BUILDING TRUST

PRODUCT DATA SHEET

Sikalastic®-520 Fiber IT

FIBER REINFORCED LIQUID APPLIED WATERPROOFING MEMBRANE AND DECORATIVE ELASTOMERIC COATING

CE

DESCRIPTION

Sikalastic®-520 Fiber IT is a fiber reinforced, cold-applied, one-component waterborne liquid applied waterproofing membrane with improved mechanical performances and UV resistance.

USES

- Waterproofing of exposed bituminous membranes.
- High strenght waterproofing and coating for exposed concrete roofs.
- Under-tile waterproofing on concrete terraces and balcony.
- Waterproofing of terraces and balconies exposed to light pedestrian traffic.

CHARACTERISTICS / ADVANTAGES

- Improved resistance to walking stress
- Liquid applied single component membrane
- High concrete protection due to low permeability to CO_2
- Water-based, low environmental impact, low VOC
- No-flame technology
- Excellent waterproofing performance
- High resistance to weathering
- Good adhesion on most of building materials
- Easy application by roller, brush, trowel

SUSTAINABILITY

Conformity with LEED v2009 IEQc 4.2: Low-Emitting Materials - Paints and Coatings

APPROVALS / CERTIFICATES

- CE-marking and Declaration of Performance as surface protection product (C) for concrete - coating for ingress protection (PI), moisture control (MC) and increasing resistivity (IR) according to EN 1504-2:2004, based on certificate of factory production control issued by notified factory production control certification body and type testing.
- CE-marking and Declaration of Performance as dispersion liquid-applied water impermeable product with improved crack bridging ability at low temperature (-5°C) and resistant to contact with chlorinated water, beneath ceramic tiling class DM O1P according to EN 14891:2012 / AC:201

PRODUCT INFORMATION

Composition	fiber reinforced synthetic polymers in water dispersion	
Packaging	5 kg plastic pails 20 kg plastic pails	
Colour	White (~RAL9010), grey (~RAL7004) and red (~RAL3009)	
Shelf life	18 months from date of production	
Storage conditions	The product must be stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Higher storage temperatures may reduce shelf life of product. Reference shall also be made to the storage recommendations within the safety data sheet.	
Density	~1,40 ± 0,05 kg/L	(EN ISO 2811-1)
Solid content	~64 ± 3% (+130°C)	UNI EN ISO 3251
Viscosity	30000 ÷ 40000 cps	

TECHNICAL INFORMATION

Tensile Strength	1,5 ÷ 3,5 MPa			(ISO 37)
Elongation at Break	100 ÷ 300%			(ISO 37)
Tensile Adhesion Strength	~1,5 MPa			(EN 1542)
		Test method	**Requirement**	(EN 14891)
	Initial tensile adhesion strength	A.6.2	≥ 0,5 N/mm²	
	Tensile adhesion strength after water contact	A.6.3	≥ 0,5 N/mm²	
	Tensile adhesion strength after heat aging	A.6.5	≥ 0,5 N/mm²	
	Tensile adhesion strength after freeze-thaw cycles	A.6.6	≥ 0,5 N/mm²	
	Tensile adhesion strength after contact with lime water	A.6.9	≥ 0,5 N/mm²	
	Tensile adhesion strength after contact with chlorinated water	A.6.7	≥ 0,5 N/mm²	
Crack Bridging Ability	≥ 0,75 mm (+23 °C) ≥ 0,75 mm (–5 °C)			(EN 14891 A.8.2) (EN 14891 A.8.3)
Flexibility at low Temperature	- 5°C			(UNI 1109)
Permeability to Water Vapour	Class I (permeable)	Sd < 5m		(EN ISO 7783-1)
Water Absorption	w ~ 0,01 kg/m²·h^{0,5} No penetration after 7 days at 1.5 bar			(EN 1062-3) (EN 14891 A.7)
Chemical Resistance	CO_2 permeability	Sd > 140 m		(EN 1062-6)
Service Temperature	-10°C ÷ +90°C			

