

# PRODUCT DATA SHEET

## Sikalastic®-560

LIQUID APPLIED ROOF WATERPROOFING BASED ON MODIFIED POLYURETHANE TECHNOLOGY

### DESCRIPTION

Sikalastic®-560 is a cold-applied, one-component waterborne liquid applied waterproofing membrane based on modified polyurethane technology. It is highly elastic, UV resistant and also eco-friendly.

### 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 refurbishment of failing APP/SBS roofing systems and hence its life cycle extension
- For enhancing the energy efficiency of buildings by reducing cooling costs due to its heat reflective nature
- Contributes to Green Building certification standards

### CHARACTERISTICS / ADVANTAGES

- One component - ready to use
- UV resistant and resistant to yellowing and weathering
- Highly elastic and crack-bridging
- Easily recoated when needed - no stripping required
- Non-toxic and VOC compliant water based coating
- Excellent adhesion on porous and non-porous substrates
- Seamless waterproofing membrane
- Water vapour permeable - allows the substrate to breathe
- Eco-friendly

### APPROVALS / STANDARDS

- Building Energy Performance Laboratory Test Report as per ASTM E 1980

### PRODUCT INFORMATION

Chemical Base	Modified Polyurethane dispersion
Packaging	10 kg plastic pails
Colour	White
Shelf Life	12 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.
Density	~1.35 kg/L (at +30°C)
Solid content by weight	~66% (At +23°C / 50% Relative Humidity)
Solid content by volume	~48% (At +23°C / 50% Relative Humidity)

### TECHNICAL INFORMATION

Shore A Hardness	≥ 50
Tensile Strength	≥ 1.5 N/mm <sup>2</sup> (For free film) (ASTM D 412)

<b>Elongation at Break</b>	≥ 350% (for free film)	(ASTM D 412)
<b>Tear Strength</b>	≥ 12 N/mm	(ASTM D 624)
<b>Crack Bridging Ability</b>	No cracks upto 3.2 mm	(ASTM C 1305)
<b>Solar Reflectance</b>	0.80	(ASTM E1980)
All values refer to the initial (properly cured, non-weathered) status of Sikalastic®-560 white.		
<b>Thermal Emittance</b>	0.91	(ASTM E 1980)
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>	<b>With reinforcement</b> -10°C min. / +80°C max.	<b>Without reinforcement</b> -5°C min. / +80°C max.

## SYSTEM INFORMATION

### System Structure

#### Roof Coating\*

Layer	Product	Consumption
1. Primer	Please refer to substrate pre-treatment	Please refer to substrate pre-treatment
2. Base coat	Sikalastic®-560	≥ 0.5 - 0.7 kg/m <sup>2</sup>
3. Top coats	Sikalastic®-560 applied in 1-2 coats	≥ 0.5 - 0.7 kg/m <sup>2</sup>

\*For partial reinforcement Sika® Reemat Premium - 225 is applied at areas with high movement, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for details. On bitumen felt a fully reinforced roof waterproofing system has to be applied.

#### Reinforced Roof Waterproofing

Layer	Product	Consumption
1. Primer	Please refer to substrate pre-treatment	please refer to substrate pre-treatment
2. Base coat	Sikalastic®-560	≥ 1.0 - 1.5 kg/m <sup>2</sup>
3. Reinforcement	Sika Fab 1 or Sika® Reemat Premium - 225	1 m <sup>2</sup> /m <sup>2</sup>
4. Top coats	Sikalastic®-560 applied in 1-2 coats	≥ 1.1 - 1.3 kg/m <sup>2</sup>

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

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

Yield	Type of application	Total consumption of Sikalastic®-560	Total thickness
	Roof Coating	0.8 - 1.4 kg/m <sup>2</sup>	0.3 - 0.5 mm
	Reinforced Roof Waterproofing	2.1 - 2.5 kg/m <sup>2</sup>	1.0 - 1.3 mm
<b>Ambient Air Temperature</b>	+8°C min. / +40°C max.		
<b>Relative Air Humidity</b>	80% max.		
<b>Substrate Temperature</b>	+8°C min. / +40°C max.		

