



Sikalastic®-621 TC

(Decothane Top Coat)

Highly durable, UV-stable, versatile and easily applied liquid
Roof Waterproofing Top coat

Construction

Product Description Sikalastic®-621 TC is a cold-applied, seamless, highly elastic, UV-stable, one-component, moisture-triggered polyurethane Top Coat (TC) designed to provide easy application and a durable solution in combination with Sikalastic®-601 BC (Base Coat).

- Uses**
- For exposed and built-up roofs in both new construction and refurbishment projects
 - For roofs displaying complex detail areas and geometry, even when accessibility is limited
 - For cost efficient life cycle extension of failing roofs
 - For reflective coatings to enhance energy efficiency by reducing cooling costs

- Characteristics / Advantages**
- Proven technology - over 20 years track record
 - Easy and quick application with Sika® Reemat and Sikalastic® Applicator
 - Fast curing, ability to rapidly become resistant to rain damage
 - UV-stable
 - Highly elastic and crack-bridging
 - Seamless roof waterproofing membrane
 - When used with approved primers, will fully bond to most substrates preventing the migration of water
 - Vapour permeable
 - Strong resistance to common atmospheric chemicals
 - Low odour during application
 - Long shelf life – 12 months

Tests

- Approval / Standards**
- European Technical Approval No. ETA-09/0139: SikaRoof® MTC 12, SikaRoof® MTC 18, SikaRoof® MTC 22, SikaRoof® MTC Cold Bonding,
 - Energy Star
 - External fire performance: B_{Roof} (t4)
Classification under BS 476-3: 1958 EXT.F.AA.
Other test work ongoing.

Product Data

Form

Appearance / Colours Slate grey, shale grey and white (Energy Star)

Packaging 15 litre containers (21.6 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 Polyurethane		
Density	1.44 kg/l	(EN ISO 2811-1)	
	All density values at +23 °C		
Solid Content	~ 81.3% by volume / ~ 87.4% by weight		
Flash Point	62°C		
Service temperature	-30 to + 80°C (intermittent)		

Chemical Properties

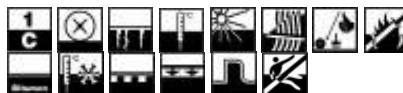
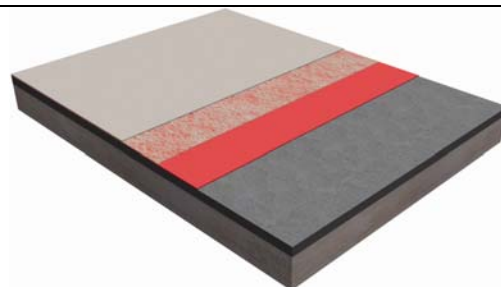
Chemical Resistance	<p>Strong resistance to a wide range of reagents including paraffin, petrol, fuel oil, white spirit, acid rain, detergents and moderate solutions of acids and alkalis. Some low molecular weight alcohols can soften the material. Contact Technical Service for specific recommendations.</p> <p>Salt spray to ASTM B117 (1000 hours continuous exposure) and Prohesion testing to ASTM G85 – 94: Annex A5 (1000 hours cyclic exposure).</p>
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System Information

System Structure

Exposed Roofs

To provide a UV-stable coating, to extend life expectancy of old roofs, to provide reflective coatings to enhance energy efficiency or for high-performance waterproofing solutions on new construction and refurbishment projects.



