

# PRODUCT DATA SHEET

## Sikalastic®-560

ECONOMICAL AND ECO-FRIENDLY LIQUID APPLIED ROOF WATERPROOFING 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. Suitable for use in hot and tropical climatic conditions.

### USES

- For roof 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

- One-component - ready to use
- Seamless waterproofing membrane
- UV resistant and resistant to yellowing and weathering
- Highly elastic and crack-bridging
- Non-toxic and VOC compliant water-based coating
- Excellent adhesion on porous and non-porous substrates
- Water vapour permeable - allows the substrate to breathe

### APPROVALS / CERTIFICATES

- Fulfils requirements according ETAG-005 Part 8
- Fulfils initial solar reflectance requirements according Energy Star (0.820)
- Conforms to the requirements of LEED EQ Credit 4.2: Low –Emitting Materials: Paints & Coatings: VOC < 100 gm/lt
- USGBC LEED rating: conforms to LEED SS Credit 7.2- Heat Island Effect-Roof, SRI ≥ 78
- Meets requirements of external fire performance ENV 1187 BRoof (T1) on non-combustible substrates
- European Technical Approval
- Din 4062; 1978

### PRODUCT INFORMATION

<b>Composition</b>	Polyurethane modified acrylic dispersion
<b>Packaging</b>	20 kg Containers
<b>Colour</b>	White
<b>Shelf life</b>	12 months from date of production if stored properly in original
<b>Storage conditions</b>	The product must be stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures >+5 °C and <+30 °C.

<b>Density</b>	1.35 kg/l approx. (+23 °C)	(EN ISO 2811-1)
<b>Solid content</b>	65 % approx. by weight (+23 °C / 50 % r.h.) 48 % approx. by volume (+23 °C / 50 % r.h.)	

## TECHNICAL INFORMATION

<b>Tensile Strength</b>	Free film: ~ 1.5 N/mm <sup>2</sup> With Sikalastic® Fleece-120: ~ 12 N/mm <sup>2</sup>	(DIN 53504) (DIN 53504)
<b>Elongation at Break</b>	350 % approx., Not reinforced 40–60 % approx., Reinforced with Sikalastic® Fleece-120	(DIN 53504) (DIN 53504)
<b>Solar Reflectance</b>	Initial 0.82 <sup>1)</sup>	ASTM C 1549
<b>Thermal Emittance</b>	0.93 <sup>1)</sup>	ASTM E 408, C1371, others <sup>1)</sup> All values refer to the initial (properly cured, non-weathered) status of Sikalastic®-560 white.
<b>Solar Reflectance Index</b>	102*	(ASTM E 1980) *All values refer to the initial (properly cured, non-weathered) status of Sikalastic®-560 white.
<b>Service Temperature</b>	–5 °C to +80 °C (intermittent)	

## SYSTEMS

### System Structure

	Roof coating*	Reinforced roof waterproofing
Build up	Sikalastic®-560 is applied in 2 coats	Sikalastic®-560 is applied in 2 coats and reinforced with Sikalastic® Fleece-120 or Sika® Reemat Premium and sealed with 1 or 2 additional coats of Sikalastic®-560
Substrates	Concrete, metals, wood, tiles	Concrete, metals, wood, tiles, asphalt, bitumen felt
Total consumption	0.9–1.4 kg/m <sup>2</sup> approx.	2.1–2.8 kg/m <sup>2</sup> approx.
Dry film thickness	0.3–0.5 mm approx.	1.0–1.3 mm approx.

\*For partial reinforcement Sikalastic® Fleece-120 is applied at areas with high movement, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for details.

	<b>Sikalastic®-560 3 years</b>	<b>Sikalastic®-560 5 years</b>
Build up	Sikalastic®-560 is applied in 2 coats	Sikalastic®-560 is applied in 2 or 3 coats
Substrates	Sound concrete, metals, wood, tiles	Sound concrete, metals, wood, tiles
Primer	Please refer to the Substrate Pre-Treatment table below.	Please refer to the Substrate Pre-Treatment table below.
Total consumption	≥ 0.9 kg/m <sup>2</sup> (≥ 0.6 l/m <sup>2</sup> ) applied in 1 or more coats	≥ 1.4 kg/m <sup>2</sup> (≥ 1 l/m <sup>2</sup> ) applied in 2 coats
Dry film thickness	0.3 mm approx.	0.5 mm approx.

