

PRODUCT DATA SHEET

SikaTop[®]-109 Seal IN

High performance flexible acrylic cementitious waterproofing coating (Formerly SikaTop[®] Seal-109 hi)

DESCRIPTION

SikaTop[®]-109 Seal IN is an elastomeric, liquid applied, crack bridging, two part high performance acrylic polymer modified cementitious waterproofing coating system with high degree of flexibility. It comprises of a liquid polymer and a cement based mix incorporating special admixtures. It is applied to concrete and mortar to prevent water infiltration, particularly in demanding applications and difficult environments.

USES

- Waterproofing applications for various structures such as:
 - Raw water concrete tanks, reservoirs, waste water tanks
 - Terraces, balconies, sunshades, etc.
 - Flat and small roofs
 - Basement and Retaining walls
 - Swimming pools, fountains, water bodies, canals
 - RCC gutters, drains and planter boxes
 - Wet areas like toilets, kitchen, utility, sunk slabs
 - Lift pits, sump, etc.
- 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
- Pore / blowhole filling
- Sealing fine static cracks in concrete structures not subject to movement
- Sealing internal basement walls against dampness

CHARACTERISTICS / ADVANTAGES

- Easy to apply by brush, spray or flat trowel
- No additional water is required to make the slurry
- Pre-batched components with consistent quality
- Easy and fast mixing
- Highly water resistant, reduces saltpetre action and prevents carbonation
- Protects concrete from chloride penetration
- Non-corrosive to steel and iron
- Very flexible, good elongation
- Bonds well to all damp substrates
- Good abrasion resistance
- Good adhesion to reinforced concrete, mortar or masonry
- Fast curing

PRODUCT INFORMATION

| | | |
|---------------|--------|--|
| Chemical base | Part A | Acrylic polymer |
| | Part B | Portland cement with selected aggregates and additives |

| | | |
|----------------------------|---|-----------------|
| Packaging | Part A+B pre-batched | 50 kg set |
| | Part A | 20 kg container |
| | Part B | 30 kg bag |
| Appearance / Colour | Part A+B mixed | Grey slurry |
| | Part A | White liquid |
| | Part B | Grey powder |
| Shelf life | 12 months from date of production | |
| Storage conditions | The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +10 °C and +35 °C. Liquid component must be protected from frost. | |

TECHNICAL INFORMATION

| | | |
|--|---|-----------------|
| Tensile strength | ≥ 1.8 N/mm ² | (ASTM D412) |
| Elongation at break | ~180 % | (ASTM D412) |
| Tensile adhesion strength | ≥ 1.2 N/mm ² (dry concrete substrate) | (EN 1542) |
| Behaviour after artificial weathering | No chalking or cracking on the film when tested for 500 hours | (IS 101) |
| Water penetration under pressure | ~0 mm penetration at 5 bar for 72 h | (BS EN 12390-8) |

SYSTEM INFORMATION

| | | |
|---|--------------|----------------------|
| System structure | Layer | Product |
| | Base coat | SikaTop®-109 Seal IN |
| | Top coat | SikaTop®-109 Seal IN |
| <p>IMPORTANT For larger application areas and high demanding applications, use a glass fabric reinforcement Sika® Fabric-50 between the coats. For normal exposures, usage of Sika® Fabric-50 is optional.</p> | | |

APPLICATION INFORMATION

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|---|---------------------------------------|--------------------------|------------------------|
| Fresh mortar density | ~1.65 kg/L (Part A+B mixed, +27 °C) | | (EN ISO 2811-1) |
| Consumption | Layer | Product | Consumption |
| | Base coat | SikaTop®-109 Seal IN | ~1 kg/m ² |
| | Top coat | SikaTop®-109 Seal IN | ~1.2 kg/m ² |
| <p>Note: The consumption will vary depending on application area, substrate type, substrate roughness, surface profile, absorption of the surface and thickness required.</p> | | | |
| Ambient air temperature | +10 °C min. / +40 °C max. | | |
| Mixing ratio | Part A : Part B = 1 : 1.5 (by weight) | | |
| Substrate temperature | +10 °C min. / +40 °C max. | | |
| Pot life | ~40 minutes (100 g mass, +27 °C) | | |
| Waiting time / Overcoating | Base layer | Overcoating layer | Waiting time |
| | SikaTop®-109 Seal IN | SikaTop®-109 Seal IN | ~4-6 hours |
| | SikaTop®-109 Seal IN | Screed / Plaster | ~5-7 days |
| <p>Note: Above values are at +30 °C and 50 % relative humidity. Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.</p> | | | |

BASIS OF PRODUCT DATA

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.