SYSTEMS

System Structure

Roof Coating
Sikalastic®-520 Fiber IT is applied in 1 or 2 coats

Total consumption	~ 1,75 kg/m²
Dry film thickness	≥ 0.8 mm

Roof Waterproofing
Sikalastic®-520 Fiber IT is applied in 1 coat, reinforced with Sika® Reemat Premium and sealed with 1 - 2 coats of Sikalastic®-520 Fiber IT

Layer	Product	Consumption
1. Primer	please refer to "Substrate Preparation"	please refer to PDS of the Primer
2. Base coat	Sikalastic®-520 Fiber IT	~ 1.6 kg/m²
3. Reinforcement	Sika® Reemat Premium	-
4. Top coats	Sikalastic®-520 Fiber IT applied in 1-2 coats	~ 1.2 kg/m²

Warning: for roof waterproofing only fully reinforced (by Sika® Reemat Premium) system has to be applied. In this case total consumption will increase of ~0,5 kg/m². Sikalastic® Flexitape Heavy must be applied as reinforcement in areas with high movement such as cracks, joints and slack seams.

Waterproofing below tiles bonded with tile adhesive
Sikalastic®-520 Fiber IT is applied on concrete screed in one coat, sealed with a further coat of Sikalastic®-520 Fiber IT

Layer	Product	Consumption
1. Primer	please refer to "Substrate Preparation"	please refer to PDS of the Primer
2. Base coat	Sikalastic®-520 Fiber IT	~ 1 kg/m²
3. Top coat	Sikalastic®-520 Fiber IT	~ 1 kg/m²
4. Tile adhesive	SikaCeram®-255 StarFlex LD[1)]	please refer to PDS of the tile adhesive

[1)] or equivalent class SikaCeram® adhesive.
Warning: on weak and slightly cracked surfaces, Sikalastic®-520 Fiber IT (base coat) must be full surface reinforced by Sika® Reemat Premium. In this case total consumption will increase of ~0,5 kg/m².
Note: These figures are theoretical and do not include for any additional material required due to surface porosity, surface profile, variations in level and wastage.

APPLICATION INFORMATION

Ambient Air Temperature	+ 5°C ÷ + 35°C
Relative Air Humidity	80 % r.h. max.
Substrate Temperature	+ 5°C ÷ + 35°C
Dew Point	The substrate temperature must be at least 3°C above "dew-point" to avoid risk of condensation on application surface
Substrate Moisture Content	≤ 6% p.b.w. Test method: Sika®-Tramex meter, CM measurement or "oven-dry" method. No rising moisture is allowed according to ASTM D4263 (polyethylene-sheet). For higher moisture content substrates apply Sikafloor EpoCem® systems as "Temporary Moisture Barrier" (TMB)
Tack free time	6 ÷ 8 h (23°C / 50% r.h. / wind speed <0,2 m/s) Times will vary due to ambient and substrate humidity, temperature & ventilation

Drying time	2 ÷ 4 days (23°C / 50% r.h. / wind speed <0,2 m/s) > 4 days in case of coating with tiles or paints Times will vary due to ambient and substrate humidity, temperature & ventilation

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Substrate quality

- All substrates must be dimensionally stable, sound, of sufficient strength, clean, dry and free of dust, dirt, oil, grease and other contamination.
- Bituminous membranes must be clean, continuous, properly fixed to the substrate, dimensionally stable and free of reptation.
- Before application check roof minimum pitch to avoid ponding water and proper size of roof drains.

Substrate treatment

Preliminary note: the proper substrate preparation methods strictly depends on substrate type, conditions and the expected level of stress.

Cementitious substrates, bricks and tiles
Cementitious substrates, bricks and tiles must be prepared mechanically with suitable abrasion equipment to remove cement laitance, loose and friable material and achieve an open textured surface.
Weak material 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® or Sika MonoTop® range. The surface has to be levelled in order to achieve an even surface without high spots.
All dust, loose and friable material must be completely removed by vacuum cleaning.
In case of very porous and absorbing substrates, surface can be previously primed by Sikalastic®-520 Fiber IT diluted 5÷30% with water, according to substrate porosity. Substrates which need strong consolidation can be primed by Sika® Primer Roof EP lightly broadcasted with quartz sand, 0.4-0.7 mm, before the application of Sikalastic®-520 Fiber IT.
On concrete screed, all control and connection joints must be previously sealed by self adhesive tape Sika® Bandella RL80S or SikaHyflex®-250 Facade. Sikalastic®-520 Fiber IT on movement joints must be reinforced by Sika® Flexitape Heavy.

