

Product Data Sheet

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Sikalastic®-621 TC

Highly durable, UV-stable, versatile and easily applied liquid polyurethane for use with the Sika-Trocal® Liquid Detailing System.

Product Description

Sikalastic®-621 TC is a cold-applied, highly elastic, UV-stable, one-component, moisture-triggered polyurethane two layer system designed for easy application and a durable product as part of the Sika-Trocal® Liquid Detailing System.

Uses

- For problematic detailing when using Sika-Trocal® SG/S/SGK membranes in both new construction and refurbishment (membrane up to two years old) projects
- For cold and warm roof-build-up's

Characteristics / Advantages

- Proven technology - over 20 years track record
- Easy and quick application
- Moisture triggered chemistry -, after application rapidly weatherproof
- High elasticity
- Vapour permeable
- Strong resistance to common atmospheric chemicals
- One component - ready to use
- Long shelf life – 12 months

Tests**Approval / Standards**

- External fire performance: B_{Roof} (t1)- B_{Roof} (t4) (SikaRoof® MTC 15, non-combustible surfaces)
B_{Roof} (t1)- B_{Roof} (t4) (SikaRoof® MTC 18)

Product Data**Form****Appearance / Colours**

Slate Grey (nearest RAL7015) and Shale Grey (nearest RAL 8500)

Packaging

5 Ltr pails (appr. 7.2 kg)

Storage**Storage Conditions / Shelf Life**

12 months from date of production if stored properly in original, unopened and undamaged sealed packaging in dry conditions at temperatures > 0 °C and <25 °C.



Technical Data

Chemical Base	One-component moisture-triggered aliphatic Polyurethane	
Density	1.44 kg/l All density values at +23 °C	(EN ISO 2811-1)
Solid Content	~ 81.3% by volume / ~ 87.4% by weight	
Flash Point	62°C	
Service temperature	-30 to + 80°C (intermittent)	
Chemical Resistance	Strong resistance to a wide range of reagents including paraffin, petrol, fuel oil, white spirit, acid rain, detergents and moderate solutions of acids and alkalis. Some low molecular weight alcohols can soften the material. Contact Sika Roofing Technical Services for specific recommendations. Salt spray to ASTM B117 (1000 hours continuous exposure) and adhesion testing to ASTM G85 – 94: Annex A5 (1000 hours cyclic exposure).	

System Information

Detailing

For use with problematic detailing with Sika-Trocal® SG/S/SGK membranes to for a complete waterproofing system.



Build up: Sikalastic®-621 TC applied in 2 coats, reinforced with Sika® Reemat Premium

Substrates: Specific substrates and Sika-Trocal® membranes

Primer: Please refer to Sikalastic® Primer chart below

Dry film thickness: 1.8 mm
(TC and TC)

Consumption: first layer TC: $\geq 1.4 \text{ kg/m}^2$ (1L/m²)

Consumption: second layer TC: $\geq 1.4 \text{ kg/m}^2$ (1L/M²)

- One component product.
- UV resistant and resistant to yellowing.
- Low-temperature stability.
- Thermal-shock resistant, i.e. will not be damaged by extended or sudden thermal exposure to ice, hail, rain, direct sunlight or rapid thermal swings.
- Highly elastic and crack-bridging.
- Vapour permeable.
- Easy application by brush and roller.
- Bonds fully to most substrates, preventing the migration of water.
- Fire resistant.
- Compatible with bituminous felts.

Substrate Quality

Cementitious substrates

New concrete should be allowed to hydrate ideally 28 days and should comply to the moisture limits detailed and have a pull off strength ≥ 1.5 N/mm². Concrete must be suitably finished, preferably by wood float or steel pan. The surface finish must be uniform and free from defects such as laitance, voids or honeycombing.

Brick and stone

Surface must be clean and sound and preferably flush pointed.

Ceramic tiles

Ensure all tiles are clean and sound.

Asphalt

Asphalt contains volatiles which can cause bleeding and slight non-detrimental staining. The asphalt must be clean and sound.

Bituminous felt

Ensure that Bituminous felt is sound and clean.

Bituminous coatings

Bituminous coatings should not have sticky or mobile surfaces, volatile mastic coatings, or old coal tar coatings. Ensure the surface is sound and clean.

Metals

Ensure that Metals is sound and clean.

Wooden substrates

Ensure that Timber is sound and clean.

Paints/Coatings

Ensure the existing material is sound, clean and compatible.

Detailed Area Preparation

Cementitious substrates

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.

High spots must be removed by e.g. grinding.

