

Sikalastic®-612

Cost-effective, single component, polyurethane, liquid waterproofing membrane

Construction

Product Description	Sikalastic®-612 is a single component, cold-applied, moisture-triggered polyurethane membrane. It cures to form a seamless and durable waterproofing solution for exposed roof areas and structures.
Uses	<ul style="list-style-type: none">■ Water-proofing of flat and pitched roof structures■ Treatment of new construction and refurbishment of existing structures■ Applicable to existing concrete, asphalt, roofing felt, brickwork, asbestos cement decks (subject to condition and priming requirements).
Characteristics	<ul style="list-style-type: none">■ Single component■ Cold applied■ Can be reinforced where required■ Seamless membrane based upon moisture-triggered chemistry■ Vapour permeable■ Elastic■ Good adhesion to most substrates – see table
Benefits	<ul style="list-style-type: none">■ No mixing, easy and ready to use■ Moves with normal thermal movement - Retains flexibility even at low temperatures■ Reinforced system - easy to detail■ Free from rain damage almost immediately on application (see table)■ Economic – provides a cost efficient life cycle extension of failing roofs■ Allows substrate to breathe■ Requires no heat or flame■ Easily recoated when needed - no stripping required
Tests	
Approvals / Standards	FTA – 005 Part 6 - W2 Resistance to fire spread ENV 1187 – B roof (t1) On Non-Combustible surfaces Euroclass E - EN13501- 1 Complies with REACH Regulation (EC) No 1907/2006



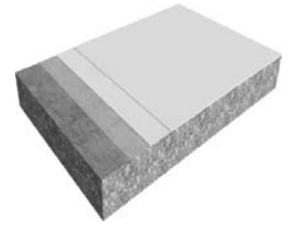
Product Data																					
Form																					
Appearance / Colour	liquid, white, grey or terracotta																				
Packaging	5L (~7.1 kg), 15L (~21.3 kg), single use pails																				
Storage																					
Storage Conditions / Shelf Life	<p>Store in original, unopened and undamaged sealed packaging in dry conditions at temperatures between 0°C and 25°C. Protect from frost.</p> <p>A shelf-life of 9 months is achieved when stored in accordance with the above recommendations at an average temperature of 20°C. Exposure to higher temperatures will reduce shelf life.</p> <p>Reference shall also be made to the storage recommendations within the material safety datasheet.</p>																				
Technical Data																					
Chemical Base	One component moisture-triggered aromatic polyurethane																				
Density	~ 1.42 kg/litre (EN ISO 2811-1) All Density values at +20°C																				
Solid Content	~ 80% by weight (+23°C / 50% r.h.) ~ 68% by volume (+23°C / 50% r.h.)																				
Flash Point	49°C (closed cup method)																				
Mechanical Physical Properties																					
Tensile Strength	~ 4.5N/mm ² (EN ISO 527-3) Unreinforced ~ 8 N/mm ² (EN ISO 527-3) Reinforced																				
Elongation at Break	~180% (EN ISO 527-3)Unreinforced ~150% (EN ISO 527-3)Unreinforced – after heat aging ~50% (EN ISO 527-3)Reinforced																				
Tensile Load	370 N Reinforced																				
ETA Levels of Performance	<table border="1"> <tbody> <tr> <td>External Fire Performance</td> <td>Broof (t1)</td> </tr> <tr> <td>Reaction to fire</td> <td>Euroclass E</td> </tr> <tr> <td>Categorisation by working life</td> <td>W2</td> </tr> <tr> <td>Categorisation by Climatic Zones</td> <td>M and S</td> </tr> <tr> <td>Categorisation by imposed loads (hard substrate only)</td> <td>P4</td> </tr> <tr> <td>Categorisation by roof slope</td> <td>S1 – S4</td> </tr> <tr> <td>Categorisation by surface temperature</td> <td> Lowest TL3 Highest TH3 </td> </tr> <tr> <td>Friction Coefficient</td> <td>NPD</td> </tr> <tr> <td>Water Vapour Diffusion (Sd)</td> <td>3.47m</td> </tr> <tr> <td>Resistance to wind loads</td> <td>>50kPa</td> </tr> </tbody> </table>	External Fire Performance	Broof (t1)	Reaction to fire	Euroclass E	Categorisation by working life	W2	Categorisation by Climatic Zones	M and S	Categorisation by imposed loads (hard substrate only)	P4	Categorisation by roof slope	S1 – S4	Categorisation by surface temperature	Lowest TL3 Highest TH3	Friction Coefficient	NPD	Water Vapour Diffusion (Sd)	3.47m	Resistance to wind loads	>50kPa
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System Information

System Structure

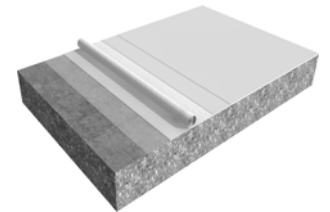
Coating and Roof Coating

For UV-stable coating, to extend life of existing structurally stable roofs.