FURTHER DOCUMENTS

Sika Method Statement : SikaTop®-109 Seal IN

ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

Mixing

- Electric drill paddle mixer (> 700 W, 300 to 500 rpm)

Application

- Hard bristled brush
- Squeegee
- Flat trowel

SUBSTRATE QUALITY / PRE-TREATMENT

- The concrete substrate must be sound and with a minimum pull off strength of 1.5 N/mm².
- The substrate must be free of all traces of contaminants, loose and friable particles, cement laitance, oils and grease, wax, curing compounds, water repellent coatings etc.
- The substrate must be prepared by suitable mechanical preparation techniques such as high pressure water jetting, needle guns, grinding, blast cleaning etc.
- High spots must be removed by grinding.
- Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed.
- Repairs to the substrate, filling of blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor®, Sikadur® and Sikagard® range of materials.
- All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.
- Any wax based curing compounds or water repellent coatings must be fully removed by scraping or grinding.
- All intersections of horizontal and vertical surfaces should be profiled with a mortar fillet of minimum 25 mm x 25 mm.

MIXING

IMPORTANT

Do not add water in any circumstances.

Waterproofing coating

1. Pour full quantity of SikaTop®-109 Seal IN Part A into a clean mixing container.
2. While stirring slowly, add SikaTop®-109 Seal IN Part B.
3. Mix thoroughly for 3 minutes, until free from lumps and smooth consistency is achieved.

Waterproofing mortar

1. Pour 90 % of SikaTop®-109 Seal IN Part A into a clean mixing container.
2. While stirring slowly, add SikaTop®-109 Seal IN Part B.
3. Mix thoroughly for 3 minutes, until free from lumps and smooth consistency is achieved.

APPLICATION

IMPORTANT

SikaTop®-109 Seal IN may display signs of “blooming” after rain or in damp weather. This does not affect the performance of the coating in any way.

IMPORTANT

Do not apply in direct sun and/or strong wind.

IMPORTANT

In areas of severe water penetration, three coats might be required.

IMPORTANT

Protect freshly applied material from freezing conditions, rains etc.

Waterproofing coating

1. Thoroughly pre-wet the prepared substrate (2 hours recommended) before application. Keep the surface wet and do not allow to dry. Before application remove excess water, e.g. with a clean sponge. The surface must appear a dark matt appearance without shining and surface pores and cavities must not contain water.
2. Apply the first coat of SikaTop®-109 Seal IN with a hard bristled brush applied in the same direction and leave to harden for 4 to 6 hours.
3. (Optional) Wherever coating is to be reinforced with glass fabric, lay Sika® Fabric-50 into the freshly applied base coat and embedded firmly into the wet coat with brush.
4. Apply the second coat of SikaTop®-109 Seal IN in crosswise direction to the first application as soon as first coat has hardened.

Waterproofing mortar

1. Thoroughly pre-wet the prepared substrate (2 hours recommended) before application. Keep the surface wet and do not allow to dry. Before application remove excess water, e.g. with a clean sponge. The surface must appear a dark matt appearance without shining and surface pores and cavities must not contain water.
2. Apply the first coat of SikaTop®-109 Seal IN by a flat trowel applied in the same direction and leave to harden for 4 to 6 hours. For pore / blowhole filling, tightly trowel into the pores / blowholes of the surface.
3. (Optional) Wherever coating is to be reinforced with glass fabric, lay Sika® Fabric-50 into the freshly applied base coat and embedded firmly into the wet coat with trowel.
4. Apply the second coat of SikaTop®-109 Seal IN in

crosswise direction to the first application as soon as first coat has hardened.

Note:

If the second coat is applied 12 hours or later to first coat, the first coat shall be slightly pre-wetted by using a fine spray.

IMPORTANT

Slight fabric marks may be visible after application of the second coat, but it will have no adverse bearing on the performance of the waterproofing system.

Protection

1. The top coat while wet, it is recommended to sprinkle clean quartz sand (specially for vertical surfaces).
2. Once top coat has sufficiently cured, apply protection plaster, mortar, screed or any other adhesive layer. A bonding agent may be necessary.

CURING TREATMENT

Cure SikaTop®-109 Seal IN for minimum 5-7 days to ensure full cement hydration and minimise cracks. Use wet hessian cloth, spray curing or similar approved methods during the recommended period of curing.

CLEANING OF TOOLS

Clean all tools and application equipment with water immediately after use. Hardened 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 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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Product Data Sheet
SikaTop®-109 Seal IN
October 2024, Version 04.01
020701010020000224

SikaTop-109SealIN-en-IN-(10-2024)-4-1.pdf