

PRODUCT DATA SHEET

Sikalastic®-580

ACRYLIC WATER BASED LIQUID APPLIED MEMBRANE FOR ROOF WATERPROOFING

DESCRIPTION

Sikalastic®-580 is a 1-part, acrylic, water based, cold applied liquid membrane that can provide a seamless, low maintenance smooth waterproof finish which is resistant to UV exposure and has elastic and vapour permeable properties. Applied in a defined thickness the product is suitable for moderate and cold climate conditions.

USES

- Roof waterproofing for new construction and refurbishment projects
- Roofs with numerous details such as penetrations, drains, roof lights and complex geometry
- Service life extension of old roofs
- Reflective roof coating to enhance energy efficiency

CHARACTERISTICS / ADVANTAGES

- Highly elastic even at temperatures down to -20 °C
- Rain resistant after 1.5 hour (20 °C; r.h. 50%)
- Low soiling
- Low maintenance
- Seamless
- Easy to apply
- Low VOC emissions
- Resistant to UV exposure
- 1-Part ready to use
- Water vapour permeable
- Cold applied - requires no heat or flame
- Extends the life of old roofs

SUSTAINABILITY

- Conformity with LEED v4 SSc 5 (Option 1): Heat Island Reduction - Roof

APPROVALS / CERTIFICATES

- CE Marking and Declaration of Performance to European Technical Assessment ETA 18/1158

PRODUCT INFORMATION

Composition	Modified Acrylic Dispersion
Packaging	5 & 20 kg ready to mix containers. Refer to current price list for packaging variations.
Colour	White (~RAL 9016) Light Grey (~RAL 7035) Grey (~RAL 7045) Slate Grey (~RAL 7015)
Shelf life	12 months from date of production
Storage conditions	The product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Always refer to packaging.
Density	~1,32 kg/l (Value at +20 °C) (EN ISO 2811-1)

Solid content by weight ~63 %

Solid content by volume ~51 %

TECHNICAL INFORMATION

Tensile Strength	Un-reinforced membrane:	~2,2 N/mm ²	(EN ISO 527-3)
	Reinforced membrane with Sika® Reemat Premium:	~15–17 N/mm ²	
	Reinforced membrane with Sikalastic® Fleece-120	~10–12 N/mm ²	

Elongation at Break	Un-reinforced membrane:	~250 %	(EN ISO 527-3)
	Reinforced membrane with Sika® Reemat Premium:	~24–29 %	
	Reinforced membrane with Sikalastic® Fleece-120:	~64–69 %	

Service Temperature -20 °C to +80 °C

SYSTEMS

System Structure

Reflective Roof Coating

Layer	Product	Consumption (kg/m ²)
1. Primer	Depending on the substrate	Depending on the substrate
2. 1 st Coat	Sikalastic®-580	~0,65
3. 2 nd Coat	Sikalastic®-580	~0,65
Total thickness		~0,51–0,64 mm

Roof Waterproofing

Layer	Product	Consumption (kg/m ²)
1. Primer	Depending on the substrate	Depending on the substrate
2. 1 st Coat	Sikalastic®-580	~1,4
3. Sika® Reinforcement	Sika® Reemat Premium (or Sikalastic® Fleece-120)	1 m ²
4. 2 nd Coat	Sikalastic®-580	~0,8
5. 3 rd Coat	Sikalastic®-580	~0,8
Total thickness	Sika® Reemat Premium	~1,23–1,36 mm
	Sikalastic® Fleece-120	~1,35–1,48 mm

Note: Sika® Reemat Premium (or Sikalastic® Fleece-120) reinforcement is applied to areas with high movement, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for detailing. The above consumption figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc. Do not apply more than 0,8 kg/m² of Sikalastic®-580 per coat for layers without reinforcement

APPLICATION INFORMATION

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

Relative Air Humidity 80 % maximum

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

Dew Point Beware of condensation. The substrate and uncured applied roof material must be at least 3 °C above dew point to reduce the risk of condensation on the roof finish.

Substrate Moisture Content ≤ 6 % parts by weight
No rising moisture according to ASTM (Polyethylene-sheet). No water / moisture / condensation.

