

PRODUCT DATA SHEET

Sikalastic®-560



ECONOMICAL AND ECO-FRIENDLY LIQUID APPLIED ROOF WATER-PROOFING SOLUTION BASED ON SIKA CO-ELASTIC TECHNOLOGY (CET)

DESCRIPTION

Sikalastic®-560 is a cold-applied, one-component waterborne liquid applied waterproofing membrane, highly elastic and UV resistant.

USES

- For waterproofing solutions in both new construction and refurbishment projects
- For roofs with many details and complex geometry when accessibility is limited
- For cost efficient life cycle extension of failing roofs
- For reflective coating to enhance energy efficiency by reducing cooling costs

CHARACTERISTICS / ADVANTAGES

- UV resistant and resistant to yellowing and weathering
- Highly elastic and crack-bridging
- Non-toxic and VOC compliant water based coating

- One component - ready to use
- Excellent adhesion on porous and non-porous substrates
- Seamless waterproofing membrane
- Water vapour permeable
- 12 month shelf life

APPROVALS / STANDARDS

- Fulfills requirements acc. ETAG-005 Part 8.
- Fulfills initial solar reflectance requirements acc. Energy Star (0.820).
- Conforms to requirement of LEED EQ credit 4.2: Low Emitting Materials : Paints & Coatings : VOC < 100gr/L.
- USGBC LEED rating : conforms to LEED SS Credit 7.2 – Heat Island Effect-Roof, SRI ≥ 7
- Meets requirements of external fire performance ENV 1187 BRoof (T1) on non – combustible substrates.

PRODUCT INFORMATION

Chemical Base	Polyurethane modified acrylic dispersion	
Packaging	4 kg Plastic pails 20 kg Plastic pails	
Colour	Grey, White and Green (Available only 20 kg pail)	
Shelf Life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging.	
Storage Conditions	The product must be stored properly in dry conditions at temperatures between +5 °C and +30 °C.	
Density	~1.35 kg/L (at +23 °C)	(EN ISO 2811-1)

Solid Content	65 % approx. by weight (+23 °C / 50 % r.h.) 48 % approx. by volume (+23 °C / 50 % r.h.)
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TECHNICAL INFORMATION

Tensile Strength	~1.5 N/mm ² , Free film (DIN 53504) ~12 N/mm ² , with Sikalastic® Fleece-120 (DIN 53504) ~4–5 N/mm ² , with Sikalastic® Reemat Premium (DIN 53504)
Elongation at Break	~350 %, Free film (DIN 53504) ~40–60 %, with Sikalastic® Fleece-120 (DIN 53504) ~70–80 %, with Sikalastic® Reemat Premium (DIN 53504)
Solar Reflectance Index	102* (Sikalastic®-560 white) (ASTM E 1980) <small>* All values related to the reflectance/emittance properties provided in this Product Data Sheet refer to the initial (properly cured, non-weathered) status of the product.</small>
Initial Emittance	0.93 (Sikalastic®-560 white) (ASTM E 408, C1371)
Solar Reflectance (Initial)	0.82 (Sikalastic®-560 white) (ASTM C 1549)
CIGS-Reflectance (Initial)	87 % (Sikalastic®-560 white) (EN 410 in conjunction with CIGS sensitivity)
Service Temperature	–10 °C to +80 °C (reinforced with fleece) –5 °C to +80 °C (without fleece reinforced)

SYSTEM INFORMATION

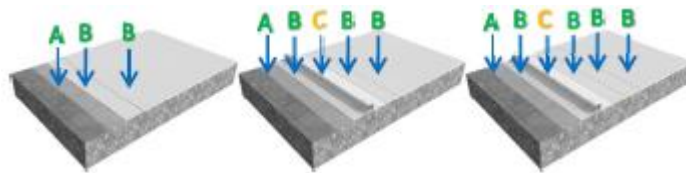
System Structure

WATERPROOFING WITHOUT REINFORCEMENT

- For UV-stable coating for extend life old roofs or as reflective coating to enhance energy efficiency.
- For detail system build up, please refer to chart below.

WATERPROOFING WITH REINFORCEMENT (SIKALASTIC FLEECE-120 OR SIKALASTIC REEMAT PREMIUM)

- For cost efficient waterproofing solutions in new construction and refurbishment projects.
- Sikalastic Fleece-120 or Sika Reemat Premium is applied at areas with high movements, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for details.
- For detail system build up, please refer to chart below.



