Construction

Sikalastic®-560 (previously known as SikaTite® PUD Plus)

Economical and eco-friendly liquid applied roof waterproofing solution based on Sika Co-Elastic Technology (CET)

Product Description	Sikalastic®-560 is a cold-applied, one-component waterborne liquid applied waterproofing membrane, highly elastic and UV-resistant. It seals roof leaks and considerably extends the roof service life.
Uses	■ For exposed roof waterproofing solutions in both new construction and refurbishment projects (concrete, metal, wood & tiles) ■ For waterproofing layer under tiles (e.g. terraces and podium roof) ■ For roofs with many details and complex geometry when accessibility is limited ■ For cost efficient life cycle extension of failing roofs ■ As solar reflective coating to enhance energy efficiency by reducing cooling costs
Characteristics / Advantages	■ One-component, water based, ready to use ■ Eco-friendly: solvent free (low VOC) and high solar reflective properties ■ Easy and completely seamless application ■ Durable waterproofing system ■ Versatile uses ■ Excellent resistance to UV, yellowing and weathering ■ Highly elastic and crack-bridging ■ Excellent adhesion on porous and non porous substrates ■ Water vapour permeable

Tests

Approval / Standards	Fulfils requirements acc. ETAG-005 Part 8 Meets requirements of external fire performance ENV 1187 B_{Roof} (T1) on non-combustible substrates

Environmental Information

Specific Characteristics	■ Non-toxic and VOC compliant water based coating ■ Odourless ■ Conforms to the requirements of LEED EQ Credit 4.2: Low-Emitting Materials: Paints & Coatings: VOC < 100 g/l ■ USGBC LEED rating: conforms to LEED SS Credit 7.2: Heat Island Effect-Roof, SRI ≥ 78 ■ Fulfills initial solar reflectance requirements acc. Energy Star (0.820)

Specific Ratings	LEED EQ Credit 4.2	LEED SS Credit 7.2	SCAQMD Method 304-91
	Passes	passes	passes

Product Data

Form

Appearance / Colours	Grey, terracotta, red and white (Energy Star)
Packaging	10 kg and 20 kg plastic pails

Storage

Storage Conditions / Shelf Life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5°C and +30°C. Protect from direct sunlight.

Technical Data

Chemical Base	Polyurethane modified Acrylic Dispersion	
Density	1.35 kg/l All density values at +23 °C	(EN ISO 2811-1)
Solid Content	~ 48% by volume / ~ 65% by weight	
Service Temperature	-10°C to +80°C (with Sika® Reemat reinforcement) -5°C to +80°C (without Sika® Reemat reinforcement)	
CIGS- Reflectance (initial) **Sikalastic®-560 white**	87% according to EN 410 in conjunction with CIGS sensitivity	
Solar Reflectance (initial) **Sikalastic®-560 white**	0.82 according to ASTM C 1549	
Initial Emittance **Sikalastic®-560 white**	0.93 according to ASTM E 408, C1371, others	
SRI (Solar Reflectance Index) (Initial) **Sikalastic®-560 white**	102 according to ASTM E 1980	
	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.	

Mechanical / Physical Properties

Tensile Strength	Free film: With Sika® Reemat Standard:	~ 1.5 N/mm^2 ~ 12 N/mm^2	(DIN 53504) (DIN 53504)
Elongation at Break	Free film: With Sika® Reemat Standard:	~ 350% ~ 40-60%	(DIN 53504) (DIN 53504)

System Information

System Structure

Roof Waterproofing – Economical System

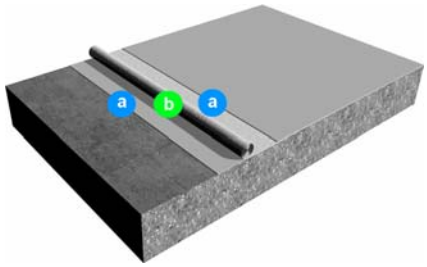
For basic roof waterproofing solutions in new construction and refurbishment project, UV-stable coating, extend life of old roofs or as solar reflective coating to enhance energy efficiency.

Build up:	1x Sikalastic®-560 + 10% water = 0.4 kg/m^2 2x Sikalastic®-560 = 0.50 kg/m^2/layer
Substrates:	Concrete, metal, wood & tiles
Primer:	Please refer to substrate preparation below
Total Thickness:	~ 0.5 mm thick
Total Consumption:	~ 1.40 kg/m^2

System Structure

Roof Waterproofing – High Standard System

For higher standard roof waterproofing solutions in new construction and refurbishment project, UV-stable coating, extend life of old roofs or as solar reflective coating to enhance energy efficiency.



