

PRODUCT DATA SHEET

Sikalastic®-625

POLYURETHANE LIQUID APPLIED REINFORCED MEMBRANE FOR ROOF WATERPROOFING

PRODUCT DESCRIPTION

Sikalastic®-625 is a 1-part polyurethane, reinforced, cold-applied liquid membrane. It provides a flexible, seamless, low maintenance, durable, smooth waterproof finish. The product is suitable for hot and cold climates.

USES

- Roof waterproofing for new construction and refurbishment projects
- Waterproofing of flat and pitched roof structures, communal walkways, podium decks and roof terraces
- Waterproofing structures with numerous details such as penetrations, drains, roof lights and complex geometry
- Waterproofing existing substrates of concrete, bituminous felt and coatings, brick, stone, asbestos cement, wood, asphalt etc.
- Only for exterior use

CHARACTERISTICS / ADVANTAGES

- Thickness: ~1.50mm
- Low maintenance
- Seamless
- 1-Part ready to use
- Cold applied - requires no heat or flame
- Low temperature application > 2°C
- Easy and quick application by spray, brush or roller
- Economic – provides a cost efficient life cycle extension of failing roofs
- Water vapour permeable
- Retains flexibility at low temperatures
- Moisture triggered technology develops early rain resistance
- Elastic properties – tolerant of thermal movement
- Impact and tear resistant

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to ETA 13/0788
- European Technical Assessment ETA 13/0788 based on ETAG 005 Part 1 and 6 - Liquid-applied roof waterproofing using kits based on polyurethane
- External Fire Exposure EN 13501-5:2005, Sikalastic®-625, Exova, Test report No. 328461
- Reaction to Fire EN 13501-5:2007 + A1:2009, Sikalastic®-625, Exova, Classification report No. 328458
- Roof Coverings Exposed to External Fire EN 13501-5:2005 + A1: 2009, Sikalastic®-625, Exova, Classification report No. 323631
- European Technical Assessment ETA 14/0176 based on ETAG 005 Part 1 and 6 - Liquid-applied roof waterproofing using kits based on polyurethane for pre-Coated Metal Roofing Sheets & Fibre Cement Roof Sheets.

PRODUCT INFORMATION

Chemical Base	Aliphatic polyurethane
Packaging	15L container Refer to current price list for packaging variations.
Colour	White (~RAL 9016), Light Grey (~RAL 7035), Cement Grey (~RAL 7042), Pebble Grey (~RAL 7032), Slate Grey (~RAL 7015)
Shelf Life	9 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 +0 °C and +25 °C. Always refer to packaging.
Density	~1,32 kg/l (at 20 °C) (EN ISO 2811-1)
Solid content by weight	~78,9 % (+23 °C / 50 % r.h.) (EN ISO 3251)
Solid content by volume	~70,9 % (+23 °C / 50 % r.h.) (EN ISO 3251)

TECHNICAL INFORMATION

Tensile Strength	>16.7 N/mm ²	(ISO 527-1/3)	Reinforced
	>11 N/mm ²	(ISO 527-1/3)	Un-Reinforced
Tear Strength	~20 N/mm	(ISO 527-1/3)	Reinforced
	14.2 N/mm	(ISO 527-1/3)	Reinforced with Flex-itape
External Fire Performance	B _{roof} (t1); B _{roof} (t4) Euroclass E	(ENV 1187) (EN13501-1)	
Chemical Resistance	Resistant to mild acids, alkalis, detergents and some solvents. Contact Sika Technical Services for additional information. Prohesion testing to ASTM G85-94; Annex A5 (1000 hours cyclic exposure) and cyclic salt fog/UV-A exposure to ASTM D 5894 (6 cycles totalling 1000 hours)		
Service Temperature	-30°C min. / +80°C max - Intermittent		

SYSTEM INFORMATION

System Structure

For ALL Systems

Note: The application of the system must be approached as one operation. Always plan for reasonable progress of each coat. Work only so far in advance that the existing surface can be overcoated as the next operation. Finish the coating system completely before progressing to the next area. The ideal time between coats is within 48 hours.

It is not good practice to plan breaks between coats of more than 7 days. For periods longer than this and less than 14 days the surface must be reactivated with Sika Reactivation Primer. Periods between coats longer than 14 days may affect the normal life term of the system –If this happens consult Sika Technical Services for advice. Ensure each application/coat is clean and dry prior to overcoating.