	<b>Sikalastic®-560 10 years</b>	<b>Sikalastic®-560 15 years</b>
Build up	Sikalastic®-560 is applied in 2 coats, reinforced with Sikalastic® Fleece-120 or Sika® Reemat Premium and sealed with 1 coat of Sikalastic®-560	Sikalastic®-560 is applied in 2 coats, reinforced with Sikalastic® Fleece-120 or Sika® Reemat Premium and sealed with 2 coats of Sikalastic®-560
Substrates	Sound concrete, metals, wood, tiles, bituminous membranes	Sound concrete, metals, wood, tiles, bituminous membranes
Primer	Please refer to the Substrate Pre-Treatment table below.	Please refer to the Substrate Pre-Treatment table below.
Total consumption	≥ 2.1 kg/m <sup>2</sup> (≥ 1.5 l/m <sup>2</sup> ) applied in 3 coats	≥ 2.8 kg/m <sup>2</sup> (≥ 2 l/m <sup>2</sup> ) applied in 4 coats
Dry film thickness	1.0 mm approx.	1.3 mm approx.

Note: Do not apply more than 0.75 kg/m<sup>2</sup> Sikalastic®-560 per coat for layers without reinforcement.

## APPLICATION INFORMATION

Ambient Air Temperature	+8 °C min / +35 °C max
Relative Air Humidity	5 %min ./ 80 % . max
Substrate Temperature	+8 °C min / +35 °C max
Dew Point	Beware of condensation. Surface temperature during application must be at least +3 °C above dew point.

**Substrate Moisture Content**

< 4 % moisture content.

No rising moisture according to ASTM (Polyethylene-sheet). No water / moisture / condensation on the substrate.

**Substrate Pre-Treatment****Cementitious substrates**

- 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. Any requirement for priming must also be considered. 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.
- Note: For the Waiting Time / Overcoating you shall refer to the PDS of the appropriate cleaner. Other substrates have to be tested for their compatibility. If in doubt, apply a test area first.

**Waiting Time / Overcoating**

Before applying Sikalastic®-560 on primer Sikalastic®-560 diluted with 10% water:

Substrate Temperature	Relative humidity	Minimum	Maximum
+10°C	50%	~ 4 hours	After thorough cleaning 1) Sikalastic®-560 can be overworked at any time
+20°C	50%	~ 2 hours	
+30°C	50%	~ 1 hours	

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

Substrate Temperature	Relative humidity	Minimum	Maximum
+10°C	50%	~ 8 hours	After thorough cleaning 1) Sikalastic®-560 can be overworked with itself at any time
+20°C	50%	~ 6 hours	
+30°C	50%	~ 4 hours	

1) Assuming that all dirt has been removed

and contamination is avoided.

Before applying Sikalastic®-560 topcoat on Sikalastic®-560 reinforced with fleece allow material to dry:

Substrate Temperature	Relative humidity	Minimum	Maximum
+10°C	50%	~ 36 hours	After thorough cleaning 1) Sikalastic®-560 can be overworked with itself at any time
+10°C	50%	~ 24 hours	
+10°C	50%	~ 12 hours	

Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

**Applied Product Ready for Use**

Temperature	Relative humidity	Rain resistant	Touch dry	Full cure
+2°C	50%	1 hour	6-8 hours	12-16 hours
+10°C	50%	1 hour	3 hours	6-8 hours
+20°C	50%	1 hour	2 hours	4-6 hours

Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.