Brick and stone

Remove any loose material, algal growth and ensure area is clean and sound.

Asphalt

Clean and allow to dry and area is sound. All major cracks should be sealed to allow continuity of the Sikalastic® -621 TC.

Bituminous felt

Clean and allow to dry and ensure area is sound.

Bituminous coatings

Remove any loose or degraded coatings. Clean and allow to dry, and ensure area is sound.

Metals

Remove any deposits of dust and oxidation and abrade to bright metal. Wire brushing can be used for soft metal such as lead. The surface must be clean and free from grease which, if present, must be removed with a proprietary solution. Wash with detergent, rinse and dry and ensure area is sound.

Wooden substrates

The substrate should then be treated as a felt roof. Small timber protrusions may be treated directly, provided that the timber is of exterior quality, e.g. plywood, oil tempered hardboard, etc.

Paints/Coatings

Paints/Coatings must be tested for their compatibility. If in doubt, apply a test area first. Remove any loose or degraded coatings. Ensure the surface is clean and free from grease.

Sika-Trocal® membranes

Ensure the surface is clean and free from grease. Clean membranes with detergent and water if necessary. Wipe with Sika-Trocal L100 Cleaner and T Prep cloths prior to application of Sikalastic® primer PVC.

Note: For the Waiting Time /Overcoating you should refer to the PDS of the appropriate cleaner. Other substrates must be tested for their compatibility. If in doubt, apply a test area first.

Substrate Priming	Substrate	Primer	Consumption primer [ml/m ²]
	<u>Cementitious substrates</u>	Sika® Concrete Primer	≈ 150
	<u>Brick and Stone</u>	subject to surface assessment tests	
	<u>Ceramic tiles (unglazed) and concrete slabs</u>	Sika® Concrete Primer	≈ 150
	<u>Asphalt</u>	subject to surface assessment tests	
	<u>Bituminous felt</u>	subject to surface assessment tests	
	<u>Bituminous coatings</u>	subject to surface assessment tests	
	<u>Metals</u> Ferrous or galvanised metals, lead, copper, aluminium, brass or stainless steel	Sikalastic® Metal Primer	≈ 200
	<u>Wooden substrates</u>	Sika® Concrete Primer	
	<u>Paints</u>	subject to surface assessment tests	
	<u>(Detailing)</u>	Sikalastic® Primer PVC (Cleaning with L100)	70-140
	<u>Existing Sikalastic® Membrane</u>	Sika® Reactivation Primer or Methylated spirit.*	≈ 200

* Consult Sika® Roofing Applications Department.

Note: For the Waiting Time /Overcoating you should 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.

Application Conditions / Limitations

Air Temperature	+5 °C min. / +35 °C max.
Substrate Temperature	+5 °C min. / +60 °C max.
Substrate Moisture Content	< 4 % moisture content. No water / moisture / condensation on the substrate.
Relative Air Humidity	20 % min. / 85 % max.
Dew Point	Beware of condensation. Surface temperature during application must be at least +3 °C above dew point.
Standing Water	Sikalastic®-621 TC must not be used in applications where standing water will occur.

Application Instructions

Mixing	Not required
Application Method	Prior to the application of Sikalastic®-621 TC the substrate must be suitably prepared and the priming coat must have cured tack-free. For the Waiting Time / Overcoating please refer to the PDS of the appropriate primer.

Detailing

Prepare as above

Bolt Heads must be prepared by smoothing over with Sika® Flexistrip and perimeter fasteners must be taped over with PVC compatible aluminium tape with a minimum width of 50mm directly onto the fixation in order to get a smoother surface for overcoating.

Apply the first layer of Sikalastic®-TC and roll in the Sika® Reemat Premium whilst wet. Ensure there are no bubbles or creases and that the Sika® Reemat Premium overlaps by a minimum of 50mm. Prior to the application of a second layer of Sikalastic®-621 TC the indicated Waiting Time in the table below should be achieved.

