

PRODUCT DATA SHEET

Sikalastic®-156

CEMENT MORTAR WITH HIGH CRACK BRIDGING PERFORMANCES FOR FLEXIBLE WATERPROOFING AND PROTECTION OF CEMENT BASED SUBSTRATES



DESCRIPTION

Sikalastic®-156 is a two component fibre-reinforced mortar, with very high flexibility, based on cement modified with special alkali-resistant polymers, containing fine particle size selected aggregates and adequate additives for waterproofing beneath ceramic tiles and for waterproofing for waterproofing and protection of concrete subgrades subjected to flexural strain and high positive hydrostatic pressure.

USES

- Suitable for protection against ingress (Principle 1, Method 1.3 of EN 1504-9:2008). It creates a carbon dioxide barrier coating;
- Suitable for moisture control (Principle 2, Method 2.3 of EN 1504-9:2008);
- Suitable for increasing resistivity (Principle 8, Method 8.3 of EN 1504-9:2008);
- Waterproofing of cement based surfaces exposed to weather attacks and sea water contact;
- Protective, flexible and anti carbonation coating for concrete surfaces, also damaged from plastic and hydraulic shrinkage;
- Flexible coating of concrete structures, also subjected to flexural strain;
- Waterproofing of hydraulic structures such as: basins, tanks, swimming pools, concrete piping, bridges and canals, also immersed in sea water;
- Waterproofing of terraces and balconies with concrete or old tiles subgrades, before the application of ceramic tiles bonded with adhesives;
- Waterproofing of hydraulic structures subject to hydraulic high positive & negative pressure.

CHARACTERISTICS / ADVANTAGES

- Very good crack bridging properties
- Flexible waterproofing. Grid is not mandatory
- Applicable also on lightly humid subgrades
- Quick hardening
- Non sagging: easy application also on vertical walls
- Excellent adhesion onto almost all subgrades, such as for instance concrete, cement mortars, stone, ceramics and bricks
- High resistance against de-icing salts and carbon dioxide
- High resistance to UV and weathering

SUSTAINABILITY

- Conformity with LEED v4 MRc 2 (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations

APPROVALS / CERTIFICATES

- Fiber-reinforced, two components, cement-based mortar for waterproofing and concrete protection, meeting the requirement of EN 1504-2:2004. Principles 1, 2 and 8 - Methods 1.3, 2.3, 8.3 of EN 1504-9:2008; certified by Factory Production Control Body No. 0546, certificate 18774, and provided with the CE-mark.
- Sikalastic®-156 fulfills the requirements of CMO2P class of EN 14891:2012 "Liquid applied water impermeable products for use beneath ceramic tiling bonded with adhesives"; certified by notified testing laboratory Lab. Modena Centro Prove S.r.l. No. 01599, test report No. 20142366, and provided with the CE-mark.
- DoP No. 02 07 01 01 002 0 000072 1026.

PRODUCT INFORMATION

Composition	Cement modified with polymers, selected aggregates and special admixtures.
Packaging	Ready batched 27.3 kg packs: comp. A (liquid): 6.3 kg; comp. B (powder): 21 kg
Appearance / Colour	Grey powder
Shelf life	12 months from date of production
Storage conditions	Store properly in undamaged original sealed packaging, in dry and cool conditions.
Density	Mixture: ~ 1.60 kg/L
Maximum Grain Size	D _{max} : 0.25 mm

TECHNICAL INFORMATION

Tensile Adhesion Strength	~ 1.3 MPa		(EN 1542)
	~ 1.23 MPa	After contact with salt water for 1 year	(EN 1542)
	~ 2.4 MPa*	Initial	(EN 14891 A.6.2.)
	~ 1.6 MPa*	After water contact	(EN 14891 A.6.3.)
	~ 2.9 MPa*	After heat ageing	(EN 14891 A.6.5.)
	~ 1.7 MPa*	After freeze-thaw cycles	(EN 14891 A.6.6.)
	~ 1.7 MPa*	After contact with lime water	(EN 14891 A.6.9.)
	~ 1.7 MPa*	After contact with chlorinated water	(EN 14891 A.6.7.)

* Values obtained with a total consumption of 4.0 Kg/m² in two layers.

Crack Bridging Ability	Dynamic:		
	Class B3.1	+23°C	(EN 1504-2)
	Class B2 ⁽²⁾	-20°C	
	Class B1	-20°C	
	Static:		
	Class A4	+23°C	(EN 1504-2)
	Class A3	-10°C	
	Class A4 ⁽²⁾	-20°C	
	~ 1.35 mm	+23°C	(EN 1062-7)
	~ 0.80 mm	-10°C	
	~ 1.44 mm ⁽²⁾	-20°C	
	~ 1.10 mm ⁽¹⁾	+23°C	(EN 14891 A.8.2)
	~ 0.88 mm ⁽¹⁾	-20°C	(EN 14891 A.8.3)
	~ 2.02 mm ⁽¹⁾⁽²⁾		

Total consumption of 4.8 Kg/m² in two layers.

⁽¹⁾ Total consumption of 4.0 Kg/m² in two layers.

⁽²⁾ Reinforced with Rete SikaTop® Seal-107 grid.

