

Product Data Sheet
Edition: 07/2014
Identification no:
02 09 15 20 500 0 000005
Sikalastic®-601BC



Sikalastic®-601 BC

High performance, root resistant, versatile and easily applied liquid Roof Waterproofing Base Coat

Product Description	Sikalastic®-601 BC is a cold-applied, seamless, highly elastic, one-component, moisture-triggered, root resistant, polyurethane Base Coat (BC), designed to provide easy application and a durable solution in combination with root resistant Sikalastic®-621 TC (Top Coat).
Uses	<ul style="list-style-type: none">■ For SikaRoof® MTC 12, 15, 18, 22 and SikaRoof® MTC Cold Bonding in both new construction and refurbishment projects■ For cold roof and warm roofs and■ For roofs displaying complex detail areas, even when accessibility is limited■ For cost efficient life cycle extension of failing roofs■ For Sika SolaRoof™ MTC 12, 15, 18, 22 as highly reflective roof waterproofing system for excellent cool roof characteristics and bifacial photovoltaic panels
Characteristics / Advantages	<ul style="list-style-type: none">■ Proven technology - over 20 years track record■ Easy and quick application with Sika® Reemat and Sikalastic® Applicator■ Moisture triggered chemistry – after application rapidly weatherproof■ High elastic and crack-bridging■ High root resistance■ 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■ One component – ready to use
Tests	
Approval / Standards	<ul style="list-style-type: none">■ European Technical Approval No. ETA-09/0139■ Root resistance approval according FLL (Institute of Horticulture)■ External fire performance: B_{Roof} (t1)- B_{Roof} (t4) (SikaRoof® MTC 15, non-combustible surfaces) B_{Roof} (t1)- B_{Roof} (t4) (SikaRoof® MTC 18) B_{Roof} (t1) (SikaRoof® MTC 22)
Product Data	
Form	
Appearance / Colours	Oxide Red
Packaging	5 litre pails (appr. 6.80 kg) and 15 litre pails (appr. 20.40 kg)
Storage	
Storage Conditions / Shelf Life	9 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. Higher storage temperatures may reduce shelf life of product.

Construction

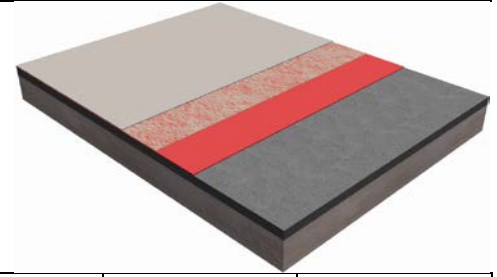
Technical Data				
Chemical Base	One-component moisture-triggered aliphatic Polyurethane			
Density	1.36 kg/l			(EN ISO 2811-1)
	All density values at +23 °C			
Solid Content	~ 78% by volume / ~ 84.3% by weight			
Flash Point	59°C			
Service temperature	-30 to + 80°C (intermittent)			
CIGS-Reflectance (initial)	Sika SolaRoof™ MTC 12	Sika SolaRoof™ MTC 15	Sika SolaRoof™ MTC 18	Sika SolaRoof™ MTC 22
	n.a.	94%	94%	94%
	Reflectivity according to EN 410 in conjunction with CIGS sensitivity			
Solar Reflectance (initial)	Sika SolaRoof™ MTC 12	Sika SolaRoof™ MTC 15	Sika SolaRoof™ MTC 18	Sika SolaRoof™ MTC 22
	0.86	0.88	0.88	0.88
	Reflectivity according to ASTM C 1549			
Initial Emittance	Sika SolaRoof™ MTC 12	Sika SolaRoof™ MTC 15	Sika SolaRoof™ MTC 18	Sika SolaRoof™ MTC 22
	0.89	0.89	0.90	0.89
	Emittance according to ASTM E 408, ASTM C1371, others			
SRI (Solar Reflectance Index) (initial)	Sika SolaRoof™ MTC 12	Sika SolaRoof™ MTC 15	Sika SolaRoof™ MTC 18	Sika SolaRoof™ MTC 22
	109	110	110	110
	Reflectance Index according to ASTM E 1980			
All values related to the reflectance/emittance properties provided in this Product Data Sheet refer to the initial (properly cured, non-weathered) status of the product.				

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>
----------------------------	--

System Information

System Structure



	SikaRoof® MTC 12 Sika SolaRoof™ MTC 12	SikaRoof® MTC 15 Sika SolaRoof™ MTC 15	SikaRoof® MTC 18 Sika SolaRoof™ MTC 18	SikaRoof® MTC 22 Sika SolaRoof™ MTC 22
Build up	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 1-2 coats Sikalastic®-621 TC	Sikalastic®-601 BC applied in 1 coat, reinforced with Sika® Reemat Premium and sealed with 2 coats Sikalastic®-621 TC
	Highly reflective Sikalastic®-621 TC – SR as part of the <u>Sika SolaRoof™ MTC systems*</u>			
Substrates	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)	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			
Total dry film thickness (BC and TC)	~ 1.3mm	~ 1.5mm	~ 1.8mm	~ 2.2mm
Total consumption	BC: ≥ 0.75l/m ² (≥ 1.0kg/m ²) TC: ≥ 0.75l/m ² (≥ 1.0kg/m ²)	BC: ≥ 1l/m ² (≥1.4kg/m ²) TC: ≥ 0.75l/m ² (≥1.0kg/m ²)	BC: ≥ 1l/m ² (≥1.4kg/m ²) TC: ≥ 1.1l/m ² (≥1.6kg/m ²)	BC: ≥ 1l/m ² (≥1.4kg/m ²) TC: ≥ 1.6l/m ² (≥2.3kg/m ²)
Tensile strength	9N/mm ²	11.4N/mm ²	12.1N/mm ²	11N/mm ²
Tear strength	26 N/mm ²	33 N/mm ²	47 N/mm ²	52 N/mm ²
Tensile Elongation	38%	46%	58%	84%
Vapour permeability	6.60 g/m ² /day μH ₂ O: 4133	6.50 g/m ² /day μH ₂ O: 3480	5.80 g/m ² /day μH ₂ O: 3584	3.80 g/m ² /day μH ₂ O: 4691
* For an optimum reflectivity of the Sika SolaRoof™ MTC systems we recommend airless spray-application of Sikalastic®-621 TC – SR (traffic white RAL 9016)				