At no stage should the Sika Liquid Plastics system or waterproof coating in its finished or intermediate stage be used as a workspace or access floor without adequate protection.

Please note: the above rates are for smooth substrates only.

Flat Roof Waterproofing Only - 15 year expected durability

Preparation:- Prior to priming all substrates must be clean dry and sound free from any oxidisation, mould and any other deleterious materials.

Embedment Layer	Sikalastic®-625 with Sika Reemat Premium	1.0L/m ²
Top Coat	Sikalastic®-625	0.75L/m ²
Gutters System		
Embedment Layer	Sikalastic®-625 with Sika Reemat Premium	1.0L/m ²
Top Coat	Sikalastic®-625	1.0L/m ²

Flat Roof Waterproofing Only - 20 year expected durability

Preparation:- Prior to priming all substrates must be clean dry and sound free from any oxidisation, mould and any other deleterious materials.

Embedment Layer	Sikalastic®-625 with Sika Reemat Premium	1.0L/m ²
Top Coat	Sikalastic®-625	1.0L/m ²
Gutter System		
Embedment Layer	Sikalastic®-625 with Sika Reemat Premium	1.25L/m ²
Top Coat	Sikalastic®-625	1.0L/m ²

Waterproofing of Exposed Trafficable Areas - 10 year expected durability

Preparation:- Prior to priming all substrates must be clean dry and sound free from any oxidisation, mould and any other deleterious materials.

Embedment Layer	Sikalastic®-625 with Sika Reemat Premium	1.0L/m ²
Top Coat	Sikalastic®-625	0.6L/m ²
Wearing Coat		
Top Coat	Sikafloor®-420	0.2L/m ²
	Fine Sand Aggregate	0.2Kg/m ²

Waterproofing of Exposed Trafficable Areas - 15 year expected durability

Preparation:- Prior to priming all substrates must be clean dry and sound free from any oxidisation, mould and any other deleterious materials.

Embedment Layer	Sikalastic®-625 with Sika Reemat Premium	1.0L/m ²
Top Coat	Sikalastic®-625	0.6L/m ²
Wearing Coat		
Top Coat	Sikalastic®-625	0.3L/m ²
	Medium Sand Aggregate	3.5Kg/m ²
	Sikafloor®-420	0.4L/m ²

Waterproofing - Buried 20 Year expected durability

Preparation:- Prior to priming all substrates must be clean dry and sound free from any oxidisation, mould and any other deleterious materials.

Embedment Layer	Sikalastic®-625 with Sika Reemat Premium	1.0L/m ²
Top Coat	Sikalastic®-625	1.0L/m ²
Wearing Coat	Tiles, Pavers or Screed	As appropriate

Gutters Systems - Stand Alone

Waterproofing - 10 Year expected durability

Preparation:- Prior to priming all substrates must be clean dry and sound free from any oxidisation, mould and any other deleterious materials.

Embedment Layer	Sikalastic®-625 with Sika Reemat Premium	1.0L/m ²
Top Coat	Sikalastic®-625	0.75L/m ²

Waterproofing - 15 Year expected durability

Preparation:- Prior to priming all substrates must be clean dry and sound free from any oxidisation, mould and any other deleterious materials.

Embedment Layer	Sikalastic®-625 with Sika Reemat Premium	1.0L/m ²
Top Coat	Sikalastic®-625	1.0L/m ²

Gutter Joints - Metal Gutters - Bolted Joints/Fixings

Bridge each bolt head/fixing with **Sika Flexistrip** (minimum 50mm squares) by first removing the backing paper and applying light pressure to the patch edges to fix.

Encapsulate each fixing/joint detail using **Sika Reemat Premium** patches, cut to requirements and bedded in Sikalastic®-625 applied at a minimum wet film thickness of **1000** microns. Allow to dry before continuing with the overall waterproofing.

Apply the fully reinforced system through the metal gutter as specified.

Gutter Joints - Metal Gutters - Bond Break

Introduce a 'bond break' at each gutter joint by first laying 50mm (minimum width) low tack de-bonding tape centred on the joint.

