Construction

Sikalastic®-560 Thixo

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

Product Description	Sikalastic®-560 Thixo is a cold-applied, one-component solvent free liquid applied waterproofing membrane, highly elastic and UV-resistant.
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	■ 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 months shelf life

Tests

Approval / Standards	Fulfils external fire performance ENV 1187 B_{Roof} (T1) (non-combustible substrates) Fulfils initial solar reflectance requirements acc. Energy Star (≥ 0.80)

Product Data

Form

Appearance / Colour	White (Energy Star), grey, other colors upon request (RAL)
Packaging	5 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.

Technical Data

Chemical Base	Polyurethane modified Acrylic Dispersion		
Density	~1.29 kg/l All density values at +23 °C		(EN ISO 2811-1)
Solid Content	~ 48% by volume / ~ 62% by weight		
Service Temperature	-5°C to +80°C (with Reemat)		

Mechanical / Physical Properties

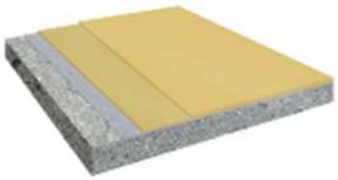
Tensile Strength	Free film: With Sika® Reemat Premium:	~ 1.5 N/mm^2 ~ 8 N/mm^2	(DIN 53504) (DIN 53504)
Elongation at Break	Free film: With Sika® Reemat Premium:	~ 350% ~ 40-60%	(DIN 53504) (DIN 53504)

System Information

System Structure

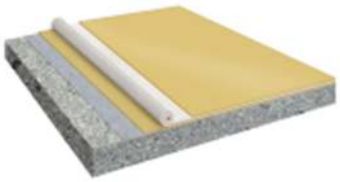
Roof Coating + waterproofing

For UV-stable coating, for extend life of old roofs or as reflective coating to enhance energy efficiency.



Build up:	Sikalastic®-560 Thixo applied in one or two coats
Substrates:	Concrete, metals, wood, tiles
Primer:	Sikalastic® -560 Thixo diluted with 15% water
Total thickness:	~ 0.5 mm – 1.0mm
Total consumption:	~ 1.3 kg/m^2

For waterproofing: 2.0-2.5kg/m² = ~0.8-1.0mm



Roof Waterproofing

For cost efficient waterproofing solutions in new construction and refurbishment projects.

Build up:	Sikalastic®-560 Thixo applied in one coat and reinforced with Sika® Reemat Premium and sealed with one or two additional coats of Sikalastic®-560 Thixo
Substrates:	Concrete, metals, wood, tiles
Primer:	Sikalastic® -560 Thixo diluted with 15% water
Total thickness:	~ 1.0 - 1.3 mm
Total consumption:	~ 2.3 – 3.2 kg/m^2

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.

	Sikalastic®-560 Thixo	Sikalastic®-560 Thixo 10 years smooth surface	Sikalastic®-560 Thixo 10 years rough surface
Build up	Sikalastic®-560 Thixo applied in one coat	Sikalastic®-560 Thixo applied in 1 coat, reinforced with Sika® Reemat Premium and sealed with one coat of Sikalastic®-560 Thixo	Sikalastic®-560 Thixo applied in 1 coat, reinforced with Sika® Reemat Premium and sealed with one coat of Sikalastic®-560 Thixo

Substrates	Sound concrete, metals, wood, tiles	Sound concrete, metals, wood, tiles, bituminous membranes
Primer	Sikalastic®-560 Thixo diluted with 15% water	
Dry film thickness	~ 0.5-1.0 mm	~ 1.0 mm ~ 1.3 mm
Total consumption	≥ 1.3 kg/m² (≥ 1 l/m²) applied in one coat	≥ 2.3 kg/m² (≥ 1.75 l/m²) applied in 2 coats ≥ 3.2 kg/m² (≥ 2.5 l/m²) applied in 2 coats

	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 (RAL)

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.

New Concrete: 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 Thixo.

Ceramic tiles.
Tiles need a good adhesion to the substrate otherwise they need to be removed. Power wash and use Sika® Biowash as required.