A : Primer coat (Sikalastic®-560 diluted with water 10%)

B : Sikalastic®-560 layer

C : Reinforced layer (Sikalastic®-Fleece or Sika Reemat Premium)

	System 1	System 2	System 3	System 4
Dry Film Thickness	0.3 mm	0.5 mm	1.0 mm	1.3 mm
Reinforcement	Not Reinforced		Sikalastic®-Fleece or Sika Reemat Premium	
Build-up	A-B -B	A-B -B	A-B- C-B-B	A-B -C-B-B-B
Primer	Sikalastic®-560 diluted with water 10%			
Consumption	min 1.0 kg/m ²	min 1.2 kg/m ²	min 2.3 kg/m ²	min 2.8 kg/m ²
Number of coats	2 coats	2 coats	3 coats	4 coats

Attention: Do not apply more than 0.75 kg/m² Sikalastic®-560 per coat for layers without reinforcement!

APPLICATION INFORMATION

Consumption

Substrate	Primer	Consumption (kg/m ²)
Cementitious	Sikalastic®-560 diluted with 10 % water	≈ 0.3
Brick and stone		
Ceramic Tiles		
Wooden		
Paints		
Bituminous Felt		
Bitumonus Coatings		
Metals		

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

Relative Air Humidity 80 % r.h. max

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

Substrate Moisture Content < 6 % moisture content.
No rising moisture according to ASTM (Polyethylene-sheet)
No water / moisture / condensation on the substrate.

Dew Point Beware of condensation, Surface temperature during application must be at least 3 °C above dew point.

Waiting Time / Over-coating Before applying Sikalastic®-560 diluted with 10 % water:

Substrate Temperature	Relative Humidity	Minimum	Maximum
+20°C	50%	~ 2 hours	After thorough cleaning Sikalastic®-560 can be overworked with itself at any time
+30°C	50%	~ 1 hour	

+20 °C

Before applying Sikalastic®-560 on Sikalastic®-560 (without fleece or Reemat Premium) allow 1st coat to dry:

Substrate Temperature	Relative Humidity	Minimum	Maximum
+20°C	50%	~ 6 hours	After thorough cleaning ¹⁾ Sikalastic®-560 can be overworked with itself at any time
+30°C	50%	~ 4 hours	

Before applying Sikalastic®-560 on Sikalastic®-560 (reinforced WITH Fleece or Reemat Premium) allow material to dry:

Substrate Temperature	Relative Humidity	Minimum	Maximum
+20°C	50%	~24 hours	After thorough cleaning Sikalastic®-560 can be overworked with itself at any time
+30°C	50%	~12 hours	

Applied Product Ready for Use

Substrate Temperature	Relative Humidity	Touch-Dry	Rain Resistant	Fully-Cured
+20°C	50%	≈ 2 hours	≈ 8 hours	≈ 4 days
+30°C	50%	≈ 1 hour	≈ 4 hours	≈ 2 days

Note : Times are approximate and will be effected by changing ambient conditions particularly temperature and relative humidity. Low temperature and high relative humidity retard curing, while high temperature and low relative air humidity accelerate curing progression.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Cementitious Substrate:

- New concrete should be cured for at least 28 days and should have a Pull off strength $\geq 1.5 \text{ N/mm}^2$.
- Cementitious or mineral based substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and to achieve an open textured surface.
- Loose friable material and weak concrete must be completely removed and surface defects such as blowholes and voids must be fully exposed.
- Repairs to the substrate, filling of joints, blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor®, SikaDur® and SikaGard® range of materials.
- High spots must be removed by e.g. grinding.
- Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in subsequently applied coatings. The concrete must be carefully assessed for moisture content, air entrapment, and surface finish prior to any coating work. Installing the membrane either when the concrete temperature is falling or stable can reduce outgassing. It is generally beneficial, therefore, to apply the embedment coat in the late afternoon or evening.
- Prime the substrate and always use a reinforced system.

Brick and stone:

Mortar joints must be sound and preferably flush pointed. Use localized reinforcement over joints and prime before applying Sikalastic®-560.

Slates, Tiles, etc.:

Ensure all slates/tiles are sound and securely fastened, replacing obviously broken or missing sections. Fully glazed tiles must be abraded prior to priming and subsequent treatment with Sikalastic®-560.

Bituminous Felt:

Ensure that bituminous felt is firmly adhered or mechanically fixed to the substrate. Bituminous felt should not contain any badly degraded areas. Prime and always use a totally reinforced system.

Bituminous Coatings:

Bituminous coatings should not have sticky or mobile surfaces, volatile mastic coatings, or old coal tar coatings. Prime and always use a totally reinforced system.

Metals:

Metals should be in sound condition. Abrade the exposed surfaces to reveal bright metal. Use locally reinforcement over joints and fixings.

Wooden substrates:

Timber and timber based panel roof decks are to be in good condition, firmly adhered, or mechanically fixed.

Paints/Coatings:

Ensure the existing material is sound and firmly adhered. Remove any oxidized layers and use localized reinforcement over joints.

Existing SikaRoof® CET Systems

The exiting SikaRoof® CET Systems should still be soundly adhered to the substrate.