Apply a 'stripe' coat (200mm wide) of Sikalastic®-625 to each seam/joint at a minimum wet film thickness of **1000** microns and whilst wet, **Sika Flexitape Heavy** (150mm) using a loaded brush to obliterate the tape. Allow to dry before continuing with the top coats.

Asbestos & Profiled Metal Roof Sheets

Waterproofing Only - 10 Year expected durability

Preparation:- Prior to priming, all substrates must be clean, dry and sound, free from any oxidation, mould and any other deleterious materials.

Tape Embedment:- Prior to the main first and second coats, a light coat of Sikalastic®-625 must be applied to the surface and edges of **Sika Joint Tape SA®** and allowed to cure. The purpose of this is to waterproof the surface of the tape and ensure that the surface of the fabric is fully embedded in the main coating. This can be applied using a roller or brush.

First Coat	Sikalastic®-625	0.5L/m ²
Top Coat	Sikalastic®-625	0.5L/m ²

Waterproofing Only - 15 Year expected durability

Preparation:- Prior to priming, all substrates must be clean, dry and sound, free from any oxidation, mould and any other deleterious materials.

Tape Embedment:- Prior to the main first and second coats, a light coat of Sikalastic®-625 must be applied to the surface and edges of **Sika Joint Tape SA®** and allowed to cure. The purpose of this is to waterproof the surface of the tape and ensure that the surface of the fabric is fully embedded in the main coating. This can be applied using a roller or brush.

First Coat	Sikalastic®-625	0.75L/m ²
Top Coat	Sikalastic®-625	0.75L/m ²

Asbestos & Profiled Metal Roof Sheets - Localised Reinforcement for Roof Areas Only

Sheet End Laps

Prepare and prime the corrugate roof sheet as appropriate.

Apply **6" (152.4mm)** wide of **Sika® Joint Tape SA** to prepared substrate.

Remove **4–6" (10.2–15.2 cm)** of release liner from underside of the **Sika Joint Tape SA** and position the tape centrally across the lap joint of the top and bottom sheet, and pressing firmly into place.

Continue to remove release liner, whilst moving across the lap joint.

Be careful to follow the profile of the metal sheet and ensure full and even contact.

Ensure that the tape overlaps any end lap fixings by at least 25mm. Where this cannot be achieved, a separate piece of **3" (76.2mm)** should be used to reinforce each fixing.

Once in-place, always apply additional pressure to the surface to fully activate the bonding process, compress any creases and remove any trapped air. Use a hard roller for best results.

Side Laps

Apply **6" (152.4mm)** wide **Sika® Joint Tape SA** to the prepared substrate.

Remove **4–6" (10.2–15.2 cm)** of release liner from the underside of the **Sika® Joint Tape SA**.

Position the tape centrally across the joint, and press into place. Continue to remove release liner, whilst moving down the joint and pressing firmly onto the substrate surface.

Ensure that the tape overlaps any side lap fixings by at least 25mm. Where this cannot be achieved, a separate piece of **3" (76.2mm)** should be used to reinforce each fixing.

Once in-place, always apply additional pressure to the surface to fully activate the bonding process, compress any creases and remove any trapped air. Use a hard roller for best results.

Bolt Heads & Fixings

3" x 5" (76.2mm x 130mm) is used to reinforce the following fixings scenarios:

- Where the **6" (152.4mm)** tape cannot encapsulate the lap fixing by 25mm and separate reinforcement is required – as outlined above.
- For all non-lap fixings

Method One:

Using the 3" (75mm) wide roll, cut a piece of tape which is approximately 3" x 4" (76mm x 100mm) in size and remove the release liner. Turn the tape to a diamond shaped position and press firmly into place centrally over the fixing.

Method Two:

Using the 3" (75mm) wide roll, cut a piece of tape which is approximately 3" x 5" (76mm x 130mm) and remove release liner. Ensure that at least 3" inches of the tape is pressed down tightly above the bolt with no creases. Pull the remaining 2" over the bolt-head and press down into place, ensuring that all creases are rolled flat.

On all localised reinforcements, the firmer the pressure applied, the faster and stronger the bond.