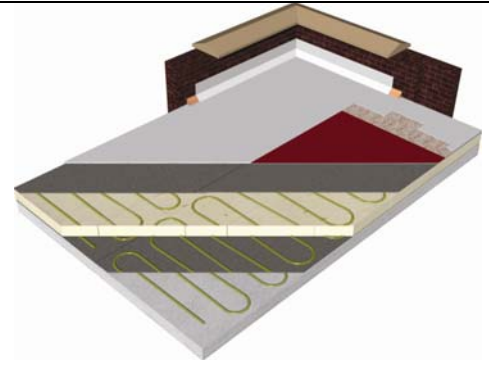
	SikaRoof® MTC 8	SikaRoof® MTC 12	SikaRoof® MTC 18	SikaRoof® MTC 22
Build up	Sikalastic® -621 TC applied in 2 coats	Sikalastic® -601 BC applied in 1 coat, reinforced with Sika® Reemat Standard and sealed with Sikalastic® -621 TC	Sikalastic® -601 BC applied in 1 coat, reinforced with Sika® Reemat Premium and sealed with 1 coat Sikalastic® -621 TC	Sikalastic® -601 BC applied in 1 coat, reinforced with Sika® Reemat Premium and sealed with 2 coats Sikalastic® -621 TC
Substrates	Sound concrete, metals, wood	Sound concrete and cement screed, metals, wood, bituminous felt and asphalt in good condition, spray applied foam, brick and stones, slates and tiles, plastics (GRP, UPVC, ABS)	Sound concrete and cement screed, metals, wood, bituminous felt and asphalt in moderate condition, spray applied foam, brick and stones, slates and tiles, plastics (GRP, UPVC, ABS),	Sound concrete and cement screed, metals, wood, bituminous felt and asphalt in moderate condition, spray applied foam, brick and stones, slates and tiles, plastics (GRP, UPVC, ABS),
Primer	Please refer to Sikalastic® Primer chart below			
Dry film thickness	0.8mm	1.2mm	1.8mm	2.2mm
Total consumption		BC: ≥ 1.1kg/m	BC: ≥ 1.5kg/m ²	BC: ≥ 1.4kg/m ²
	TC: ≥ 1.5kg/m ²	TC: ≥ 1.1kg/m ²	TC: ≥ 1.5kg/m ²	TC: ≥ 2.4kg/m ²
Tensile load	392 N/50mm	540 N/50mm	1089 N/50mm	1210 N/50mm
Tear strength	26 N/mm	50 N/mm	80 N/mm	120 N/mm
Tensile Elongation	38%	46%	58%	84%
Vapour permeability	13.9 g/m ² /day	11.8 g/m ² /day	8.9 g/m ² /day	6.2 g/m ² /day

Sikalastic® Carrier is applied at areas with high movement, irregular substrates or to bridge cracks, joints, and seams on the substrate.

Built-up Roofs

SikaRoof® MTC Cold Bonding

Insulated build-up Roof Waterproofing system for new construction and refurbishment projects.

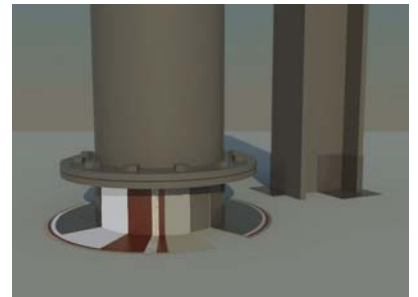


Build up:	Sikalastic® Vap, Sikalastic® Insulation and Sikalastic® Carrier adhered with Sikalastic® Coldstick, waterproofed with SikaRoof® MTC 12, 18 or 22
Substrates:	Plywood, concrete, galvanised steel, aluminium, asphalt, bituminous felt (incl. SBS)
Primer:	Please refer to Sikalastic® Primer chart below
Dry film thickness: (BC and TC)	1.2 to 2.2 mm
Total consumption:	BC: ≥ 1.1 to 1.5 kg/m ² TC: ≥ 1.1 to 2.4 kg/m ²

Professional Detailing

SikaRoof® MTC Flashing

As a flashing kit, can be used with bituminous felt to form a complete waterproofing system.



Build up:	Sikalastic® -601 BC applied in 1 coat, reinforced with Sika® Reemat Premium and sealed with 1 coat Sikalastic® -621 TC
Substrates:	Bituminous membrane.
Primer:	Please refer to Sikalastic® Primer chart below
Dry film thickness: (BC and TC)	1.8 mm
Total consumption:	BC: ≥ 1.5 kg/m ² TC: ≥ 1.5 kg/m ²

	One component product. Stir before using
	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, roller or airless spray equipment even when accessibility is limited .
	Bonds fully to most substrates, preventing the migration of water
	Root resistant
	Seamless waterproofing membrane
	Withstands mechanical loads of pedestrian and light wheeled traffic
	Fire resistant
	Compatible with bituminous felts
	Resistant to wind uplift
	Slip resistant (with quartz sand topping)

Application Details Cementitious substrates

New concrete should be allowed a minimum of 10 days before priming – ideally 28 days. Inspect the concrete, including upstands, all areas should be hammer tested. Concrete must be suitably finished, preferably by wood float or steel pan. A power float finish is acceptable where the surface is prepared to avoid laitance (a tamped finish is not acceptable). The surface finish must be uniform and free from defects such as laitance, voids or honeycombing.

Brick and stone

Mortar joints must be sound and preferably flush pointed.

Slates, tiles, etc.

Ensure all slates/tiles are sound and securely fastened, replacing obviously broken or missing sections.

Asphalt

Asphalt should conform to **BS6925:1988** otherwise, owing to volatiles, bleeding and slight non-detrimental staining can occur. The asphalt must be carefully assessed for moisture and/or air entrapment, grade, and surface finish prior to any coating works being carried out.

Bituminous felt

Ensure that Bituminous felt is firmly adhered or mechanically fixed to the substrate. Bituminous felt should not contain badly degraded areas.

