

## PRODUCT DATA SHEET

# Sikalastic®-590 Plus AU

### ROOF MEMBRANE AND PROTECTIVE COATING UTILIZING LOCAL ADVANCED TECHNOLOGY

#### DESCRIPTION

Sikalastic®-590 Plus AU is a one component polyurethane / polysiloxane modified acrylic with excellent UV resistance and good crack bridging capability. Sikalastic®-590 Plus AU is developed in Australia using local advanced technologies to withstand the harsh local conditions. Sikalastic®-590 Plus AU can be applied as a protective coating or a membrane applied either by roller, brush, or spray.

#### 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 roofs
- For reflective coating to enhance energy efficiency by reducing cooling costs (Sikalastic®-590 Plus AU White)

#### PRODUCT INFORMATION

<b>Composition</b>	Polyurethane/ Polysiloxane modified acrylic dispersion
<b>Packaging</b>	4 Litre and 15 Litre plastic pails
<b>Shelf life</b>	12 months from date of production if stored properly in original, unopened and undamaged sealed packaging.
<b>Storage conditions</b>	The product must be stored properly in dry conditions at temperatures between +5 °C and +30 °C.
<b>Colour</b>	Grey and White (Special colours available on made to order basis, minimum order approx. 60 pails)
<b>Density</b>	1.39kg/L
<b>Volatile organic compound (VOC) content</b>	< 1 gram/Litre

#### CHARACTERISTICS / ADVANTAGES

- Can withstand 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
- Seamless waterproofing membrane
- Water vapour permeable
- Class III membrane

#### APPROVALS / CERTIFICATES

Sikalastic®-590 Plus AU complies with AS4654.1- 2012 External Waterproofing Membranes

## TECHNICAL INFORMATION

Shore A hardness	74
Tensile strength	0.50MPa (peak)
Tensile strain at break	> 550% elongation (at 7 days @ 23C/ 65+15% RH)
Tensile adhesion strength	1.68MPa (with and without primer)

## SYSTEM INFORMATION

### System structure

#### WATERPROOFING MEMBRANE COATING -1.2mm DFT

For UV-stable (light foot traffic) coating to extend the life of old roofs or as reflective coating to enhance energy efficiency.

▪ For detail system build up, please refer to table below :

Coating System	Product	Consumption
Primer Coat	Sikalastic Roof Primer	approx 12m <sup>2</sup> per litre
First Coat	Sikalastic®-590 Plus AU	800 micron WFT
Second Coat	Sikalastic®-590 Plus AU	800 micron WFT
Third Coat	Sikalastic®-590 Plus AU	800 micron WFT

#### PROTECTIVE COATING -500 micron DFT

For non-trafficable areas requiring a protective coating solution in new construction and refurbishment projects.

▪ For detail system build up, please refer to table below :

Coating System	Product	Consumption
Primer Coat	Sikalastic Roof Primer	approx 12m <sup>2</sup> per litre
First Coat	Sikalastic®-590 Plus AU	500 micron WFT
Second Coat	Sikalastic®-590 Plus AU	500 micron WFT

## APPLICATION INFORMATION

Yield	1 Litre per 1m <sup>2</sup> @ 500 micron DFT (15m <sup>2</sup> per drum) 2.4 Litres per 1m <sup>2</sup> @ 1200 micron DFT (6.25m <sup>2</sup> per drum)
Ambient air temperature	+15 °C min / +35 °C max
Relative air humidity	80 % r.h. max
Dew point	Beware of condensation, Surface temperature during application must be at least 5 °C above dew point.
Substrate temperature	+15 °C min / +35 °C max
Substrate moisture content	< 5 % moisture content. No water / moisture / condensation on the substrate.
Waiting time to overcoating	2 hours at 500 micron 3 hours at 800 micron *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.
Drying time	Flood test can be conducted after 48 hours from application Foot traffic allowed after 7 days from application *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.