Build up: Sikalastic®-612 applied in one or two coats
Substrates: Concrete, metals, asbestos cement, screeds, tiles.
Primer: Please refer to Sikalastic® Primer-Cleaner chart below
Total thickness: ~ 0.5 – 1.4 mm depending on system used
Total consumption: ~ 0.7 – 2L/ m² (1-2.82kg/m²) depending on system used

For partial reinforcement Sikalastic® Fleece-120 or Sikalastic® Flexitape Heavy is applied at areas with high movement, irregular substrate or to bridge cracks, joints and seams on the substrate as well as for details.



Reinforced Roof Waterproofing

For cost efficient waterproofing solutions in new construction and refurbishment projects. For projects with surfaces subject to probable movement and light/maintenance foot traffic



Build up: Sikalastic®-612 applied in one coat, reinforced with Sikalastic® Fleece-120 and sealed with Sikalastic®-612

Substrates: Concrete, metals, wood, tiles, asphalt*, felt*, etc
Primer: Please refer to Sikalastic® Primer-Cleaner chart below
Total thickness: ~2 - 2.3mm
Total consumption: ~2L/m² (2.82kg/m²)

* Test compatibility before use – bituminous felts and asphalt based materials need full reinforcement. Bituminous materials may also soften temporarily and could produce a slight stain.

Application Details

Consumption Dosage	Coating System	Product	Consumption
	Economic coating system	1 (or 2) x Sikalastic®-612	0.7L/m ² (≥ 1.00kg/m ²)
	Standard coating system	1 x Sikalastic®-612 1 x Sikalastic® 612	0.5L/m ² (≥0.7kg/m ²) 0.5L/m ² (≥0.7kg/m ²)
	ETAG 005 Roof System	1 x Sikalastic® 612 1 x Sikalastic® 612	1L/m ² (1.42kg/m ²) 1L/m ² (1.42kg/m ²)
	Reinforced roof waterproofing system	1 x Sikalastic®-612 embedded with Sikalastic®Fleece 120 1 x Sikalastic®-612	1.3L/m ² (≥1.8kg/m ²) 0.7L/m ² (≥1.0kg/m ²)

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

Explanation of Icons



One component product. Stir before using.



UV resistant - some slight yellowing may occur



Highly elastic and crack-bridging



Vapour permeable



Easy application by brush, roller or airless spray equipment even when accessibility is limited



Bonds fully to most substrates, preventing the migration of water



Seamless waterproofing membrane



Fire resistant



Compatible with bituminous felts



Resistant to wind uplift

Primers Generally

Primers are not normally required for the Sikalastic® 612 coating system. For porous or irregular surfaces typically allow an extra initial coat of 0.25 – 0.3L/m² (circa 0.4kg /m²) if necessary.

Dusty friable surfaces will benefit from sealing with the Sika primers shown below. However this is not a substitute for achieving a sound surface and adhesion quality under these circumstances is limited by the strength and condition of the substrate.

All primers shall be coated within 24 hours or as soon as individual data sheets advise to avoid atmospheric or physical contamination.

See also table below for specific substrates.

Substrate Priming	Substrate	Primer	Consumption Primer [ml/m²]
	<u>Cementitious substrates</u>	Not normally required - thin coating as primer if necessary or Sika [®] Concrete Primer preferred	If used Sika [®] Concrete Primer ≈ 100 - 200
	<u>Brick and Stone</u>	Not normally required – but Sika Bonding Primer or Concrete primer where necessary on porous or dusting substrates	If used Sika [®] Concrete Primer ≈ 100 - 200
	<u>Ceramic tiles (unglazed) and concrete slabs</u>	Sika [®] Concrete Primer	Sika [®] Concrete Primer ≈ 100 -150
	<u>Asphalt</u>	Not required, but may have other surface treatments so subject to surface assessment tests	
	<u>Bituminous felt</u>	Not required Fully reinforced systems only!	
	<u>Bituminous coatings</u>	Check stability	
	<u>Metals</u> Ferrous or galvanised metals, lead, copper, aluminium, brass or stainless steel Factory coated metal sheeting must be tested for adhesion before proceeding	Sikalastic [®] Metal Primer.	≈ 200
	<u>Wooden substrates</u>	Timber based roof decks require a complete layer of Sikalastic [®] Carrier and full reinforcement. For exposed small timber sections use Sika [®] Concrete Primer or Sika [®] Bonding Primer.	≈ 150
	<u>Paints</u>	Subject to adhesion tests	
	<u>Existing SikaRoof[®] MTC System</u>	Sika [®] Reactivation Primer	≈ 200