Substrate Pre-Treatment

Substrate	Primer	Consumption (kg/m ²)
Cementitious substrate	Sikalastic®-580 - 10 % water dilution	~0,30
Existing old paints / elastomeric coatings	Sikalastic®-580 - 10 % water dilution	~0,30 Subject to adhesion and compatibility testing
Ceramic tiles (un-glazed)	Sikalastic®-580 - 10 % water dilution	~0,30
Bituminous felt / coatings	Sikalastic® Metal Primer*. Only required for high reflectivity applications. Use fully reinforced system only	~0,20
Metals	Sikalastic® Metal Primer	~0,20
Wooden substrates	For exposed wooden upstands use Sikalastic®-580 - 10 % water dilution Wood based roof decks require a complete layer of Sikalastic® Carrier membrane	~0,30
Brick and stone	Sikalastic®-580 - 10 % water dilution	~0,30

* Sikalastic® Metal Primer prevents migration of bituminous volatiles and improves long-term reflectivity. The pre-treatment must be carried out after the correct substrate preparation. The above consumption figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level or wastage etc.

Waiting Time / Overcoating

Sikalastic®-580 on Sikalastic®-580 diluted with 10 % water			
Substrate Temperature	Relative humidity	Minimum	Maximum
+10 °C	50 %	~4 hours	Sikalastic®-580 can be overcoated at any time*
+20 °C	50 %	~2 hours	
+30 °C	50 %	~1 hour	
Sikalastic®-580 on Sikalastic®-580			
Substrate Temperature	Relative humidity	Minimum	Maximum
+10 °C	50 %	~36 hours	Sikalastic®-580 can be overcoated at any time*
+20 °C	50 %	~24 hours	
+30 °C	50 %	~12 hours	

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

For other primer types, refer to individual Product Data Sheets.
*Assuming all dirt has been removed and contamination avoided.

Drying time

Drying times will also be increased by restricted air movement.

Applied Product Ready for Use

Substrate Temperature	Relative Humidity	Rain Resistant	Touch Dry	Full Cure
+10 °C	50 %	~3 hours	~4 hours	~6 days
+20 °C	50 %	~1,5 hours	~2 hour	~4 days
+30 °C	50 %	~45 min.	~1 hour	~2 days

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

APPLICATION INSTRUCTIONS

EQUIPMENT

Substrate preparation

Abrasive blast cleaning / planing / scarifying or grinding equipment.

Manual or mechanical wire brushes

High pressure power washer

Mixing

Double spiral mix paddle & drill (300–400 rpm)

Application

Airless spray equipment (Roof Coating):

Minimum equipment parameters:

- Pressure: 220 bar

- Output: 5,1 l/min

- Nozzle size: 0,83mm (0,033 inch)

Recommended type of equipment: Wagner Heavycoat HC 940 E SSP Spraypack.

Suitable application brushes and rollers that are project specific to the roof area and detailing.

SUBSTRATE PREPARATION

General

All dust, loose and friable material must be completely removed from all surfaces before application of the product and associated system products, preferably by vacuum extraction equipment.

To confirm adequate surface preparation and Sikalastic®-580 adhesion, carry out a small trial before full application together with adhesion tests as required.

Cementitious substrates

Substrate must be sound with a minimum tensile adhesion strength of 1,5 N/mm², clean, dry and free of all contaminants such as dirt, oil, grease, coatings, laitance, surface treatments and loose friable material.

New concrete should be cured for at least 28 days and have a pull-off strength >1.5N/mm².

Substrates must be prepared mechanically using suitable substrate preparation equipment to remove cement laitance and achieve an open textured gripping surface profile suitable for the product thickness.

High spots can be removed by grinding.

Weak cementitious substrates must be removed and surface defects such as blow holes 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. Products must be cured before applying Sikalastic®-580.

Brick and stone

Mortar joints must be sound and preferably flush pointed. Use localised Sika® reinforcement over joints.

Ceramic tiles

Ensure all tiles are securely fixed. Replace any broken, loose or missing sections. Power wash and use Sika® Biowash as required.

Bituminous felt

Ensure the bituminous felt is firmly adhered or mechanically fixed to the substrate and does not contain any badly degraded areas. Replace as necessary. Always use a fully reinforced system over the felt.

Bituminous coatings

Bituminous, volatile mastic or old coal tar coatings must be rigid and without a sticky surface. Always use a fully reinforced system over these types of coating.

Metal

Metals must be in a sound surface condition. Abrade exposed surfaces to a bright metal finish. Use localised Sika® reinforcement over joints and fixings.

Wood

Wood and wood based panel roof decks must be in good structural condition, firmly adhered or mechanically fixed.

Paints/Coatings

The existing material must be sound and firmly adhered to the substrate. Remove any oxidized or loose layers. To confirm compatibility with Sikalastic®-580, carry out a small trial before full application.

