX)	125 lbs./cu.ft. (2.0 kg/l) = 16.6 lbs./gal.																										
WORKING TIME	Approximately 60 minutes at 68F Approximately 30 minutes at 86F																										
COMPRESSIVE STRENGTH (ASTM D-695) @ 28 DAYS	<table border="0"> <tr> <td>Type White</td> <td>3,000 psi</td> <td>(20.7 MPa)</td> </tr> <tr> <td>Type Gray</td> <td>3,400 psi</td> <td>(23.4 MPa)</td> </tr> </table>			Type White	3,000 psi	(20.7 MPa)	Type Gray	3,400 psi	(23.4 MPa)																		
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TENSILE STRENGTH (ASTM C-307) 28 DAYS	<table border="0"> <tr> <td>White</td> <td>870 psi</td> <td>(6.0 MPa)</td> </tr> <tr> <td>Gray</td> <td>990 psi</td> <td>(6.8 MPa)</td> </tr> </table>			White	870 psi	(6.0 MPa)	Gray	990 psi	(6.8 MPa)																		
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BOND STRENGTH (ACI 503R-30 Modified): Pull-off test	28 days 180 psi (1.25 N/mm ²)																										
FLEXIBILITY (ASTM D522 Modified)	Approximately 25%																										
WATERTIGHTNESS UNDER HYDROSTATIC PRESSURE (DIN 1048 mod.)	<table border="0"> <thead> <tr> <th rowspan="2">Water Pressure feet (bar)</th> <th colspan="2">Penetrated Water</th> <th colspan="2">Water Absorption</th> </tr> <tr> <th>grains</th> <th>(grams)</th> <th>$\frac{\text{grains}}{\text{ft}^2 \cdot \text{hours}}$</th> <th>$\left(\frac{\text{grams}}{\text{m}^2 \cdot \text{hours}}\right)$</th> </tr> </thead> <tbody> <tr> <td>16 (0.5)</td> <td>0</td> <td>(0)</td> <td>0</td> <td>(0)</td> </tr> <tr> <td>33 (1)</td> <td>15</td> <td>(1)</td> <td>3</td> <td>(2)</td> </tr> <tr> <td>99 (3)</td> <td>31</td> <td>(2)</td> <td>10</td> <td>(7)</td> </tr> </tbody> </table> <p>Rendering mortars absorbing less than 91 grains/ft²·h (64 grams/m²·h) are considered watertight.</p>			Water Pressure feet (bar)	Penetrated Water		Water Absorption		grains	(grams)	$\frac{\text{grains}}{\text{ft}^2 \cdot \text{hours}}$	$\left(\frac{\text{grams}}{\text{m}^2 \cdot \text{hours}}\right)$	16 (0.5)	0	(0)	0	(0)	33 (1)	15	(1)	3	(2)	99 (3)	31	(2)	10	(7)
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VAPOR PERMEABILITY (ASTM E-96)	U.S. perms 28 days 18 (not a vapor barrier)																										
CARBON DIOXIDE DIFFUSION	Coefficient (μCO ₂) Approximately 35,000 equivalent to 6 inches of concrete																										
WATER VAPOR DIFFUSION	Coefficient (μH ₂ O) Approximately 500 ("breathable")																										

PACKAGING

- 44 lb. unit - when mixed yields 2.65 gallons (10 l)
- Component 'A' - 1 gal. plastic jug; 4/carton.
- Component 'B' - 35.5 lb. multi-wall bag.

HOW TO USE

SUBSTRATE PREPARATION

Concrete, mortar and masonry surfaces must be clean, free from grease, oil and loosely adhering particles. Steel and iron

surfaces must be free from scale, rust, grease and oil. All surfaces must be as true and flat as possible. An open-textured, sandpaper-like substrate is ideal (CSP-4). All surfaces must be saturated surface dry (SSD), with no standing water at time of application.

It is necessary to stop water ingress prior to the application of SikaTop Seal 107. Use a quick setting, waterproof slurry (SikaSet) to seal water leaks.

MIXING

The consistency of the mix can be altered by reducing the amount of Component 'A' (liquid) to be used. Under normal circumstances, when the full quantities of both components are mixed together, a slurry consistency will result. For a trowelable consistency use only 90% of component 'A'. Mix in a clean container by slowly adding the powder component to the liquid component and mixing with slow speed drill and mixing paddle.

