

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-component, cold applied, moisture-triggered polyurethane waterproofing membrane. It cures to form a seamless, durable and chemical resistant, waterproofing solution for flat roofs and external balconies 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

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
- Excellent crack-bridging ability

APPROVALS / STANDARDS

- 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

PRODUCT INFORMATION

Chemical base	One-component, moisture-triggered aromatic polyurethane
Packaging	18 kg container
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.
Storage conditions	Product must be stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures between +5 °C and +30 °C. Higher storage temperatures may reduce shelf life of product. Prevent exposure to sunlight, frost and heat.
Colour	Grey

Density	1.40 ± 0.05 kg/L at +23° C	(EN ISO 2811-1)
Solid content by weight	92% ±3%, (23°C, 50% r.h.)	

TECHNICAL INFORMATION

Shore A Hardness	~40	ASTM D 2240-15
Tensile Strength	~3.0 N/mm ²	ASTM D412-16
Elongation at Break	~600 % (without reinforcement fabric)	ASTM D412-16
Crack Bridging Ability	No crack at 5 mm crack width(Unreinforced)	BS EN 14891 : 2017
Tensile Adhesion Strength	≥ 1.0 N/mm ²	ASTM D7234-21
Tear Strength	~10 kN/m	ASTM D624-00
Service temperature	-20 °C to +80 °C max	

CHEMICAL RESISTANCE Sikalastic®-611 R AP resists contact with weak acids and alkalis regulated by JIS A 6021.

SYSTEM INFORMATION

System Structure

Note: For detailed reinforcement information refer to the Sika Method Statement: Sikalastic®-611 R AP

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.

Roof Coating:

Layer	Product	Consumption
Primer	please refer to substrate pre-treatment	please refer to PDS of the Primer
1st Base coat	Sikalastic®-611 R AP	1.0 ~ 1.4 kg/m ²
2nd Base Coat	Sikalastic®-611 R AP	0.75 ~ 1.0 kg/m ²
Topcoat	Sikalastic® U-Coating or Sikalastic® ExcelTop	≥ 0.3 kg/m ² /layer

Roof Waterproofing System:

System	1st base coat	2nd base coat
SikaRoof® MTC-05 UV AP	≥ 1.0 kg/m ²	≥ 0.75 kg/m ²
SikaRoof® MTC-08 UV AP	≥ 1.0 kg/m ²	≥ 1.0 kg/m ²
SikaRoof® MTC-10 UV AP	≥ 1.4 kg/m ²	≥ 1.0 kg/m ²

APPLICATION INFORMATION

Product Temperature	+5 °C min / +40 °C max
Ambient Air Temperature	+5 °C min / +40 °C max
Relative Air Humidity	5% min / 80% max Relative Humidity
Dew Point	Beware of condensation. The substrate and uncured applied membrane must be at least +3 °C above dew point to reduce the risk of condensation or blooming on the membrane finish.
Substrate Temperature	+5 °C min / +40 °C max
Substrate Moisture Content	Refer to Product Data Sheet of the appropriate primer
Pot Life	Product will cure rapidly in high temperatures combined with high air hu-

midity. 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 DOCUMENTS

Sika® Method Statement: Sikalastic®-611 R AP
Sika® System Data Sheet: Sikarroof® MTC-05 UV AP
Sika® System Data Sheet: Sikarroof® MTC-08 UV AP
Sika® System Data Sheet: Sikarroof® MTC-10 UV AP

IMPORTANT CONSIDERATION

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

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains 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

Substrate	Primer
Cementitious including concrete slabs	Sikalastic® U-Primer / US Urethane Primer / Sikafloor®-161
Brick and Stone	Sikalastic® U-Primer / US Urethane Primer / Sikafloor®-161
Ceramic Tiles (unglazed)	Sikalastic® U-Primer / US Urethane Primer / Sikafloor®-161
Bituminous coatings (aged) / Bituminous felts (aged)	Sikalastic® Metal Primer / PW-F Primer
Metals*	Sikalastic® Metal Primer / PW-F Primer
Existing SikaRoof MTC System	Sikalastic® Reactivation Primer / Interlayer Primer J

*Ferrous, stainless steel, aluminium, lead, zinc; Factory coated metal sheeting must be tested for adhesion before proceeding

NOTE:

For the consumption rates and waiting time / overcoating please 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.

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 reinforcement.
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 TOOLS

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 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 war-

ranty 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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