Bituminous felt:
Ensure that Bituminous felt is firmly adhered or mechanically fixed to the substrate. Bituminous felt should not contain any badly degraded areas.

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 Sikalastic®-560 Thixo

The existing Sikalastic® -560 Thixo should still be soundly adhered to the substrate.

Substrate Preparation

Substrate Priming

Substrate	Primer	Consumption [kg/m^2]
Cementitious substrates	Sikalastic® -560 Thixo +diluted with 15% water	≈ 250
Brick and Stone	Sikalastic® -560 Thixo +diluted with 15% water	≈ 250
Ceramic tiles (unglazed) and concrete slabs	Sikalastic® -560 Thixo +diluted with 15% water	≈ 250
Asphalt	subject to surface assessment tests, Sikalastic® -560 Thixo +diluted with 15% water	≈ 250
Bituminous felt	Sikalastic® -560 Thixo +diluted with 15% water	≈ 250
Bituminous coatings	Sikalastic® -560 Thixo +diluted with 15% water	≈ 250
Metals Ferrous or galvanised metals, lead, copper, aluminium, brass or stainless steel	Sikalastic® -560 Thixo +diluted with 15% water	≈ 200
Wooden substrates	Sikalastic® -560 Thixo +diluted with 15% water	≈ 250
Paints	Subject to adhesion tests, Sikalastic® -560 Thixo +diluted with 15% water	≈ 150
Polymeric membranes	Subject to adhesion tests, primer to be defined	

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.

Note: For the Waiting Time /Overcoating you should 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.

Application Conditions / Limitations

Substrate Temperature	+8 °C min. / +45 °C max.
Ambient Temperature	+8 °C min. / +45 °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 Thixo thoroughly for 1 minute in order to achieve a homogeneous mixture. Over mixing must be avoided to minimise air entrainment.

Application Method / Tools

Application Method (please refer to the most recent issue of the Method Statement)

Prior the application of Sikalastic®-560 Thixo 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.

Roof Coating: Sikalastic®-560 Thixo is applied in one or two coats. Prior to the application of a 2nd coat the indicated waiting time in the table below Waiting Time / Overcoating shall be allowed.

Roof Waterproofing: Sikalastic®-560 Thixo is applied in combination with Sika® Reemat Premium.

1. Apply first coat of appr 1.0 l/m² of Sikalastic®-560 Thixo on a length of approx. 1m.
2. Roll in the Sika® Reemat Premium whilst wet and ensure that there are no bubbles or creases. Overlapping of the Reemat minimal 5 cm.
3. Prior to the application of a second coat of Sikalastic®-560 Thixo the indicated waiting time in the table below should be achieved.

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

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 Thixo 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 Thixo to ensure a consistent thickness of the seamless SikaRoof systems.

Thick hair brush:
For application of Sikalastic®-560 Thixo 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® Coldstik.

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 Tools

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

Waiting Time / Overcoating

Before applying Sikalastic®-560 Thixo on Sikalastic®-560 Thixo diluted with 15% water allow material to dry:

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

Before applying Sikalastic®-560 Thixo on Sikalastic®-560 Thixo allow material to dry:

Substrate Temperature	Relative humidity	Minimum	Maximum
+10°C	50%	~ 24 hours	After thorough cleaning [1] Sikalastic®-560 Thixo can be overworked 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 Thixo on substrates with rising moisture.

On new concrete, it is recommended to apply during falling ambient and substrate temperatures. If applied during rising temperatures “pin holing” may occur from rising air.

Ensure that Sikalastic®-560 Thixo 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. After fully curing ponding is allowed. Use Sika Reemat 120 fleece reinforcement sheet when ponding of water is expected or when the surface is badly sloped.

Sikalastic®-560 Thixo 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.

Sikalastic®-560 Thixo 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 in order to guarantee sufficient crack-bridging ability.

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

Sika® Reemat Premium can be used as total reinforcement or for partial reinforcements over dynamic cracks and joints.

Sikalastic®-560 Thixo is not recommended for pedestrian traffic. In case pedestrian traffic is unavoidable, Sikalastic®-560 Thixo 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 Thixo. Use an alkaline barrier, for example kiln dried quartz sand.

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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.

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.

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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