## 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.

## IMPORTANT CONSIDERATIONS

- Sikalastic®-590 Plus AU can be applied on roofs subject to small amounts of ponding water.
- Recommended slope of 1 % should be provided to substrate.
- Protect the applied material from rain until 24 hours to get good ponding water capability.
- Do not apply Sikalastic®-590 Plus AU 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 Plus AU 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 Plus AU 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 Plus AU directly on insulation boards. Instead use a separation layer between insulation board and Sikalastic®-590 Plus AU.
- Do not over lay Sikalastic®-590 Plus AU with tiles, concrete, cementitious screeds or others. Sikalastic®-590 is an exposed Roofing system.
- Sikalastic®-590 Plus AU requires a suitable metal primer on all metal substrates prior to membrane application .

## ECOLOGY, HEALTH AND SAFETY

### SUBSTRATE PREPARATION

#### Cementitious Substrate:

- New concrete should be cured for at least 28 days and should have a Pull off strength  $\geq 1.5$  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 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.

- Always prime the substrate to increase bond strength of the coating and to consolidate the existing substrate.

#### Brick and Stone:

- Mortar joints must be sound and preferably flush pointed. Brick and stone should be primed with Sikalastic® Roof Primer or Sikatite® Moisture Seal 2k if moisture is present. Use a suitable bond breaker over joints and prime before applying Sikalastic®-590 Plus AU. (Contact Sika Technical for advice on joint sealing before application of membrane)

#### Bituminous Sheets/Coatings:

- Bituminous sheet membranes should not have sticky or mobile surfaces and should be thoroughly cleaned; apply Sikalastic®-590 Plus AU with addition of 10% water as a primer coat and allow to dry before applying the chosen Sikalastic®-590 Plus AU membrane system. Use suitable bond breaker over any existing joints. (Contact Sika Technical for advice on joint sealing before application of membrane)
- Volatile mastic coatings, old coal tar coatings, bitumen based liquid membranes should not have sticky or mobile surfaces and should be thoroughly cleaned, apply Sikalastic®-590 Plus AU undiluted directly to the surface and allow to dry before applying the chosen Sikalastic®-590 Plus AU membrane system. Use suitable bond breaker over any existing joints. (Contact Sika Technical for advice on joint sealing before application of membrane)
- Please note a site adhesion test is highly recommended to ensure minimum bond strength of 1MPa (pull off test) is achieved and no reaction between Sikalastic®-590 Plus AU and the existing coating is apparent before undertaking the entire application.

#### Existing Paints/Coatings:

- Ensure the existing material is sound, firmly adhered and remove any oxidized layers. A site adhesion test is highly recommended to ensure minimum bond strength of 1MPa (pull off test) is achieved and no reaction between Sikalastic®-590 Plus AU and the existing coating is apparent before undertaking the entire application.

#### Metals:

- For aluminium/colorbond surfaces, it is highly recommended to solvent wipe the existing surface to remove any present oxidation which could affect long term adhesion of the new coating. Once this has been completed, apply Sikalastic® Roof Primer before applying Sikalastic®-590 Plus AU.

## APPLICATION

Prior to the application of Sikalastic®-590 Plus AU, the primer coat has to be used and it must have cured tack-free. The primer coat is Sikalastic® Roof Primer and consumption is approximately 12m<sup>2</sup> per litre depending on porosity of the substrate. For the Waiting Time / Overcoating please refer to the PDS of the appropriate primer. Please note Sikalastic® Roof Primer will only have a silification effect on porous, well prepared, clean cementitious substrates. For substrates containing over 5% moisture content Sikatite® Moisture Seal 2k should be used as the primer coat, please refer to the PDS for consumption rates.

## CLEANING OF EQUIPMENT

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

## 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.

## 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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Sikalastic-590PlusAU-en-AU-(04-2023)-1-3.pdf

### Product Data Sheet

Sikalastic®-590 Plus AU

April 2023, Version 01.03

020915108010000014