APPLICATION

SikaTop Seal 107 can be applied by trowel, notched trowel, stiff bristle, or spray equipment. Work the material well into the prepared substrate, filling all pores and voids.

For brush consistency: Apply the first coat of SikaTop Seal 107 with horizontal brush strokes and leave to harden (4 to 8 hours). Apply the second coat with vertical brush strokes.

For trowel consistency: Apply the first coat with a notched trowel and leave to harden (4 to 8 hours). Apply the second coat with a flat trowel.

For spray application: Use a hopper gun spray equipment, textured sprayer (e.g. Texspray E110c), or a rotor/stator pump equipment. Allow the first coat to harden (4 to 8 hours) prior to the application of the second coat.

As soon as the mortar layer starts to set, a uniform surface texture can be obtained by rubbing the surface with a fine sponge or a plastic trowel. Do not

overwork SikaTop Seal 107 during finishing and avoid the use of additional water.

Where required, a third coat of SikaTop Seal 107 may be applied no later than 24 hours after the second coat (in this case, do not trowel or sponge finish the second coat). If intercoat period exceeds 24 hours, light grit blasting is required prior to further application.

Balcony Waterproofing Layer:

Fill in any spalled areas in the existing substrate with the appropriate Sika repair mortar as required. Apply an appropriately sized closed cell backer rod along transition (wall-slab) to prevent three-sided adhesion. Apply a continuous cant bead of Sikaflex 11FC or Sikaflex 2C, to a depth of 1/8" minimum and 1/2" thickness. Allow sealant to cure sufficiently.

Substrate must be SSD with no standing water at time of application. Apply a 1/16" thick layer of SikaTop Seal 107 over the entire balcony. While the material is still wet apply a "360 degree pull" non-alkaline, woven fiberglass mesh (as manufactured by Bayex, Div. of Bay Mills, Midland, Ontario) to reinforce the 107 layer along static hairline cracks, wall to slab transitions and patched areas. Using trowels remove any wrinkles in the mesh by forcing down into the SikaTop Seal 107. Ensure the mesh is completely embedded and covered with SikaTop Seal 107. If any areas are not covered apply additional SikaTop Seal 107 over top of mesh to cover. Trowel to a smooth uniform finish. Allow curing so that surface can take foot traffic without harming the coating. For a decorative, protective finish, SikaColor Balcony system is then applied.

CURING

As with all cement based products, curing is important. Protect newly applied product against direct sunlight, wind, rain and frost.

LIMITATIONS

s If rain is anticipated within 1-2 days after application, the surface should be protected in order to

CAUTION

Component 'A' - Irritant - May cause skin/eye/ respiratory irritation. Avoid breathing vapors. Use with adequate ventilation. Avoid skin and eye contact. Safety goggles and rubber gloves are recommended.

Component 'B' - Irritant; suspect carcinogen - Contains portland cement and sand (crystalline silica). Skin and eye irritant. Avoid contact. Dust may cause respiratory tract irritation. Avoid breathing dust. May cause delayed lung injury (Silicosis). IARC lists crystalline silica as having sufficient evidence of carcinogenicity in laboratory animals and limited evidence of carcinogenicity in humans. NTP also lists crystalline silica as a suspect carcinogen. Use of safety goggles and chemical resistant gloves is recommended. If PELs are exceeded, an appropriate, NIOSH/MSHA approved respirator is required. Remove contaminated clothing.

FIRST AID

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for 15 minutes, and contact a physician. For respiratory problems, remove person to fresh air.

CLEAN UP

In case of spillage, scoop or vacuum into appropriate container, and dispose of in accordance with current, applicable local, state and federal regulations. Keep container tightly closed and in an upright position to prevent spillage and leakage.

Mixed components: Uncured material can be removed with water. Cured material can only be removed mechanically.

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**KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION**

CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

**KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY**

Sika warrants its products to be free from manufacturing defects and to meet Sika's current published properties when applied in accordance with Sika directions and tested in accordance with ASTM and Sika Standards. User determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product and excludes labor or the cost of labor. Any claim for breach of this warranty must be brought within one year of the date of purchase.

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