

PRODUCT DATA SHEET

Sikalastic®-611 R AP

HIGH PERFORMANCE ONE-COMPONENT LIQUID APPLIED POLYURETHANE ROOF WATERPROOFING MEMBRANE

DESCRIPTION

Sikalastic®-611 R AP is a one-part, elastic, cold applied, moisture-triggered polyurethane waterproofing membrane that can be applied directly from the container. The product provides a seamless, smooth, durable and chemical resistant, waterproofing finish for flat roofs and with primer and topcoat.

USES

Sikalastic®-611 R AP may only be used by experienced professionals.

The Product is used for:

- Flat and sloping fully exposed roof structures
- New construction and refurbishment projects
- Waterproofing and renovation of old roofs to extend service life
- Roofs with numerous details such as penetrations, drains, roof lights and complex geometry

The Product is used on the following substrates:

- Concrete and cementitious substrates
- Metal
- Bituminous sheet membranes
- Bituminous coatings
- Brick
- Unglazed ceramic tiles

PRODUCT INFORMATION

Composition	One-component, moisture-triggered aromatic polyurethane
Packaging	18 kg metal can Refer to the current price list for available packaging variations.
Shelf life	9 months from date of production if stored properly in original, unopened and undamaged sealed container. Refer to expiry date on the container.

CHARACTERISTICS / ADVANTAGES

- 1-part, ready to use
- Highly durable system
- Moisture triggered chemistry (MTC)
- Fast curing and rain resistant
- High solids content
- Self-leveling properties
- Cold applied - requires no heat or flame
- Applied by squeegee, brush, or roller
- Metal tin container can be fully recycled

APPROVALS / CERTIFICATES

- Crack bridging (BS EN 14891:2017), Tensile Strength & Elongation at break (ASTM D 412-16), Tear Strength (ASTM D 624-00), Shore A hardness (ASTM D2240-15), Weight loss (ASTM C 836-15) tested by QUATEST 3®, Vietnam. Test report: KT3-01826BXD1
- Tensile performance, Tear performance, Heating elongation and shrinkage state, Tensile performance after deterioration treatment, Deterioration state of elongation, Solid content, Density of cured product according to CNS 8644:2014 tested by TGS Taipei Laboratory. Test Report: PL-21-00900XA

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 instructions. Higher storage temperatures may reduce shelf life of product. Prevent exposure to sunlight, frost, and heat. Refer to the current Safety Data Sheet for information on safe handling and storage.	
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Colour	Grey	
Density	(1.40 ± 0.05) kg/L (at +23° C)	(EN ISO 2811-1)
Solid content by mass	((92±3)% (+23°C / 50% r.h.))	

TECHNICAL INFORMATION

Shore A hardness	~50	(ASTM D 2240)
Tensile strength	~4.0 N/mm ²	(ASTM D412)
Tensile strain at break	~1000 % (without reinforcement fabric)	(ASTM D412)
Crack bridging ability	Unreinforced No crack at 5 mm crack width	(BS EN 14891:2017)
Tear strength	~14 N/mm	(ASTM D624)
Service temperature	-20°C to +80 °C	
Chemical resistance	Sikalastic®-611 R AP resists contact with weak acids and alkalis regulated by JIS A 6021.	

SYSTEM INFORMATION

System structure	Sikalastic®-611 R AP is part of the following roof waterproofing and coating systems and reference must be made to the respective System Data Sheets: Roof Waterproofing systems:	
	<ul style="list-style-type: none"> ▪ SikaRoof® MTC-05 UV ▪ SikaRoof® MTC-08 UV ▪ SikaRoof® MTC-10 UV 	

Consumption of Sikalastic®-611 R AP base coats within the systems:

System	1st base coat	2nd base coat
SikaRoof® MTC-05 UV	≥ 1,05 kg/m ²	≥ 0,70 kg/m ²
SikaRoof® MTC-08 UV	≥ 1,05 kg/m ²	≥ 1,05 kg/m ²
SikaRoof® MTC-10 UV	≥ 1,40 kg/m ²	≥ 1,05 kg/m ²

Note: 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 INFORMATION

Material temperature	Maximum	+40°C
	Minimum	+5 °C
Ambient air temperature	Maximum	+40°C
	Minimum	+5°C
Relative air humidity	Maximum	80%
	Minimum	5%
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 surface finish.	