<b>Dew Point</b>	Beware of condensation! Surface temperature during application must be at least 3°C above dew point.		
<b>Substrate Moisture Content</b>	≤ 6% No water / moisture / condensation on the substrate is desired during application		
<b>Substrate Pre-Treatment</b>	<b>Substrate</b>	<b>Primer</b>	<b>Consumption (kg/m<sup>2</sup>)</b>
	Cementitious substrate	Sikalastic®-560 diluted with 10% water.	~0.3
	Brick and stone	Sikalastic®-560 diluted with 10% water.	~0.3
	Ceramic tiles (unglazed)	Sikalastic®-560 diluted with 10% water.	~0.3
	Bituminous felt	SikaBit® T Primer IN with quartz sand broadcast. Fully reinforced system only	~0.2
	Bituminous coatings	SikaBit® T Primer IN with quartz sand broadcast. Fully reinforced system only	~0.2
	Metals	Sikafloor®-161 HC	~0.2
	Wooden substrates	Timber based roof decks require a complete layer of Sikalastic® Carrier. For exposed timber upstands use Sikalastic®-560 diluted with 10% water.	~0.3
	Paints	Subject to adhesion and compatibility test	
	<p>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.</p> <p>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.</p>		
<b>Waiting Time / Overcoating</b>	8 - 12 hrs depending upon the changing ambient conditions particularly temperature and relative humidity		

## APPLICATION INSTRUCTIONS

### EQUIPMENT

Sikalastic®-560 can be applied using a thick hair brush, short piled lamb skin roller or airless spray equipment. Use a short piled lamb skin roller to ensure a consistent thickness of the seamless Sika® Roof systems. For application of Sikalastic®-560 to all details and penetrations use a good quality thick hair brush.

Airless spray equipment can be used for quick application of Sikalastic®-560 system. Two spray applied layers is the minimum requirement. The pump should have the following parameters:

Min Pressure	220 bar
Min Output	5.1 Lt/min
Min dia of nozzle	0.83mm (0.033 inch)

### SUBSTRATE PREPARATION

#### Cementitious Substrates

New concrete should be cured for at least 28 days and should have a pull off strength > 1.5 N/mm<sup>2</sup>.

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 substrates, filling of joints, blowholes/voids must be fully and surface levelling must be carried out using appropriate products from Sika® range of products.

High spots must be removed by grinding, etc. 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 applica-

tion of Sikalastic®-560 Roofing System. Existing chip-pings should be removed by hand or scrubbing prior to power washing. The concrete must be carefully assessed for moisture content, air entrapment and surface finish prior to any coating work.

#### **Brick / porous stones**

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

#### **Slates / tiles / polished stones**

Ensure all slates/tiles/polished stones are sound and securely fastened, replacing obviously broken or missing sections. Fully glazed tiles/stones 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 fully 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 fully reinforced system.

#### **Metals**

Metals must be in sound condition. Abrade exposed surfaces to reveal bright metal. Replace any rusted or damaged portion. For pre-coated sheets, check for any delamination of existing paint. Use Sika® Multiseal T and localised 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 localised reinforcement over joints.

#### **MIXING**

Prior to application, stir Sikalastic®-560 thoroughly with the paddle mixer for one 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 Sika Fab 1 or Sika® Reemat Premium - 225.

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 Sika Fab 1 or Sika® Reemat Premium - 225 and ensure that there are no bubbles or creases. Overlapping of the Sika Fab 1 minimum 5 cm.
3. Apply second coat of approx. 0.25 kg/m<sup>2</sup> - 0.5 kg/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 of Sikalastic®-560.**

#### **CLEANING OF TOOLS**

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

#### **LIMITATIONS**

- Do not apply Sikalastic®-560 on substrates with rising moisture.
- Sikalastic®-560 is not suitable for permanent water immersion.
- On substrates likely to exhibit outgassing, apply during falling ambient and substrate temperature. If applied during rising temperatures “pin holing” may occur from rising air. Therefore, it is generally beneficial to apply the embedment coat in the late afternoon or evening.
- Ensure that temperature does not drop below +8°C and that relative humidity does not exceed 80% until the membrane has fully cured.
- Sikalastic®-560 should not be applied on roofs subject to long-term ponding water.
- Sikalastic®-560 should not be applied on roofs subject to ponding water with subsequent periods of frost. In cold climatic zones for roofing structures with a pitch of less than 3% appropriate measures must 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 Sika® Reemat Premium -225 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.
- Areas with high movement, irregular substrates, or timber based roof decks require a complete layer of Sikalastic® Carrier.
- Sikalastic®-560 is not recommended for medium to

heavy pedestrian traffic.

- Do not apply cementitious products (e.g. tile mortar or protection screed) onto Sikalastic®-560.

## 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 for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

## 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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