

PRODUCT DATA SHEET

Sikalastic®-590

ECONOMICAL, PU-ACRYLIC DISPERSION BASED, LIQUID APPLIED MEMBRANE WITH IMPROVEMENT IN WATER-RESISTANT CAPABILITY OF PONDING

DESCRIPTION

Sikalastic®-590 is one component, Polyurethane – Acrylic dispersion based, liquid applied membrane for roof waterproofing with improvement in water-resistant capability of ponding, excellent UV resistance, good crack bridging capacity and great esthetics.

USES

- For 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 (Sikalastic®-590 White)

CHARACTERISTICS / ADVANTAGES

- Good behavior under limited water ponding
- 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

PRODUCT INFORMATION

Chemical base	Polyurethane modified acrylic dispersion		
Packaging	20 kg in plastic pail		
Colour	Grey and white		
Shelf life	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging.		
Storage conditions	The product must be stored properly in dry conditions at temperatures between +5 °C and +30 °C.		
Density	~1.32 kg/L (at +30 °C)		(EN ISO 2811-1)
Solid content	~63 % by weight		

TECHNICAL INFORMATION

Tensile Strength	~ 1.7 N/mm ²	Free film (> 7 days)	(ASTM D412)
Elongation at Break	~ 360 %	Free film (>7 days)	(ASTM D412)

Adhesion in Peel ~ 1.5 N/mm² Free film (> 7 days) (ASTM D7234)

Behaviour after Artificial Weathering Pass, 1000 hours, UVA-340 (ASTM G154)
no cracking, no blister, no delamination, no chalking

SYSTEM INFORMATION

System Structure	System Build up	Coating System	Reinforced System
	Priming	Sikalastic®-590 diluted with 10 % water pbw	Sikalastic®-590 diluted with 10 % water pbw
	Build up	2 coats Sikalastic®-590 locally reinforced with Sika® Reemat Premium for critical areas (*)	1 st coat Sikalastic®-590 fully reinforced with Sika® Reemat Premium 2 nd coat x Sikalastic®-590
	Total Consumption (**)	~ 1.5 - 1.7 kg/m ²	~ 1.7 - 2.1 kg/m ²

*) areas with high movement, irregular substrate or to bridge small cracks, joints and seams on the substrate.

***) consumption figures are theoretical and do not allow for any additional material due to surface porosity, surface profile, variations in level and wastage etc.

APPLICATION INFORMATION

Ambient Air Temperature +15 °C min / +35 °C max

Relative Air Humidity 80 % r.h. max

Substrate Temperature +15 °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 < 6 % moisture content.
No rising moisture according to ASTM (Polyethylene-sheet)
No water / moisture / condensation on the substrate.

Waiting Time / Overcoating Before applying Sikalastic®-590 on Sikalastic®-590 diluted with 10 % water as primer, allow primer to dry:

Substrate Temperature	Relative Humidity	Minimum	Maximum
+20 °C	50 %	~2 hrs	* Note 1
+30 °C	50 %	~1 hrs	* Note 1

Before applying Sikalastic®-590 on Sikalastic®-590 (without reinforced), allow 1st coat to dry:

Substrate Temperature	Relative Humidity	Minimum	Maximum
+20 °C	50 %	~6 hrs	* Note 1
+30 °C	50 %	~4 hrs	* Note 1

Before applying Sikalastic®-590 on Sikalastic®-590 (reinforced with Sika Reemat Premium), allow material to dry:

Substrate Temperature	Relative Humidity	Minimum	Maximum
+20 °C	50 %	~24 hrs	* Note 1
+30 °C	50 %	~12 hrs	* Note 1

*Note 1 : After thorough cleaning Sikalastic®-590 can be overcoated with Sikalastic®-590 at any time

Applied Product Ready for Use

Substrate Temperature	Relative Humidity	Touch Dry	Rain Resistant	Fully Cured
+20 °C	50 %	~2 hrs	~10 hrs	~4 days
+30 °C	50 %	~1 hrs	~6 hrs	~2 days

Note : Times are approximate and will be effected by changing ambient conditions particularly temperature and relative humidity. Low temperature and high relative humidity retard curing, while high temperature and low relative air humidity accelerate curing progression.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Cementitious Substrate:

- New concrete should be cured for at least 28 days and should have a Pull off strength ≥ 1.5 N/mm².
- 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 Sika-floor®, 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.

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 should be in sound condition. Abrade the exposed surfaces to reveal bright metal. Use locally reinforcement over joints and fixings.

For the other substrates: please contact to Sika Technical Department.

MIXING

Prior to application, stir Sikalastic®-590 thoroughly for 1 minute in order to achieve a homogeneous mixture. Over mixing must be avoided to minimise air entrain-

ment.

APPLICATION

Prior to application of Sikalastic®-590, the priming coat must be applied and it must have cured tack-free. The primer coat is Sikalastic®-590 at consumption of ~0.3 kg/m² (diluted with 10 % water pbw). Damageable areas (door frame) have to be protected with an adhesive tape.

Detailing

Always begin the installation with the details prior to the installation of the horizontal areas. Follow same process as reinforced system.

Coating System

Apply the first layer of Sikalastic®-590 maintaining a wet edge to ensure a seamless membrane. Once the first layer has cured enough (refer to the overcoating time window) apply the second layer of Sikalastic®-590.

Reinforced System

Apply the first layer of Sikalastic®-590 maintaining a wet edge to ensure a seamless membrane. Roll-in the reinforcement Sika® Reemat Premium and overlap by minimum 5 cm. The roller may require only a little bit of extra material to keep wetted but no further significant material is added at this stage. Once the first layer has cured enough (refer to the overcoating time window) apply the second layer of Sikalastic®-590.

TOOLS

Drill and paddle:

Sikalastic®-590 should be mixed for one minute using a drill and paddle.

Solvent resistant short-piled lamb skin roller:

Used in the application of Sikalastic®-590 to ensure a consistent thickness of the seamless SikaRoof systems.

Thick hair brush:

For application of Sikalastic®-590 to all details and penetrations.

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.

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. Ø nozzle : 0.83 mm (0.033 inch)
For example : Wagner Heavycoat HC 940 E SSP Spray pack

CLEANING OF TOOLS

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

IMPORTANT CONSIDERATION

- Sikalastic®-590 can be applied on roofs subject to short ponding water
- Recommended slope of 1 % should be provided to substrate. (Depending on Roof layout and availability of Drains and Gutters, minimum could be 0.5 % slope).
- Protect the applied material from rain until 24 hours to get good ponding water capability.
- Do not apply Sikalastic®-590 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 temperature does not drop below 15 °C and that relative humidity does not exceed 80 % until the Membrane has fully cured.
- Ensure that Sikalastic®-590 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.
- In cold climatic zones, Sikalastic®-590 should not be applied on roofs subject to ponding water with subsequent periods of frost. Otherwise a slope of more than 3% should be provided, or appropriate measures should be considered.
- Do not apply Sikalastic®-590 directly on insulation boards. Instead use a separation layer between insulation board and Sikalastic®-590.
- Sika® Reemat Premium should be used as fully reinforcement or for partial reinforcements over dynamic cracks and joints.

- Sikalastic®-590 is not recommended for pedestrian traffic. In case pedestrian traffic is unavoidable, Sikalastic®-590 shall be covered with appropriate elements such as tiles, stone plates or wooden panels.

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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