Bituminous coatings

Bituminous coatings should not have sticky or mobile surfaces, volatile mastic coatings, or old coal tar coatings.

Metals

Metals must be in sound condition.

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.

Existing Sikalastic® MTC System

The existing Sikalastic® MTC System should still be soundly adhered to the substrate.

Substrate QualityCementitious 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.

Repairs to the substrate, filling of joints, blowholes/voids and surface levelling must be carried out using appropriate products from the Sikafloor[®], SikaDur[®] and SikaGard[®] range of materials.

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

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 coat in the late afternoon or evening.

Brick and stone

Power wash and use Sika[®] Biowash as required.

Slates, tiles, etc.

Slates, tiles, etc. need a good adhesion to the substrate otherwise they need to be removed. Power wash and use Sika[®] Biowash as required.

Asphalt

Power wash and use Sika[®] Biowash as required. All major cracks should be sealed to allow continuity of the SikaRoof MTC 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

Power wash and use Sika[®] Biowash as required. Treat blisters by star cutting and removing any underlying water. Allow to dry and re-adhere using Sikalastic[®] Coldstik.

Bituminous coatings

Remove any loose or degraded coatings. Apply the Sikalastic[®] waterproofing membrane directly.

Metals

Steelwork is ideally prepared to Sa 21/2 (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. Where blasting is not permitted, clean metal preparation by pin hammer etc is acceptable.

Non-ferrous metals are prepared as follows. 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.

Wooden substrates

Timber and timber based panel roof decks require a complete layer of Sikalastic[®] Carrier bonded using Sikalastic[®] Coldstik prior to the application of the chosen system. 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

Remove any loose or degraded coatings. Ensure the surface is clean and free from grease.

Existing SikaRoof MTC System

Clean the membrane using a water jet at approximately 14N/mm² (2000 p.s.i) using Sika[®] Biowash if necessary. Allow to dry.

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 Preparation	Substrate	Primer	Consumption primer [ml/m ²]
Substrate Priming	<u>Cementitious substrates</u>	Sika [®] Concrete Primer or Sika [®] Bonding Primer	≈ 150
	<u>Brick and Stone</u>	Not required	
	<u>Slate, tiles, etc.</u>	Not required	
	<u>Asphalt</u>	Not required, subject to surface assessment tests	
	<u>Bituminous felt</u>	Not required	
	<u>Bituminous coatings</u>	Not required	
	<u>Metals</u> Ferrous or galvanised metals, lead, copper, aluminium, brass or stainless steel	Sikalastic [®] Metal Primer	≈ 200
	<u>Wooden substrates</u>	Timber based roof decks require a complete layer of Sikalastic Carrier. For exposed timber Upstands use Sika [®] Bonding Primer or Sika [®] Concrete Primer	
<u>Paints</u>	Sika [®] Bonding Primer or aluminium based solar reflective coatings with Sikalastic [®] Metal Primer	?	
<u>Existing Sikalastic[®] Membrane</u>	Sika [®] Reactivation Primer	≈ 200	

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

Substrate and ambient Temperature	+2 °C min. / +35 °C max.
Substrate Moisture Content	< 4 % moisture content. No rising moisture according to ASTM (Polyethylene-sheet). No water / moisture / condensation on the substrate.
Relative Air Humidity	5 % min. / 85 % max.
Dew Point	Beware of condensation. Surface temperature during application must be at least +3 °C above dew point.

Application Instructions

Mixing	Not required
Application Method	Prior to the application of Sikalastic [®] -601 BC the substrate must be prepared and the priming coat must have cured tack-free. For the Waiting Time / Overcoating please refer to the PDS of the appropriate primer.

Exposed Roofs

SikaRoof[®] MTC 8: Sikalastic[®]-621 TC is applied in one or more coats. Prior to the application of a second coat the indicated Waiting Time in the table below should be achieved.

SikaRoof[®] MTC 12, 18, 22: Apply first coat of Sikalastic[®]-601 BC and roll in the Sika[®] Reemat whilst wet. Ensure there are no bubbles or creases and that the Reemat overlaps by a minimum of 5cm. Prior to the application of a second and third coat of Sikalastic[®]-621 TC the indicated Waiting Time in the table below should be achieved.

Please note, always begin with details prior to waterproofing the horizontal surface.

