

Construction

Sikalastic®-150

Highly elastic cement based waterproofing coating

Product Description

Sikalastic®-150 is a two-pack elastic fibre-reinforced, cement based flexible waterproofing coating.

Uses

Due to its high elasticity, Sikalastic®-150 is applicable on different structures including those subject to thermal movement and vibration such as:

- Waterproofing and protection of hydraulic structures like water storage tanks, swimming pools, concrete pipes, bridge parapets, water canals, etc;
- Waterproofing and protection of external walls to be buried below ground;
- Internal waterproofing against hydrostatic water pressure of walls and floors in basements and other below ground structures;
- Waterproofing of terraces and balconies on concrete and old tiles substrates;
- Protection of exposed and weathered, new and existing concrete surfaces, as a flexible, anti-carbonation, chloride and sulphate resistant coating. Also for sealing of concrete surfaces cracked by plastic and hydraulic surface shrinkage;
- Elastic coating of precast concrete surfaces, subject to flexural loading and vibration, etc.

Characteristics / Advantages

- Easy application by metal spatula, roller or flat brush, sprayed, even onto vertical walls and ceiling;
- Capable of accommodating substrate flexural strains;
- Crack bridging capability, even on existent cracks or cracks that might open after the product application;
- Optimum adhesion onto almost all substrate, such as for instance concrete, cementitious mortars, stone, ceramics, bricks and wood.
- Certified for use in contact with Potable water (AS4020:2005)

Tests

Approvals / Standards

ARPA, Italy: Certificate for drinking water, water permeability (direct & negative pressure), crack bridging;
Istituto di Ricerche E Collaudi: Elastic Modulus;
Politecnico di Milano: Bonding in immersed conditions (various medias).

Product Data

Form

Colour

Grey

Packaging

Liquid, component A: 6.4 kg
Powder, component B: 20 kg



Storage

Storage Conditions / Shelf Life 12 months from date of production if stored in undamaged original sealed containers, in dry conditions and protected from direct sunlight at temperatures between +5°C and +30°C.

Technical Data

Chemical Base	Liquid component: Acrylic emulsion Powder component: Cement, special aggregates, fibres and additives
Density	Fresh mortar: 1.7 ± 0,1 kg/l (EN 12190)
Grading	D _{max} : 0.5 mm (EN 12192-1)
Layer Thickness	For effective waterproofing: 3 - 4 mm in total (2 mm max per coat)
Water Penetration under Hydrostatic Pressure	Positive hydrostatic pressure: tested at 0.7 MPa without absorption (DIN 1048) Negative hydrostatic pressure: tested at 0.1 MPa without leakage

Mechanical / Physical Properties

Bond Strength	~ 0.5 N/mm ² (+23°C/50% r.h.) (EN 1542)
E-Modulus	~ 16.64 N/mm ² (+23°C/50% r.h.) (obtained linearizing the initial portion of load/deformation curve)
Crack Bridging Capacity	1.63 mm (non reinforced concrete, pre-cracked concrete) (+23°C/50% r.h.) 1.57 mm (non reinforced concrete, non cracked concrete) (+23°C/50% r.h.)

System Information

Application Details

Consumption / Dosage This depends on the substrate roughness and thickness of layer applied. As a guide, ~ 1.7 kg of Sikalastic®-150 per m² per mm thick.

For the recommended thickness of 3 to 4 mm, 1 x 26.4kg unit of Sikalastic®-150 yields covers ~ 3.5 to 5 m².

Substrate Quality The concrete must be dry, structurally sound, laitance free, clean and free from dirt, oil, grease or other contaminants and loose or friable particles.

Tiled surfaces must be free of loose tiles and deteriorated joint.

Substrate Preparation *Concrete surface:*
The substrate shall be prepared by suitable mechanical techniques such as high pressure water jetting, needle guns, grit blasting, hammers, etc. The substrate must be dry or slightly wet.

Tiling floor/walls:
Wire-brush, grind and vacuum the ceramic tiles to remove dust, traces of oils or grease and any other contaminants (the substrate must be dry).

Substrate levelling / repair and pre-treatment:
Large and deep voids and defective areas (honeycombing, broken edges, formwork spacer holes, etc.) shall be repaired with a suitable Sika® MonoTop, SikaTop® mortar (refer to the relevant technical data sheets).