Other compatible primers from the Sika[®] range are Sikafloor 155W, Sika[®] primer 3N Sikafloor[®] 156, Sikafloor[®] 161. These only when subject to standard use instructions relevant to each primer.

Substrate Treatment Cementitious substrates

New concrete shall be cured. Inspect the concrete, including upstands. The surface finish must be uniform and free from defects such as laitance, voids or honeycombing.

Outgassing is a naturally occurring phenomenon of concrete that can produce pinholes in subsequently applied coatings, particularly when the surface contains moisture. Installing the coatings either when the concrete temperature is falling or stable can reduce outgassing.

Brick and stone

Mortar joints must be sound and preferably flush pointed. Make good any missing mortar and Power wash.

Tiles

Ensure all tiles are sound and securely fastened, replacing obviously broken or missing sections. Tile joints must be filled if necessary and sound.

Asphalt

Asphalt contains volatiles which can cause bleeding and slight non-detrimental staining. The asphalt must be carefully assessed for moisture and/or air entrapment, grade and surface finish prior to any coating works being carried out. Power wash. All major cracks should be sealed. Use **full reinforcement**.

Bituminous felt

Bitumen felt has variable softening points and additives many are and remain soft or volatile. Use **full reinforcement!** Ensure that Bituminous felt is firmly adhered or mechanically fixed to the substrate. Use strips of e.g. Sikalastic® Fleece 120 or Sikalastic® Flexitape Heavy in order to cover joints, connections or overlaps onto bituminous sheets.

Bituminous coatings

Bituminous coatings must not have sticky or mobile surfaces, volatile mastic coatings, or old coal tar coatings. Remove loose or degraded coatings. Test compatibility before use – may need full reinforcement.

Metals

Metals must be in sound condition and free from corrosion.

Steelwork is ideally prepared to Sa2½ (Swedish Standard SIS 05 : 5900 = 2nd quality BS4232 = S.S.P.C. grade SP10) OR as indicated by the blasting specification which may be of a higher standard.

Non-ferrous metals are prepared as follows. Remove any deposits of dust and oxidation and abrade to bright metal.

Use a suitable twin pack metal primer and observe relevant application and over coating instructions. Adhesion test before full application.

Wooden substrates

Timber and timber based panel roof decks are to be in good condition, firmly adhered, or mechanically fixed.

Paints/Coatings

Ensure the existing material is sound and firmly adhered.

Application Conditions / Limitations	
Substrate Temperature	+5°C min. / +60°C max.
Ambient Temperature	+5°C min. / +40°C max.
Substrate Moisture Content	≤ 4% pbw moisture content. Test method: Sika®-Tramex meter, CM - measurement or Oven-dry-method. No rising moisture according to ASTM (Polyethylene-sheet).
Relative Air Humidity	85% r. h. max.
Dew Point	Beware of condensation. The substrate and uncured membrane must be at least 3°C above the dew point to reduce the risk of condensation. Condensation may affect adhesion and could affect appearance.
Application Instructions	
	<p><u>Application Method</u></p> <p>Prior the application of Sikalastic®-612 the priming coat if used must have cured tack-free. For the Waiting Time / Overcoating please refer to the PDS of the appropriate primer. Damageable areas (handrails etc.) have to be protected with tape or plastic wrapping.</p> <p>Roof Coatings: Sikalastic®-612 is applied in two coats. Prior to the application of a 2nd coat the indicated waiting time in the table below Waiting Time / Overcoating shall be allowed.</p> <p>Reinforced Roof Waterproofing: Sikalastic®-612 is applied in combination with Sikalastic® Fleece 120. Over coating of bitumen felt has to be full reinforced!</p> <ol style="list-style-type: none"> 1. Apply first coat of approximately 1.3 L/m² of Sikalastic®-612 Work only so far in advance that the material stays liquid. 2. Roll in the Sikalastic® Fleece-120 and ensure that there are no bubbles or creases. Overlapping of the fleece a minimum 5 cm and ensure overlaps are sufficiently wet to bond. 3. The roller may require only a little extra material to keep wetted but no further significant material needs to be added at this stage. 4. After the coat is dry enough to walk on, seal the roof area with second coat of Sikalastic® - 612 at a minimum 0.7 L/m² per coat. <p>Please note, always begin with details prior starting with waterproofing the horizontal surface. For details follow step 1-4.</p>
Mixing	Mixing is not required however if product is settled or separated on opening, stir Sikalastic®-612 gently but thoroughly in order to achieve a uniform colour. Stirring gently will minimise air entrainment.
Application Method / Tools	<p>By brush: With a soft bristle brush.</p> <p>By roller: With a solvent resistant, "non-fuzzy" roller.</p> <p>By spray: Airless spray equipment, for example: piston pump Wagner EP 3000. (pressure: ~ 200 - 250 bar, nozzle: 0.38mm - 0.53mm, angle: ca. 50 - 80°). Ensure sprayed film will hold on the pitch of the surface at the desired thickness without running. Spray more thinner but coats if required</p> <p>For Reinforcement or Waterproofing systems apply 1.3 L/m² of coating and whilst wet lay on the Sikalastic® Fleece 120. Apply gentle pressure with a loaded roller so the Fleece is saturated and free from entrapped bubbles.</p>
Cleaning of Tools	Clean all tools and application equipment with Thinner C immediately after use. Hardened and/or cured material can only be removed mechanically.