Existing Sikalastic®-580

The existing Sikalastic®-580 must be sound and firmly adhered to the substrate. Carry out adhesion tests to confirm. After preparation power wash to clean the surface and use Sika® Biowash as required.

MIXING

Sikalastic®-580 is supplied ready for use. Before application, mix for a minimum of 1 minute using mixing paddle and drill or other suitable equipment to mix the liquid and all the coloured pigment until a uniform colour has been achieved. Over mixing must be avoided to minimise air entrainment.

APPLICATION

INSTALLATION PROCEDURE

Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instructions.

REFLECTIVE ROOF COATING

Primer

Pour mixed primer onto the prepared substrate and apply by brush or appropriate roller. Ensure a continuous coat covers the substrate. Confirm primer waiting /overcoating time has been achieved before applying successive products. Refer to individual primer Product Data Sheet.

Coating

Pour mixed Sikalastic®-580 onto prepared substrate and apply evenly by airless spray, brush or short piled roller at the required consumption rate in 2 directions at right angles to each other. Apply 2 coats at the same consumption.

ROOF WATERPROOFING

Primer

Pour mixed primer onto the prepared substrate and apply by brush or appropriate roller. Ensure a continuous, pore free coat covers the substrate. Confirm primer waiting /overcoating time has been achieved before applying successive products. Refer to individual primer Product Data Sheet.

Membrane

1st Coat:

Pour mixed Sikalastic®-580 onto prepared substrate the same width as the Sika® Reemat Premium and apply evenly by brush or short piled roller at the required consumption rate in 2 directions at right angles

to each other.

Sika® Reemat Premium:

Roll in the Sika® Reemat Premium whilst Sikalastic®-580 is still wet ensuring there are no bubbles or creases in the reinforcement. Reinforcement overlaps must be a minimum of 50 mm. Recommendation is to work 1,0 m at a time lengthways applying 1st coat and embedding reinforcement.

2nd Coat:

Pour mixed Sikalastic®-580 onto the applied layer with the reinforcement and apply evenly by brush or short piled roller at the required consumption rate in 2 directions at right angles to each other. Confirm overcoating times before application.

3rd Coat:

Pour mixed Sikalastic®-580 onto the dry 2nd coat and apply evenly by brush or short piled roller at the required consumption rate in 2 directions at right angles to each other. Confirm overcoating times before application

FURTHER INFORMATION

- Method Statement - Sikalastic®-580

IMPORTANT CONSIDERATIONS

- After application, Sikalastic®-580 must be protected from damp, condensation and direct water contact (rain) in accordance with substrate temperature and rain resistant guidelines.
- Do not apply Sikalastic®-580 on substrates with rising moisture.
- Ensure Sikalastic®-580 is totally dry and the surface is without pinholes before applying successive coats.
- Remove surface water between coating applications.
- Sikalastic®-580 must not be applied on roofs subject to long-term ponding water.
- In cold climatic zones, roof structures with a pitch of less than 3 %. Appropriate measures must be considered to avoid ponding water and the water becoming frozen.
- Sikalastic®-580 applied on roofs subject to long-term freezing at temperatures around the minimum service temperature of -20 °C must always be reinforced with Sika® Reemat Premium in order to provide sufficient crack-bridging ability.
- Do not apply Sikalastic®-580 directly on insulation boards. Use a separation layer of Sikalastic® Carrier SA between insulation board and Sikalastic®-580.
- Sika® Reemat Premium can be used as total reinforcement or partial reinforcement over dynamic cracks and joints.
- Sikalastic®-580 is not recommended for direct exposure to pedestrian traffic.
- Do not apply cementitious products (e.g. tile mortar) directly onto Sikalastic®-580.
- Always confirm waiting /overcoating times have been achieved before applying successive coats of products.
- Always begin with detailing applications before full waterproofing application of the horizontal surfaces.
- Do not apply to substrates where significant moisture vapour transmission (out-gassing) will occur during application. This effect may be reduced if Sikalast-

ic®-580 is applied on a falling substrate temperature.

- Roofs with bituminous felts or coatings must always be fully covered with a fully reinforced system.

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

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/CE, the maximum allowed content of VOC (product category IIA / i type wb) is 140 g/l (Limits 2010) for the ready to use product.

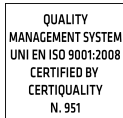
The maximum content of Sikalastic®-580 is < 140 g/l VOC for the ready to use product.

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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