Reaction to Fire	Euroclass F	(EN 13501-1)
Freeze Thaw De-icing Salt Resistance	~ 2.0 MPa	(EN 13687-1)
Behaviour after Artificial Weathering	No blistering, cracking and flaking (2000 h UV and condensation)	(EN 1062-11,4.2)

Permeability to Water Vapour	Class I (permeable) S _D = ~ 1.02 m	(EN 1504-2) (EN ISO 7783)
Capillary Absorption	~ 0.02 kg m ⁻² h ^{-0.5}	(EN 1062-3)
Water Penetration under Pressure	no penetration	5 bar after 3 days on 1mm cracked specimen (UNI 12390-8)
	no penetration	5 bar after 3 days on undamaged specimen
	no penetration	1.5 bar after 7 days (EN 14891 A.7)
Water Penetration under Negative Pressure	no penetration	2.5 bar after 72 hours (UNI 8298-8)
Chloride Ion Diffusion Resistance	no penetration	(UNI 7928)
Permeability to Carbon Dioxide	S _D = ~ 277 m	(EN 1062-6)

APPLICATION INFORMATION

Mixing Ratio	Comp. A : Comp. B = 6.3 : 21 in weight		
Consumption	As a guide, 1.6 kg/m ² per mm of thickness.		
Ambient Air Temperature	+5°C min. / +35°C max.		
Substrate Temperature	+5°C min. / +35°C max.		
Pot Life	~ 60 min. at +20°C		
Waiting Time / Overcoating	Sikalastic®-156 must be properly hardened before overcoating or contact with water. The following waiting times can be used as a guide:		
		+20°C	+10°C
	Horizontal lining with tiles	~ 2 days	~ 7 days
	Vertical lining with tiles	~ 2 days	~ 3 days
	Coating by emulsion coat	~ 2 days	~ 3 days
	Immersion in water	~ 2 days	~ 7 days
<small>Waiting times may vary depending on humidity of environment and subgrade.</small>			

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

- The substrate must be structurally sound and free from dust, dirt, loose material, surface contamination as oil or grease, cement laitance.
- The substrate should be prepared by suitable mechanical preparation techniques, such as high water pressure or grit blasting, water jetting to remove all previous coatings, wire-brushing, sanding on ceramic tiles. Non impact/vibrating cleaning methods are preferred.
- Damaged, delaminated or weak concrete must be repaired using Sika MonoTop® mortars.
- For a correct waterproofing in swimming pools, basins, tanks, sub-basement rooms, it is useful to realize corner fillets between floor and wall using Sika MonoTop® mortars.
- Interruptions in concrete casting, pipes, lights and installations must be sealed with suitable means.
- Subgrade must be left naturally dry or humid, as it is. Don't dampen before application.
- Avoid ponding water or condensate before applica-

tion.

MIXING

Sikalastic®-156 can be mixed with a low speed (~ 500 r.p.m.) electric drill mixer. Shake carefully Comp. A before using. Then pour ~ ½ Comp. A into a suitable mixing container and add Comp. B slowly while mixing. When homogeneous, add the remaining amount of Comp. A and mix thoroughly at least for 3-4 minutes, until the proper lump-free consistency is reached. Do not add any additional water or other ingredients; each packaging unit must be entirely mixed, to avoid faulty particle size distribution of aggregates contained in the powder component.

APPLICATION

Application by metallic trowel

Apply Sikalastic®-156 using a notched (3x3 mm) trowel, with firm even pressure onto the substrate in order to achieve a regular, consistent thickness. Immediately sleek the product using the notched side of the trowel, to get an even thickness. As soon as the

first layer is hardened apply the possible second strate by spatula, taking care to get a homogeneous and continuous layer that covers the first one completely. The recommended total thickness for Sikalastic®-156 must be at least 3 mm as protective coating and 2.5 mm as waterproofing layer, minimum in 2 layers. Maximum recommended thickness per layer is 2 mm for both hand or spray application. Sikalastic®-156 can not be smoothened using float or sponge trowel. It's possible to smooth the surface, as soon as the curing of the product is complete, by light abrasion.

Application by spray

Sikalastic®-156 can be sprayed by a machine provided of suitable nozzle, in a thickness of max 2 mm for every single layer. Higher thickness must be applied in sequence, when the preceding layer starts hardening. Corresponding to possible floor joints and other critical zones (for instance interface with vertical surfaces), the waterproofing layer must be reinforced with Sika® SealTape S. It must be applied on a fresh first layer and then covered by a second layer. Corresponding to structural joints, the specific system of elastic junction Sikadur® Combiflex SG must be applied.

To achieve a smooth surface, do not sand or grind the material until it has fully hardened, because this may damage the waterproofing capability. Wait until it is fully hardened and then it is possible to remove any irregularities on the surface by light grinding.

Application of ceramic tiles on Sikalastic®-156:

Ceramic tiles and vitreous tile mosaics can be applied over Sikalastic®-156 using a suitable cement tile adhesive (e.g. cement based tile adhesive complying with C2 class as per EN 12004 - cement medium-elasticity adhesive). Tile joint shall be filled with the relevant Sika-Ceram® tile grout.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened material can only be mechanically removed.

IMPORTANT CONSIDERATIONS

- Protect from rain for at least 24 - 48 hours from application;
- Avoid direct contact with chlorinated swimming pool water using opportune tile line;
- Avoid application or protect freshly applied product from direct sunlight and/or strong wind;
- The hardening process is slower when there is a high environmental humidity level, e.g. in closed or inadequately ventilated rooms and basements. Ventilation methods are recommended;
- When overcoating with solvented paints, always carry out preliminary trials to ensure the solvent does not affect the integrity of waterproofing layer;
- When applied at high ambient temperatures, a light surface dampening can be necessary.

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.

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.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

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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