Cleaning of Hands/Skin	Immediately wash with soap and water or use Sika® Hand Wipes.				
Potlife	Sikalastic®-612 is designed for fast drying. Therefore the material will cure particularly quickly in high temperatures combined with high air humidity. Even in the tin the material will begin to cure once exposure to air – do not attempt to re-seal and re-use. Skin formation starts after approx. 1 hour (+20°C / 50% r.h.).				
Waiting Time/ Overcoating	Before applying Sikalastic®-612 on Sikalastic®-612 allow:				
	Ambient Conditions	Minimum	Maximum		
	+5°C/50% r.h.	Allow overnight curing			
	+10°C/50% r.h	12 hours	After four days the surface has to be cleaned and primed with Sika® Reactivation Primer		
	+20°C/50% r.h	6 hours			
+30°C/50% r.h	4 hours				
Notes on Application/Limitations	<p>Do not apply Sikalastic®-612 on substrates with rising moisture.</p> <p>Sikalastic®-612 is not suitable for permanent water immersion or inverted roof structures.</p> <p>Vertical or steeply pitched surfaces may require an additional application to build required thickness.</p> <p>On substrates likely to exhibit outgassing, ensure substrate is thoroughly dry and apply during falling ambient and substrate temperatures. If applied during rising temperatures “pin holing” may occur from rising vapour. In very severe case Sikalastic Concrete Primer may assist.</p> <p>Product must be used in conjunction with a safe system of work. Ensure an adequate assessment of all site risks has been conducted prior to work commencing. Refer to the product safety datasheet for further guidance.</p> <p>Sikalastic 612 may exhibit slight chalking at the surface – do not use run off water for live fish tanks, etc.</p> <p>Material begins to react with air once opened. Tight fitting lids may also damage on opening. It should be planned ideally to use all material in one use. Resealing for use at a later date is not possible. Opened unused material may thicken and gas if used later.</p> <p>Do not use Sikalastic®-612 for indoor applications.</p> <p>Do not apply close to the air intake vent of running air conditioning unit. Turn off or isolate if necessary.</p> <p>The product can be overcoated with itself – refer to the ‘Overcoating’ section of this Product Data Sheet.</p> <p>Volatile bituminous materials may stain and or soften below the coating.</p> <p>Low melting point bituminous materials may need priming – using a darker shade also helps hide any staining from the volatiles.</p>				
Curing Details					
Applied Product ready for use	Temperature	Relative Humidity	Rain Resistant	Touch Dry	Full Cure
	+5°C	50%	10 minutes*	8-10 hours	16 hours
	+10°C	50%	10 minutes*	6 hours	10 hours
	+20°C	50%	10 minutes*	4 hours	7 hours
	+30°C	50%	10 minutes*	2 hours	5 hours
* Be aware that impact of heavy rain 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.					

Value Base	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 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.
Ecology, Health and Safety Information	A Safety Data Sheet following EC-Regulation 1907/2006, Article 31 is not needed to bring the product to the market, to transport or to use it. The product does not damage the environment when used as specified.

**Editorial note for National Data Sheets:
(This note must be deleted during preparation of National Product Data Sheet)
It may be necessary to adapt this disclaimer below to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika Corporate Legal in Baar.**

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