Substrate temperature	Maximum	+40°C	
	Minimum	+5°C	
Substrate moisture content	Substrate	Test method	Moisture content
	Cementitious substrates	Sika® Tramex moisture metre	≤ 6 %
	Cementitious substrates	Calcium carbide method (CM-method)	≤ 4 %
No rising moisture (ASTM D4263, polyethylene sheet) The substrate must be visibly dry with no standing moisture.			
Substrates	Substrate	Primer	
	Cementitious including concrete slabs	Sikalastic® U-Primer / Sikafloor®-161	
	Brick and Stone	Sikalastic® U-Primer / Sikafloor®-161	
	Ceramic Tiles (unglazed)	Sikalastic® U-Primer / Sikafloor®-161	
	Bituminous coatings (aged) / Bituminous felts (aged)	Sikalastic® Metal Primer / Sika® Primer PW-F	
	Metals	Sikalastic® Metal Primer / Sika® Primer PW-F	
	Existing SikaRoof MTC System	Sikalastic® Reactivation Primer/ Interlayer Primer J	
Pot Life	Product will cure rapidly in high temperatures combined with high air humidity. Skin formation starts after ~2 hour (+20 °C / 50 % r.h.).		
Applied product ready for use	Ambient conditions	Touch dry	Full cure
	+23°C/50% r.h.	3 hours	16 hours
	+30°C/50% r.h.	2 hours	12 hours
Be aware that impact of heavy or rain showers can physically damage the still liquid membrane. Note: Times are approximate and will be affected by changing ambient conditions particularly temperature and relative humidity.			

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.

FURTHER INFORMATION

Refer to the Method Statement of Sikalastic®-611 R AP

IMPORTANT CONSIDERATIONS

Installation work must only be carried out by Sika® trained and approved contractors, experienced in this type of application.

- Do not apply on substrates with rising moisture.
- Not suitable for permanent water immersion.
- On substrates likely to exhibit outgassing, apply during falling ambient and substrate temperature. If applied during rising temperatures “pin holing” may occur from rising vapour. Sikalastic® Primer may assist with reducing or eliminating this effect.

- Do not dilute the system products with any diluents.
- Do not use for indoor applications.
- Switch off the air intake vent of a running air conditioning unit when installing the system.
- Do not apply Sikalastic®-611 R AP directly onto insulation boards. Use Sikalastic® Carrier between Insulation board and roof system.
- Do not apply over volatile bituminous materials as these may stain / soften below the roof system. Areas with high movement, irregular substrates, or timber based roof decks require a complete layer of Sikalastic® Carrier applied before application of roof membrane system.
- Do not apply different basecoats on the same jobsite
- Always work with the same product
- Do not use grit salt and/or other de-icing agents between coats of Sikalastic®-611 R AP as this may affect the cure and inter-coat adhesion of the product.
- Sikalastic®-611 R AP is resistant to most encountered atmospheric pollutants, proprietary cleaning solutions and environmental conditions within the service temperature limits. The suitability of the product for use in applications with increased chemical resistance requirements must first be established.
- Incompatible with some silicones products.

- Aromatic Polyurethanes chalk under UV exposure and this effect is influenced by the type of country or region climate. Waterproofing life expectancy is increased with system thickness and by using Sikalastic® U-Coating or Sika® Excel Top

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 Material Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

EQUIPMENT

Select the most appropriate equipment required for the project:

SUBSTRATE PREPARATION EQUIPMENT

- Abrasive blast cleaning / planing / scarifying or grinding equipment.
- Manual or mechanical wire brushes.
- High pressure power washer.

For other types of preparation equipment, contact Sika Technical Services.