Dry film thickness	1.5mm - Reinforced 0.71mm - Un-Reinforced	
System Performance	W3/M/P3/S1-S4/TL3 - TH3	(ETAG 005)

APPLICATION INFORMATION

Ambient Air Temperature	+2°C min. / +30°C max.
Relative Air Humidity	20% min. / 85% max.
Substrate Temperature	+2°C min. / +30°C max.
Dew Point	Beware of condensation. The substrate and uncured applied product must be at least +3°C above dew point to reduce the risk of condensation or blooming on the surface of the applied product. Metal surfaces will be more prone to temperature fluctuations occurring and wind chill effects.
Substrate Moisture Content	≤4 % parts by weight. Test method: Sika®-Tramex meter No rising moisture according to ASTM (Polyethylene-sheet).

Substrate Pre-Treatment

Substrate	Primer
Cementitious	Sika® Concrete Primer Low Odour
Asbestos Cement	Sika® Concrete Primer Low Odour
Brick and Stone	Sika® Concrete Primer Low Odour
Metals - lead, copper, aluminium, brass or stainless steel	Sikalastic® Metal Primer or Sika® 204N Adhesion/compatibility test required
Bright Galvanized Metal	Must be treated with a proprietary Mordant Solution before priming as above
Bituminous felt	Not required - (non volatile)
Single Ply	Adhesion to single ply may vary depending on type, age etc. Adhesion/compatibility tests required
PVC/Plastisol Coated Roofs/PVf2	Adhesion/compatibility tests required
Wood	Timber based roof decks require Primer 610 with a complete layer of Sikalastic® Carrier Membrane SA. For small exposed timber sections use Sika® Concrete Primer Low
Paints	Subject to adhesion and compatibility tests
Existing Sikalastic®-625 System	Sika® Reactivation Primer

For consumption rates and waiting time/overcoating, refer to the individual Product Data Sheet of the appropriate cleaner and primer. Other substrates must be tested for their compatibility. To ensure compatibility, carry out preliminary trials.

Pot Life

~1–2 hours

The material in opened containers must be applied before a surface skin occurs.

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

Waiting Time / Overcoating

~48 hours

For longer periods up to 14 days, the surface must be reactivated with Sika Reactivation Primer.

Applied Product Ready for Use

Ambient conditions	Rain resistant	Touch dry	Full cure
+2 °C / 50 % r.h.	~12 hours	~20 hours	>24 hours
+10 °C / 50 % r.h.	~9 hours	~15 hours	~24 hours
+20 °C / 50 % r.h.	~6 hours	~10 hours	~18 hours
+30 °C / 50 % r.h.	~4 hours	~6 hours	~14 hours

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

APPLICATION INSTRUCTIONS

EQUIPMENT

Apply Sikalastic®-625 using a roller (short pile mohair roller), brush (soft nylon or bristle brush).

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®-625 adhesion, carry out a preliminary trial before full application together with adhesion tests as required.

Concrete and Cementitious Substrates

Substrate must be structurally sound, 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.

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. Products must be cured before applying Sikalastic®-625.

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. Any requirement for priming must also be considered. Installing the membrane either when the concrete temperature is falling or stable can reduce outgassing. It is generally beneficial, therefore, to apply the embedment coating in the late afternoon or evening.

Brick and stone

Thoroughly clean by power wash and allow to dry.

Where there is a risk of algal re-growth on absorbent surfaces use Sika Biowash. Refer to the individual Product Data Sheet. Repair any spalling, flaking or other damage and replace any missing jointing.

Asphalt

Thoroughly clean by power wash and allow to dry. All major cracks should be sealed to allow continuity of the Sikalastic®-625 system. Asphalt must be carefully assessed for moisture and/or air entrapment, grade and surface finish prior to any coating works being carried out. Any priming requirement must also be considered.

Bituminous felt

Felt must be firmly adhered or mechanically fixed.

Thoroughly clean by power wash and allow to dry.

Treat blisters by star cutting and removing any underlying water. Allow to dry and re-adhere using De-

costik® SP. Badly degraded areas should be replaced with S-Vap 5000E SA or S-Vap HD bonded as specified.

Bituminous coatings

Bituminous, volatile mastic or old coal tar coatings must be rigid and without a sticky surface. Remove loose, degraded and tacky coatings.

Single ply

Various types of single ply sheeting can be coated subject to adhesion/compatibility tests. Contact Sika Technical Services for additional information.

Metals

Ferrous metals must be in a sound surface condition.

Surfaces must be clean, free from rust, oil, grease, existing loose or degraded coatings etc. Prepare surfaces to a bright metal finish using suitable preparation techniques taking into account environmental conditions.