## APPLICATION INSTRUCTIONS

### SUBSTRATE PREPARATION

Substrate	Primer	Consumption (kg/m <sup>2</sup> )
Cementitious substrate	Sikalastic®-560 diluted with 10 % water.	0.3 approx.
Brick and stone	Sikalastic®-560 diluted with 10 % water.	0.3 approx.
Ceramic tiles (unglazed)	Sikalastic®-560 diluted with 10 % water.	0.3 approx.
Bituminous felt	Only required for high reflectivity applications (Sikalastic® Metal Primer)* Fully reinforced system only	0.2 approx.
Bituminous coatings	Only required for high reflectivity applications (Sikalastic® Metal Primer)* Fully reinforced system only	0.2 approx.
Metals	Sikalastic® Metal Primer	0.2 approx.
Wooden substrates	Timber based roof tecks require a complete layer of Sikalastic® Carrier. For exposed timber upstands use Sikalastic®-560 diluted with 10 % water.	0.3 approx.
Paints	Subject to adhesion and compatibility test	

\* Sikalastic® Metal Primer prevents migration of bituminous volatiles and improves long-term reflectivity.

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.

For the Waiting Time / Overcoating, please refer to the PDS of the appropriate cleaner and primer. Other substrates must be tested for their compatibility. If in doubt, apply a test area first.

### 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

**Roof Coating:** Sikalastic®-560 is applied in two or three coats. Prior to the application of a 2<sup>nd</sup> coat the indicated waiting time in the table above shall be allowed.

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

1. Apply first coat of appr. 0.75 kg/m<sup>2</sup> (for non-absorbing substrates) – 1.00 kg/m<sup>2</sup> (for absorbing substrates) of Sikalastic®-560 on a length of approx. 1m.
2. Roll in the Sikalastic® Fleece-120 or Sika® Reemat Premium and ensure that there are no bubbles or creases. Overlapping of the fleece minimal 5 cm.
3. Apply second coat of appr. 0.25 kg/m<sup>2</sup> - 0.5kg/m<sup>2</sup> 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.
4. Repeat step 1–3 until the roof area is waterproofed.
5. After the two coats are dry, seal the roof area with one or more additional coats of Sikalastic®-560 (≥ 0.5 kg/m<sup>2</sup> per coat).

Please note, always begin with details prior starting with waterproofing the horizontal surface.

**For detailed information regarding application method please refer to Method Statement No. 850 94 03.**

### Tools:

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. *Squeegee:* Useful when removing excess water from the roof after overnight rain. *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. *Stanley knife:* This tool is required when cutting Sikalastic® Vap, Sikalastic® Insulation and Sikalastic® Carrier. When the Sikalastic® Insulation is resting on an uneven substrate, the back of the board should be cut to enable maximum contact with Sikalastic® Coldstick. *Saw:* Used when cutting thick Sikalastic® Insulation boards. *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. nozzle: 0.83mm (0.033 inch) For example: Wagner Heavycoat HC 940 E SSP Spraypack

### CLEANING OF EQUIPMENT

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

## IMPORTANT CONSIDERATIONS

- Do not apply Sikalastic®-560 on substrates that have rising moisture.
- Always apply during falling ambient and substrate temperature. If applied during rising temperatures “pin holing” may occur from rising and expanding air.
- When applying Sikalastic®-560 in Wet Rooms it is recommended to install mortar arris's / fillets at all up-stands and around drainage pipes.
- Sikalastic®-560 may be flood tested with 50 mm water for a maximum period of 48 hrs.
- Ensure that each coat of Sikalastic®-560 is totally dry and the surface is without pinholes before applying any top coat.
- Each coat of Sikalastic®-560 must be fully cured before applying subsequent coats.
- Do not allow temporary ponding or moisture 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.
- Sikalastic®-560 should not be applied on roofs subject to long-term ponding water especially with subsequent periods of frost. In cold climatic zones for Roofing structures with a pitch of less than 3% appropriate measures must have to be considered.
- Sikalastic®-560 applied on roofs subject to long-term freezing at temperature around the minimum service temperature of -10°C should always be reinforced with Sikalastic®Fleece-120 in order to guarantee sufficient crack-bridging ability.
- 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 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

- 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.
- For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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