Build up:	1x Sikalastic®-560 + 10% water = 0.4 kg/m^2 1x Sikalastic®-560 = 0.50 kg/m^2/layer Sika® Reemat Standard reinforcement 2x Sikalastic®-560 = 0.50 kg/m^2/layer
Substrates:	Concrete, metal, wood & tiles
Primer:	Please refer to substrate preparation below
Total Thickness:	~ 1.0 mm thick
Total Consumption:	~ 1.9 - 2.0 kg/m^2

Sika® Reemat Standard is applied at areas with high movements, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for details.

a) Primer layer Sikalastic®-560 + 10% water and 1x Sikalastic®-560

b) 1x layer Sika® Reemat Standard

a) 2x layer finish coat Sikalastic®-560

	One component product. Stir before using
	UV resistant and resistant to yellowing
	Highly elastic and crack-bridging
	Vapour permeable
	Easy application by brush, roller or airless spray equipment even when accessibility is limited
	Bonds fully to most substrates, preventing the migration of water
	Seamless waterproofing membrane

	Fire resistant
	Compatible with bituminous felts
	Resistant to wind uplift
	Wide colour range available

Application Details

Substrate Treatment

Cementitious substrates:

New concrete should be cured for at least 28 days and should have a Pull off strength ≥ 1.5 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 localised 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 must be in sound condition. Abrade exposed surfaces to reveal bright metal. Use 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.

Existing SikaRoof® CET Systems

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

Substrate Preparation

Substrate Priming

Substrate	Primer	Consumption [kg/m^2]
Cementitious substrates	Sikalastic®-560 diluted with 10% water.	≈ 0.4
Brick and Stone	Sikalastic®-560 diluted with 10% water.	≈ 0.4
Slate, tiles, etc.	Sikalastic®-560 diluted with 10% water.	≈ 0.4
Bituminous felt	Sikalastic®-560 diluted with 10% water.	≈ 0.4
Bituminous coatings	Sikalastic®-560 diluted with 10% water	≈ 0.4
Metals	Sikalastic®-560 diluted with 10% water.	≈ 0.4
Wooden substrates	Sikalastic®-560 diluted with 10% water	≈ 0.4
Paints	Sikalastic®-560 diluted with 10% water.	≈ 0.4

These figures are theoretical and do not include for any additional material required due to surface porosity, surface profile, variations in level and wastage, etc..

Application Conditions / Limitations

Substrate Temperature

+8 °C min. / +35 °C max.

Ambient 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.

Relative Air Humidity

80 % max.

Dew Point

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

Application Instructions

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.

Sikalastic®-560 must be thoroughly stirred using a low speed electric stirrer (300 – 400 rpm) or other suitable equipment.

Application Method / Tools	*Application Method (please refer to the most recent issue of the Method Statement)* Prior the application of Sikalastic®-560 the priming coat 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. ***Economical System:*** Sikalastic®-560 is applied in one (1) or more coats. Prior to the application of a 2nd coat the indicated waiting time in the table below Waiting Time / Overcoating shall be allowed. ***High Standard System:*** Sikalastic®-560 is applied in combination with Sika® Reemat Standard. Application with Sika® Reemat Standard 1. Apply first coat (~1.0 kg/m²) of Sikalastic®-560 on a length of approx. 1m. 2. Roll in the Sika® Reemat Standard and ensure that there are no bubbles or creases. Overlapping of the Sika® Reemat Standard minimal 5 cm. 3. Repeat step 1-2 until the roof area is waterproofed. 4. After the first coat is dry, seal the roof area with second coat of Sikalastic®-560 (~0.50 kg/m²). 5. After the second coat is dry, seal the roof area with third coat of Sikalastic®-560 (~0.50 kg/m²). Please note, always begin with details prior starting with waterproofing the horizontal surface. For details follow step 1-5. *Tools:* Sikalastic®-560 - by Brush: With thick hair brush. - by Roller: With a solvent resistant, short-piled lamb skin roller. - by Trowel: The first layer of Sikalastic®-560 can be applied with a toothed trowel. Never use the trowel for Sikalastic®-560 if Sika® Reemat Standard is underneath. - by Airless Spray Machine: Used only for the economical 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 Tools	Clean all tools and application equipment with water immediately after use. Hardened/cured material can only be removed mechanically.
Pot Life	Sikalastic®-560 is designed for fast drying. High temperatures combined with low air humidity and high air circulation will increase the drying process. Thus, material in opened containers shall be applied immediately. In opened containers, the material will form a film within 1 – 2 hours.

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 hour	

Before applying Sikalastic®-560 on Sikalastic®-560 (without Sika® Reemat Standard) 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	

Before applying Sikalastic®-560 topcoat on Sikalastic®-560 reinforced with Sika® Reemat Standard 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
+20°C	50%	~ 24 hours	
+30°C	50%	~ 12 hours	

1) Assuming that all dirt has been removed and contamination is avoided.

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

Notes on Application / Limitations

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 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.

Sikalastic®-560 should not be applied on roofs subject to long-term ponding water 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.

Do not apply Sikalastic®-560 directly on insulation boards. Instead use a separation layer like Sikalastic®-Carrier between insulation board and Sikalastic®-560.

Sika® Reemat Standard 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 B_{Roof} (T1)

Construction

Curing Details

Applied Product ready for use

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

Substrate Temperature	Relative humidity	Touch dry	Rain resistant	Full cure
+10°C	50%	~ 4 hours	~ 12 hours	~ 6 days
+20°C	50%	~ 2 hour	~ 8 hours	~ 4 days
+30°C	50%	~ 1 hour	~ 4 hours	~ 2 days

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

Value Base

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.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall 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.

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