For technically correct waterproofing in swimming pools, tanks, basement rooms, etc., corner fillets between the floors and walls shall be made using an appropriate Sika® mortar such as Sika® MonoTop.

Joints in concrete, pipe entries, lights and electrical installations in the surfaces must also be sealed by suitable means.



Application Conditions / Limitations

Substrate Temperature +8°C min. / +35°C max.

Ambient Temperature +8°C min. / +35°C max.

Relative Air Humidity < 75% r.h.

Application Instructions

Mixing Sikalastic®-150 shall be mixed with a low speed (< 500 rpm) electric drill mixer.
Pour the liquid component A into a suitable mixing container. While stirring slowly, add the powder component B to component A. Mix thoroughly for at least 3 minutes to the required consistency.

Application Method / Tools

Application by trowel:

Apply the first coat of Sikalastic®-150 using a notched (3x3 mm) trowel, with firm even pressure onto the substrate in order to achieve a regular, consistent thickness. As soon as the first layer has hardened, apply the second coat of Sikalastic®-150 by trowel, taking care to achieve a uniform and continuous layer, which totally covers the first one. Maximum recommended thickness for each coat is 2 mm.

In highly stressed areas a special alkali-resistant glass fibre fabric (150 - 160 g/m² and 0.47 mm thick) shall be placed into the first fresh mortar layer. It shall be well trimmed and fully embedded into the mortar avoiding the formation of voids in the coating.

To achieve a smooth surface, do not sand or grind the material until it has fully hardened, as this may damage the waterproofing capability. Wait until fully hard and then remove any irregularities in the top surface by grinding as required.

Roller or spray application:

Sikalastic®-150 shall be applied by roller or with suitable mortar spray equipment, applying approximately 2 mm thickness in each coat. Higher thicknesses must be built up in layers and applied when the previous layer is set (hard to the finger nail). Any additional finishing shall then be carried out as above.

Tiling Works:

Ceramic tiles and vitreous tile mosaics can be applied over Sikalastic®-150 using a suitable cementitious tile adhesive (e.g. cement based tile adhesive complying with C2 class as per EN 12004 - cementitious medium-elasticity adhesive). Tile joint shall be filled with the relevant Sikaceram tile grout.

Cleaning of Tools

Tools shall be thoroughly cleaned with water before material setting. Hardened mortar can be only mechanically removed.

Potlife

~ 1 hours at +20°C

Waiting Time / Overcoating

Immersion:

Sikalastic®-150 must have hardened sufficiently before overcoating or immersion.

The following waiting times can be used as a guide:

Action	Waiting time at +20°C	Waiting time at +10°C
Tiling works in horizontal	~ 7 days	~ 14 days
Tiling works in vertical	~ 3 days	~ 7 days
Overcoating with emulsion paint	~ 3 days	~ 7 days
Overcoating with solvented paint	~ 7 days	~ 14 days
Immersion in water	~ 7 days	~ 14 days



Notes on Application / Limitations	<p>Do not add extra water or other ingredients; each unit must be mixed and used in full. Mixing only parts of units can cause poor particle size distribution and therefore inadequate waterproofing performance;</p> <p>Avoid application in, and protect freshly applied material from direct sunlight and/or strong winds;</p> <p>Sikalastic®-150 hardens more slowly when there is a high environmental humidity level, i.e. in closed or inadequately ventilated rooms and basements;</p> <p>Avoid direct contact with chlorinated swimming pool water by overcoating with a one-component protective coating for swimming pools, or with an appropriate tiled surface;</p> <p>Sikalastic®-150 shall not be applied on wet substrates because this can reduce adhesion or slow the hardening time of the material;</p> <p>Freshly applied Sikalastic®-150 shall be protected from rain for at least 24 hours at 20°C;</p> <p>When overcoating with solvented paints, always carry out preliminary trials to ensure that the solvent does not affect the integrity of the waterproofing layer.</p>
Value Base	<p>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.</p>
Health and Safety Information	<p>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.</p>
Legal Notes	<p>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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms and conditions of sale. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.</p> <p>PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.</p>