MIXING EQUIPMENT

- Electric single or double paddle mixer (300–400 rpm) with spiral paddle

APPLICATION EQUIPMENT

- Brush: Soft bristle
- Roller: Solvent resistant fleece
- Float trowels

SUBSTRATE PREPARATION

The supporting structure must be of sufficient structural strength to apply all new and existing layers of the roof build-up. Complete roof system must be designed and secured against wind uplift loadings. Refer to the Sika Method Statement: Sikalastic®-611 R AP Suitable substrates:

- Concrete and cementitious substrates
- Metal
- Bituminous sheet membranes
- Bituminous coatings
- Brick
- Unglazed ceramic tiles

GENERAL

All contamination such as dust, loose and friable material that could affect final finish or reduce adhesion, must be completely removed from all surfaces before application of the product or subsequent products, preferably by industrial vacuuming equipment.

MIXING

IMPORTANT

Avoid over-mixing to minimise air entrainment. Product is supplied ready to use. Before application, mix for at least 1 minute or until the liquid is uniform.

APPLICATION

IMPORTANT

Protect from rain

After application, the product must be protected from heavy rain or rain showers until dry to prevent surface damage.

IMPORTANT

Application of successive coats

To prevent a reduction in product performance the following actions are necessary when applying successive coats.

1. Ensure product is totally dry and the surface is without pinholes before applying successive coats.
2. Remove surface water between coating applications.
3. Confirm overcoating times have been achieved between coating applications.

IMPORTANT

No application on rising moisture

Do not apply on substrates with rising moisture.

INSTALLATION PROCEDURE

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

PRIMER

Equipment:

- Fleece roller
 - Brush
1. Pour the mixed Product onto the surface. The consumption is specified in the individual primer Product Data Sheet Application Information.
 2. Apply the Product evenly over the surface with a brush or fleece roller.
 3. Back roll the surface in two directions at right angles with a fleece roller.

The coating is continuous and pore free.

ROOF WATERPROOFING

Reinforced waterproof membrane

Equipment:

- Fleece roller
- Brush
- Float trowels

1st coat

1. Install the detailing first (such as corners, upstands, joints) before installation of the main horizontal surfaces.
2. Pour the mixed Product onto the substrate. The consumption is specified in Application Information.
3. Apply the Product with either a trowel, brush or a fleece roller.
4. **IMPORTANT** Avoid going back to re-work areas that are partially dried as this may damage the surface finish. Back roll the surface in two directions at right angles with a fleece roller.

The coating is continuous and pore free.

Reinforcement application

1. For the best results work 1.0 m at a time lengthways applying the 1st coat and embedding the reinforce-

- ment.
2. Make sure reinforcement overlaps are greater than 50 mm.
 3. Lay the reinforcement onto the wet 1st coat
 4. Use a short pile roller to roll over the reinforcement and resin
- The coating is continuous and pore free.

2nd coat

1. Check if the reinforcement is embedded properly, if necessary use sand paper to ensure that the surface is even. If the surface was contaminated with dust or dirt clean the surface with water and light detergent, wait until the surface is dry before applying 2nd coat. Remove any standing water before application.
 2. Install the detailing first (such as corners, upstands, joints) before installation of the main horizontal surfaces.
 3. Pour the mixed Product onto the substrate. The consumption is specified in Application Information.
 4. Apply the Product with one either a brush or a fleece roller.
 5. **IMPORTANT** Avoid going back to re-work areas that are partially dried as this may damage the surface finish. Back roll the surface in two directions at right angles with a fleece roller.
- The coating is continuous and pore free.

Top coat

1. Install the detailing first (such as corners, upstands, joints) before installation of the main horizontal surfaces.
 2. Mix 2-part top coat according to Product Data Sheet.
 3. Pour the mixed Product onto the substrate. The consumption is specified in the individual primer Product Data Sheet Application Information.
 4. Apply the Product with either a brush or a fleece roller.
 5. **IMPORTANT** Avoid going back to re-work areas that are partially dried as this may damage the surface finish. Back roll the surface in two directions at right angles with a fleece roller.
- The coating is continuous and pore free.

CLEANING OF EQUIPMENT

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

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.

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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