Non-ferrous metals must be in a sound surface condition. Remove any deposits of dust and oxidation and abrade to a bright metal finish. Wire brushing can be used for soft metals such as lead. Surfaces must be clean, free from oil and grease, which, if present, must be removed with a proprietary de-greasing solution. Then wash with detergent, rinse and dry.

Wood

Wood and wood based panel roof decks must be a minimum 18mm thick and certificated to conform with BS EN 1995-1-1: Eurocode 5; in good structural condition, firmly adhered or mechanically fixed.

Wood based decks require a complete layer of Carrier Membrane SA before the application of the chosen Sikalastic®-625 system. The substrate must be primed prior to the Carrier Membrane SA adhered to the timber deck. Small timber protrusions must be flattened by locally planing or sanding to provide a smooth surface.

Paints/Coatings

Remove loose or degraded coatings by suitable preparation techniques to provide a feathered firm adhering edge. Remaining coatings can be overcoated if soundly adhered. Ensure the surface is clean and free from oil, grease etc.

Existing Sikalastic®-625 system

Clean the membrane surface using a power wash at ~14 N/mm² (2000 psi) including detergent then rinse thoroughly and allow to dry.

MIXING

Sikalastic®-625 is supplied ready for use, gently stir until a uniform colour has been achieved. Over mixing must be avoided to minimise air entrainment.

Accelerated

Before use slightly stir the Sikalastic®-625 then add the full Sika® PU Accelerator unit (180ml Sika® PU Accelerator for 15L of Sikalastic®-625) and stir using a drill and paddle until a uniform mix has been achieved. Over mixing must be avoided to minimise air entrapment.



APPLICATION

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

General

Always begin application with detailing before installation of the main horizontal surfaces.

Primer

Apply the appropriate 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.

Base coat

Apply the Sikalastic®-625 onto prepared substrate the same width as the Sika® Reemat Premium and apply evenly by brush (soft nylon or bristle brush) or roller (short pile mohair roller) at the required consumption rate in 2 directions at right angles to each other. Alternatively spray Sikalastic®-625 with suitable equipment.

Reinforcement

Roll in the Sika® Reemat Premium reinforcement whilst Sikalastic®-625 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 metre at a time lengthways applying 1st coat and embedding reinforcement.

Top coat

Apply the Sikalastic®-625 onto the applied reinforcement layer 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. Alternatively spray Sikalastic®-625 with suitable equipment.

Ensure each application/coat is clean and dry before applying next coat.

CLEANING OF TOOLS

Clean all tools and application equipment with cellulose thinners or xylene immediately after use. Hardened material can only be removed mechanically.

LIMITATIONS

- Do not use Sikalastic®-625 for indoor applications.
- Application of Sikalastic®-625 in confined spaces must be undertaken in accordance with the Material Safety Data Sheet recommendations.
- Do not apply close to air intake vents of running air conditioning units unless they have been switched off or isolated as vapour may be drawn into the building.
- All areas requiring corrosion protection must be applied over an appropriate metal primer that has been applied directly to bright metal.
- All joints, areas subject to differential movement, guttering and drainage channels and repairs, must be treated with the reinforcement.
- Adhesion suitability must be verified by carrying out preliminary trials before full application together with adhesion tests as required.
- The application of the system must be approached as one operation. Work in advance so the application stages can be completed within the overcoating times. Finish the coating system completely before progressing to the next area.
- Application of the system stages must be completed within the overcoating times otherwise the system performance may be compromised.
- After application, Sikalastic®-625 must be protected from heavy rain or rain showers until dry to prevent surface damage.
- Application at higher than recommended film thicknesses may result in a prolonged "soft" texture to the coating. This will eventually cure.

VALUE BASE

All technical data stated in this Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

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 sb) is 500 g/l (Limits 2010) for the ready to use product. The maximum content of Sikalastic®-625 is < 500 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.

TECHNICAL ENQUIRIES

Tel: 01772 255015
Web: www.liquidplastics.co.uk
Twitter: @LiquidPlastics

SIKA LIMITED

Watchmead
Welwyn Garden City
Hertfordshire, AL7 1BQ
Tel: 01707 394444
Web: www.sika.co.uk
Twitter: @SikaLimited



Product Data Sheet

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