Metal
Metal surfaces have to be cleaned from contaminants, preferably by high pressure water power wash. Metal surfaces must be prepared by blast cleaning to Sa 2 ½ (ISO 8501-1) or SSPC-SP 10. In case this is not possible, treat the substrate whith equivalent systems. Less effective treatments can reduce the expected life of the system. The surface must be coated with Sikalastic® Metal Primer. Then, apply Sika® Bandella RL80S (or Sikalastic® Flexistrip) along joints, cracks or spots (eg. mechanical fasteners). On joints Sikalastic®-520 Fiber IT must be also reinforced by Sika® Flexitape Heavy.

Bituminous Membrane
Cracks or damages of the membrane have to be repaired by suitable products (e.g. Sika® Bandella RL80S, SikaBoom® foam, low-modulus polyurethane sealant SikaHyflex®-250 Facade). Afterwards the surface must be thoroughly cleaned by water power-wash. Once the surface is dry, apply Sikalastic®-520 Fiber IT without any dilution. Just in case of critical surfaces or high requirements, the surface can be primed with Sikalastic® Metal Primer or Sika® Primer Roof PU.

For any information about treatment of further substrates contact our Technical Service.

MIXING

Prior to application, stir Sikalastic®-520 Fiber IT thoroughly for 1 minute in order to achieve a homogeneous mixture. Over mixing must be avoided to minimise air entrainment.
Except from primimg purpose Sikalastic®-520 Fiber IT must not be diluted.

APPLICATION

Sikalastic®-520 Fiber IT can be applied by brush, roller and trowel in at least 2 coats (crosswise). Every coat can be applied over the previous one as soon as it's dry.
About consumption, see "Systems" section.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be removed by solvent, hot water or mechanically.

IMPORTANT CONSIDERATIONS

- Do not apply Sikalastic®-520 Fiber IT on substrates with rising moisture.
- Sikalastic®-520 Fiber IT is not suitable for permanent water immersion, which can soften the product.
- Very porous substrates can lead to outgassing. To avoid it is suggested to use a high build primer such as Sika Primer Roof EP.
- Until the membrane is not yet fully dry, do not expose it to rain, temperatures below +5 °C and to relative humidity higher than 80%.
- Sikalastic®-520 Fiber IT must not be applied on roofs subject to ponding water.
- Do not apply Sikalastic®-520 Fiber IT with temperature higher than recommended. This lead to too quick filming process and low adhesion.
- Keep packaging closed before application.
- Do not apply Sikalastic®-520 Fiber IT directly on insulation boards. In case use a carrier membrane like SikaBit® VB SA-620 FC between insulation board and Sikalastic®-520 Fiber IT.
- Areas with high movement, irregular substrates, or timber based roof decks, require a complete coating by carrier membrane SikaBit® VB SA-620 FC before application of Sikalastic®-520 Fiber IT.
- Sikalastic®-520 Fiber IT, if not coated by bonded tiles, is not recommended for regular walk traffic. It is resistant just to light pedestrian traffic, such as inspection and maintenance.
- Under tile waterproofing system is recommended only on concrete substrates.
- New bituminous coatings and membranes (not mineralised) normally have high hydrocarbon oil bleeding, which reduces the adhesion of Sikalastic®-520 Fiber IT coating. For this reason it is recommended to apply Sikalastic®-520 Fiber IT on such surfaces, not earlier than 6 months from its installation (normally enough to eliminate the bleeding). But this waiting time is not always sufficient, so it's recommended anyway to carry out preliminary adhesion test ("peeling").
- Whenever Sikalastic®-520 Fiber IT is applied on bituminous membranes installed over insulating panels, fully reinforced system is mandatory.

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.

DIRECTIVE 2004/42/CE LIMITATION OF EMISSIONS OF VOC

According to the EU Directive 2004/42/CE, the maximum allowed content of VOC (product category IIA / k type SB) is 100 g/l (Limits 2010) for the ready to use product. The maximum content of Sikalastic®-520 Fiber IT is < 100 g/l VOC for the ready to use product.

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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