Built-up Roofs

SikaRoof[®] MTC Cold Bonding: Mix the components of the Sikalastic[®] Coldstick (as instructed in the relevant PDS) and apply to the substrate snaking the adhesive across the deck. For profiled metal decks apply along the crowns. Roll the Sikalastic[®] Vap into the adhesive, sealing side and end laps with a bead of adhesive. The Sikalastic[®] Insulation is embedded in a similar layer of Sikalastic[®] Coldstick. The Sikalastic[®] Carrier is then laid onto the Sikalastic[®] Insulation and adhered in a similar manner to the vapour control layer. The SikaRoof MTC 12, 18 or 22 is then applied directly over the Sikalastic[®] Carrier.

Professional Detailing

SikaRoof® MTC Flashing: Ensure that Bituminous felt is firmly adhered or mechanically fixed. Apply first coat of Sikalastic®-601 BC, and roll in the Sika® Reemat Premium whilst wet. Ensure there are no bubbles or creases and that the Reemat overlaps by a minimum of 5cm. Prior to the application of a second and third coat of Sikalastic®-621 TC the indicated Waiting Time in the table below should be achieved.

Application Tools

Jet washer: If dust, vegetation, moss / algae or other contaminants are present on the existing roof, a power washer is required to clean the substrate prior to the application of SikaRoof Systems. Existing chippings should be removed by hand or scabbling prior to power washing.

Squeegee: Useful when removing excess water from the roof after overnight rain

Drill and paddle: The two part of Sikalastic® Coldstick should be mixed for two minutes using a drill and paddle. Part B should be poured into part A.

Pouring Can: The pouring can is used to snake the Sikalastic® Coldstick across the structural deck, the Sikalastic® Vap, or the Sikalastic® Insulation.

Scraper: Required to squeeze the excess Sikalastic® Coldstick from the laps of the Sikalastic® Vap and Sikalastic® Carrier when sealing the side and end laps.

Medium pile roller: Used in the application of Sikalastic®-601 BC and Sikalastic®-621 TC to ensure a consistent thickness of the seamless SikaRoof systems.

Small Medium pile roller: Used in the application of Sika® Reemat , Sikalastic®-601 BC and Sikalastic®-621 TC to details and penetrations throughout the roof construction.

Brushes: For application of Sika® Reemat , Sikalastic®-601 BC and Sikalastic®-621 TC to all details and penetrations.

Stanley knife: This tool is required when cutting Sikalastic® Vap, Sikalastic® Insulation and Sikalastic® Carrier. When the Sikalastic® Insulation is resting on a uneven substrate, the back of the board should be cut to enable maximum contact with Sikalastic® Coldstick

Saw: Used when cutting thick Sikalastic® Insulation boards.

Sikalastic® Applicator: A gravity fed, easy-to-use spreader for Sikalastic®-601 BC, Sikalastic®-621 TC, and Sikalastic® Coldstick.

Airless spray equipment: Used only for the SikaRoof Pro 8 System. Two spray applied layers is the minimum requirement. The pump should have the following parameter:

- min. pressure: 220 bar
- min. output: 5.1 l/min
- min. Ø nozzle: 0.83mm (0.033 inch)

For example: Wagner Heavycoat HC 940 E SSP Spraypack

Cleaning of Tools

Clean all tools and application equipment with Sikalastic® ? immediately after use. Hardened and/or cured material can only be removed mechanically.

Pot life

Sikalastic®-601 BC 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.

Waiting Time / Overcoating

Before applying Sikalastic®-621 TC the previously applied Sikalastic coating should have been left to dry for:

Temperature	Relative humidity	Minimum	Maximum
+2°C	50%	allow overnight curing	After seven days the surface has to be cleaned and primed with Sika® Reactivation Primer
+10°C	50%	8 hours	
+20°C	50%	6 hours	

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%	1 hour	8 - 12 hours	16-24 hours
+10°C	50%	1 hour	4 hours	8-12 hours
+20°C	50%	1 hour	3 hours	6-8 hours

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®-601 BC on substrates with rising moisture.

On substrates likely to exhibit outgassing apply during falling ambient and substrate temperature. If applied during rising temperatures “pin holing” may occur from rising air.

Substrate preparation is crucial to ensure highly durable quality. Precisely follow the instructions of the corresponding Primer and Cleaner PDS and the most recent issue of the Method Statement.

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

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

Areas with high movement, irregular substrates, or timber based roof decks require a complete layer of Sikalastic Carrier.

Sikalastic®-621 TC is not recommended for frequent traffic. If daily pedestrian traffic is unavoidable, Sikalastic®-621 TC shall be covered with appropriate elements such as tiles, stone plates, or wooden panels.

Do not apply cementitious products (e.g. tile mortar) directly onto Sikalastic®-601 TC.

Value Base

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

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.

Important Notification

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms and conditions of sale. Users should always refer to the most recent issue of the Australian version of the Technical Data Sheet for the product concerned, copies of which will be supplied on request.

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.



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