MIXING

Prior to application, stir Sikalastic®-560 thoroughly for 1 minute in order to achieve a homogeneous mixture. Over mixing must be avoided to minimise air entrainment.

APPLICATION

Prior the application of Sikalastic®-560 the priming coat if used must have cured tack-free. For the Waiting Time / Overcoating please refer to the PDS of the appropriate primer. Damageable areas (door frame) have to be protected with an adhesive tape.

Waterproofing WITHOUT Fleece: Sikalastic®-560 is applied in three coats (1 coat is for primer coat & 2 coats are Sikalastic-560). Prior to the application of a 2nd coat the indicated waiting time in the table below Waiting Time / Overcoating shall be allowed.

Waterproofing WITH Reinforcement: Sikalastic®-560 is applied in combination with Sikalastic Fleece-120 or Sika Reemat Premium.

1. Apply primer coat (Sikalastic®-560 diluted with 10% water) of approx. $\approx 0.3 \text{ kg/m}^2$.
2. After the primer cured, apply first coat of approx. $\approx 1.0 \text{ kg/m}^2$ of Sikalastic®-560 on a length of approx. 1m.
3. Roll in the Sikalastic Fleece-120 or Sika Reemat Premium and ensure that there are no bubbles or creases. Overlapping of the Sikalastic Fleece-120 at minimum of 5 cm.
4. Apply second coat of approx. $\approx 0.5 \text{ kg/m}^2$ coat, right into the wet Fleece to achieve the required film thickness. The entire application shall happen while Sikalastic®-560 is still liquid, Wet in Wet.
5. Repeat step 2 – 4, until the roof area is waterproofed.
6. After the two coats are dry, seal the roof area with one or more additional coats of Sikalastic-560 with consumption approx. $\geq 0.5 \text{ kg/m}^2$ per coat.

Please note, always begin with details prior starting with waterproofing the horizontal surface. For details follow step 1-6.

TOOLS

Drill and paddle:

Sikalastic® -560 should be mixed for one minute using a drill and paddle.

Solvent resistant short-piled lamb skin roller:

Used in the application of Sikalastic®-560 to ensure a consistent thickness of the seamless SikaRoof systems.

Thick hair brush:

For application of Sikalastic®-560 to all details and penetrations.

Jet Washer:

If dust, vegetation, moss / algae or other contaminants are present on the existing roof, a power washer is required to clean the substrate prior to the application of SikaRoof Systems. Existing chippings should be removed by hand or scabbling prior to power washing.

Airless spray equipment:

Used only for the roof coating systems. Two spray applied layers is the minimum requirement. The pump should have the following parameter:

-min. pressure : 220 bar

-min. output : 5.1 l/min

-min. \varnothing nozzle : 0.83 mm (0.033 inch)

For example : Wagner Heavycat HC 940 E SSP Spray pack

CLEANING OF TOOLS

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

LIMITATIONS

- Sikalastic® 560 should not be applied on roofs subject to long-term ponding water
- Recommended slope of 2% should be provided to substrate. (Depending on Roof layout and availability of Drains and Gutters, minimum could be 1.5% slope).
- Do not apply Sikalastic®-560 on substrates with rising moisture.
- Always apply during falling ambient and substrate temperature. If applied during rising temperatures "pin holing" may occur from rising air.
- Ensure that temperature does not drop below 8 °C and that relative humidity does not exceed 80 % until the Membrane has fully cured.
- Ensure that Sikalastic®-560 is totally dry and the surface is without pinholes before applying any top coat.
- Do not allow temporary ponding to remain between coats on any horizontal surfaces or until the final coating has totally cured. Brush or mop surface water away during this time.
- In cold climatic zones, Sikalastic® 560 should not be applied on roofs subject to ponding water with subsequent periods of frost. Otherwise a slope of more than 3% should be provided, or appropriate measures should be considered.
- Do not apply Sikalastic®-560 directly on insulation boards. Instead use a separation layer like Sikalastic®-Carrier between insulation board and Sikalastic®-560.
- Sikalastic® Fleece-120 can be used as total reinforcement or for partial reinforcements over dynamic cracks and joints.
- Sikalastic®-560 is not recommended for pedestrian traffic. In case pedestrian traffic is unavoidable, Sikalastic®-560 shall be covered with appropriate elements such as tiles, stone plates or wooden panels.
- Do not apply cementitious products (e.g. tile mortar) directly onto Sikalastic®-560. Use an alkaline barrier, for example kiln dried quartz sand.
- The fire resistance performance has been tested internally according to ENV 1187 BRoof (T1)

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 declared data and recommended uses for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data and uses.

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, the maximum allowed content of VOC (Product category IIA / j type sb) is 550 / 500 g/l (Limits 2007 / 2010) for the ready to use product.

The maximum content of Sikalastic®-560 is < 500 g/l VOC for the ready to use product.

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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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