Substrate QualityCementitious substrates

New concrete should be allowed a minimum of 10 days before priming – ideally 28 days and should have a Pull off strength ≥ 1.5 N/mm². 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.

Ceramic tiles

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

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.

Bituminous felt

Ensure that Bituminous felt is firmly adhered or mechanically fixed to the substrate. Bituminous felt should not contain any 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 SikaRoof[®] MTC Systems

The existing SikaRoof[®] MTC Systems should still be soundly adhered to the substrate.

Substrate 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.

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.

Ceramic tiles

Tiles 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.

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 loose or degraded coatings.

Metals

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. 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 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 140bar (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 Priming	Substrate	Primer	Consumption primer [ml/m²]
	<u>Cementitious substrates</u>	Sika [®] Concrete Primer	≈ 150
	<u>Brick and Stone</u>	Not required	
	<u>Ceramic tiles (unglazed) and concrete slabs</u>	Sika [®] Concrete Primer	≈ 150
	<u>Asphalt</u>	subject to surface assessment tests <u>Only required for high reflectivity applications (Sikalastic[®] Metal Primer)</u>	
	<u>Bituminous felt</u>	<u>Only required for high reflectivity applications (Sikalastic[®] Metal Primer)</u>	
	<u>Bituminous coatings</u>	<u>Only required for high reflectivity applications (Sikalastic[®] Metal Primer)</u>	
	<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 [®] Concrete Primer	
	<u>Paints</u>	Sika [®] Bonding Primer or aluminium based solar reflective coatings with Sikalastic [®] Metal Primer	
	<u>Existing SikaRoof[®] MTC System</u>	Sika [®] Reactivation Primer.	≈ 200

* Sikalastic[®] Metal Primer prevents migration of bituminous volatiles and improves long-term reflectivity

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 / Limits

Substrate Temperature	+5 °C min. / +60 °C max.
Ambient Temperature	+5 °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 12, 15, 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.

For Sika SolaRoof[™] MTC 12, 15, 18, 22 we recommend airless spray-application of Sikalastic[®]-621 TC-SR for optimum reflectivity.

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 Sarna® Vap into the adhesive, sealing side and end laps with a bead of adhesive. The Sikatherm® Insulation is embedded in a similar layer of Sikalastic® Coldstick. The Sikalastic® Carrier is then laid onto the Sikatherm® Insulation and adhered in a similar manner to the vapour control layer. The SikaRoof® MTC 12,15, 18 or 22 is then applied directly over the Sikalastic® Carrier. Prior to the application of the Sika SolaRoof™ MTC 12, 15, 18, 22 systems, Sikalastic® Metal Primer has to be applied as barrier layer to prevent migration of bituminous volatiles.

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® MTC 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 parts of Sikalastic® Coldstick should be mixed 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 Sikatherm® 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, Sikatherm® Insulation and Sikalastic® Carrier. When the Sikatherm® 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.

Cleaning of Tools	Clean all tools and application equipment immediately after use with Thinner S. 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. <u>In opened containers, the material will form a film within 1 or 2 hours.</u>

Curing Details

Applied Product ready for use	Temperature	Relative humidity	Rain resistant	Touch dry	Full cure
	+5°C	50%	10 minutes*	8-10 hours	24 hours
	+10°C	50%	10 minutes*	4 hours	8-10 hours
	+20°C	50%	10 minutes*	3 hours	6-8 hours

* Be aware that 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.

Notes on Application / Limitations	<p>Do not apply Sikalastic®-601 BC on substrates with rising moisture.</p> <p>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.</p> <p>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.</p> <p>Do not use Sikalastic®-601 BC for indoor applications.</p> <p>Do not apply close to the air intake vent of a running air conditioning unit.</p> <p>Do not apply Sikalastic®-601 BC directly on Sikalastic® Insulation boards. Instead use Sikalastic® Carrier between Sikalastic® Insulation board and Sikalastic®-601 BC.</p> <p>Areas with high movement, irregular substrates, or timber based roof decks require a complete layer of Sikalastic® Carrier.</p> <p>Do not apply cementitious products (e.g. tile mortar) directly onto Sikalastic®-601 BC or Sikalastic®-621 TC.</p>
---	--

Value Base	All technical data stated in this Product Data Sheet is 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 Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data. REACH relevant information is available in the most recent SDS.
--------------------------------------	--

Legal Notes	<p>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.</p>
--------------------	---



Sika South Africa (Pty) Ltd
9 Hocking Place,
Westmead, 3608
South Africa

E-mail: headoffice@za.sika.com
Phone +27 31 792 6500
Telefax +27 31 700 1760
www.sika.co.za