Application Tools	<p><u>Tiger Stripe roller</u>: Used in the application of Sikalastic®-621 TC to ensure a consistent thickness.</p> <p><u>Foam roller</u>: Used in the application of Sikalastic® Primer PVC.</p> <p><u>Brushes</u>: Used in the application of Sika® Reemat, Sikalastic®-621 TC and Sikalastic® 600 PVC Primer.</p> <p><u>T Prep Cloths</u>: Used in the application of Sika-Trocal L100 Cleaner</p>
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Cleaning of Tools	Clean all tools and application equipment immediately after use with proprietary cleaning solvent e.g. Sika-Trocal L100 Cleaner. Hardened and/or cured material can only be removed mechanically.
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Pot life	Sikalastic®-621 TC is designed for fast drying. High temperatures combined with high air humidity will increase the drying process. Thus, material in opened containers should be applied immediately. In opened containers, the material will form a film within 1 or 2 hours.
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Waiting Time / Overcoating	Before applying the second layer of Sikalastic®-621 TC the previously applied Sikalastic coating should have been left to dry for:
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Temperature	Relative humidity	Minimum	Maximum
+2°C	50%	allow overnight curing	The second layer of Sikalastic®-621 TC should be applied within seven days.*
+10°C	50%	8 hours	
+20°C	50%	6 hours	

* Consult Sika® Roofing Applications Department if this is not achieved.

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

Curing Details

Temperature	Relative humidity	Rain resistant	Touch dry	Full cure
+2°C	50%	10 minutes*	8 - 12 hours	16-24 hours
+10°C	50%	10 minutes*	4 hours	8-12 hours
+20°C	50%	10 minutes*	3 hours	6-8 hours

** Be aware that heavy rain or rain showers can aesthetically damage the still liquid membrane*

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

Notes on Application / Limitations

Do not apply Sikalastic®-621 TC on areas with rising moisture and where ponding water may occur.


Substrate preparation is crucial to ensure quality. Precisely follow the instructions of the corresponding Primer and Cleaner PDS and the most current issued information.

Do not use Sikalastic®-621 TC for indoor applications.

Do not apply close to the air intake vent of a running air conditioning unit.

Sikalastic®-621 TC is not recommended for areas with frequent traffic.

CE Labelling

				
Manufacturing plant: Sika Limited Iotech House Miller Street Preston Lancashire PR1 1EA United Kingdom				
Last two digits of the year in which the marking was affixed	09			
European Technical approval No.	ETA 09/0139			
Guideline for European Technical approval	ETAG-005-6			
System	<u>SikaRoof® MTC 12</u>	<u>SikaRoof® MTC 15</u>	<u>SikaRoof® MTC 18</u>	<u>SikaRoof® MTC 22</u>
Minimum layer thickness	1.3 mm	1.5 mm	1.8 mm	2.2 mm
Thickness achieved with	Sika® Reemat Standard	Sika® Reemat Premium	Sika® Reemat Premium	Sika® Reemat Premium
Water vapour permeability	6.6 g/m ² /day μ: 4133	6.5 g/m ² /day μ: 3480	5.8 g/m ² /day μ: 3584	3.8 g/m ² /day μ: 4691
Resistance to wind loads	≥ 50 kPa	≥ 50 kPa	≥ 50 kPa	≥ 50 kPa
External fire performance	No performance determined ¹⁾	B _{Roof} (t1) - B _{Roof} (t4)	B _{Roof} (t1) - B _{Roof} (t3)	B _{Roof} (t1)
Reaction to fire EN 13501-1	Euroclass F	Euroclass F	Euroclass E	Euroclass E
Statement on dangerous substances	None contained			
Level of use categories according to ETAG 005 with relation to:				
Working life:	W2	W3	W3	W3
Climatic zones:	M and S	M and S	M and S	M and S
Imposed loads most compressive substrate	P1	P4	P4	P4
Imposed loads least compressive substrate	P2	P4	P4	P4
Roof slope:	S1 to S4	S1 to S4	S1 to S4	S1 to S4
Lowest surface temperature	TL3	TL3	TL3	TL3
Highest surface temperature	TH4	TH4	TH4	TH4

¹⁾ Classification cannot be given as a valid EN does not exist. However, indicated classifications under prEN 13501-5 are: B_{Roof} (t1), B_{Roof} (t2) and B_{Roof} (t3). Classification under BS 476-3 : 1958 is assessed as EXT.F.AA. Results of tests are given in the Evaluation Report.

EU Regulation 2004/42/CE

VOC - Decopaint Directive

According to the EU-Directive 2004/42/CE, the maximum allowed content of VOC (Product category IIA / i type **sb**) is 600/500 g/l (Limits 2007 / 2010) for the ready to use product.

The maximum content of **Sikalastic®-621 TC** is <500 g/l VOC for the ready to use product.

Roofing

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.
Health and Safety Information	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.
Legal Note	The information contained herein and any other advice 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. The information only applies to the application(s) and product(s) expressly referred to herein. In case of changes in the parameters of the application, such as changes in substrates etc., or in case of a different application, consult Sika's Technical Service prior to using Sika products. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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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