

SYSTEM DATA SHEET

SikaRoof® MTC-18

HIGH PERFORMANCE, UV-STABLE LIQUID APPLIED POLYURETHANE ROOF WATER-PROOFING SYSTEM



DESCRIPTION

SikaRoof® MTC-18 is a cold-applied, seamless, highly elastic and UV-stable moisture triggered polyurethane roof waterproofing system consisting of Sikalastic®-601 BC, Sika® Reemat Premium and Sikalastic®-621 TC.

USES

SikaRoof® MTC-18 may only be used by experienced professionals.

SikaRoof® MTC-18 can be used as following:

- Roof waterproofing solution for 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 In combination with Sikalastic®-621 TC – SR (traffic white RAL 9016) for cool roofs and solar roofs

CHARACTERISTICS / ADVANTAGES

- Proven technology - over 25 year track record
- One component – no mixing, easy and ready to use
- UV resistant - Highly reflective (RAL9016) and resistant to yellowing
- Cold applied - requires no heat or flame
- Seamless roof waterproofing membrane
- Compatible with Sika® Reemat Standard- easy to detail
- Fast curing - free from resin damage almost immediately on application
- High elastic and crack-bridging - retains flexibility even at low temperatures
- High root resistance
- Easily re-coated when needed - no stripping required
- Good adhesion to most substrates- see primer chart
- Vapour permeable - allows substrate to breathe
- Strong resistance to common atmospheric chemicals

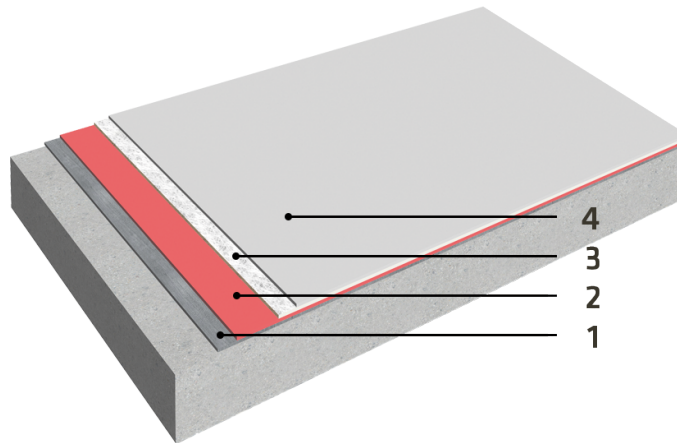
APPROVALS / CERTIFICATES

- Liquid applied roof waterproofing kit according to ETAG 005, ETA-09/0139 issued by technical assessment body British Board of Agrément (BBA), Declaration of Performance 15813688, provided with the CE marking
- External fire performance: B_{Roof}(t1), B_{Roof}(t2), B_{Roof}(t3)
- Reaction to fire according to EN 13501-1: Euroclass E

SYSTEMS

System Structure

Sikalastic®-601 BC applied in 1 coat, reinforced with Sika® Reemat Premium and sealed with 1 coat Sikalastic®-621 TC



Layer	Product	Consumption
1. Primer	please refer to substrate pre-treatment	please refer to PDS of the Primer
2. Base coat	Sikalastic®-601 BC	≥ 1.0 l/m ² (≥ 1.4 kg/m ²)
3. Reinforcement	Sika® Reemat Premium	-
4. Top coat	Sikalastic®-621 TC	≥ 1.1 l/m ² (≥ 1.6 kg/m ²)

Note: These figures are theoretical and do not include for any additional material required due to surface porosity, surface profile, variations in level and wastage.

Chemical base	Moisture-triggered aliphatic polyurethane
Colour	Sikalastic®-601 BC: Oxide red (RAL 3011) Sikalastic®-621 TC: Slate grey (RAL 7015), shale grey (RAL 8500), traffic white (RAL 9016), other colours available upon request
Dry film thickness	~1.8 mm

TECHNICAL INFORMATION

Tensile Strength	~12.1 N/mm ²	(EN ISO 527-3)
Elongation at Break	~58 %	(EN ISO 527-3)
Tear Strength	~47 N/mm ²	(EN ISO 6383-1:2004)
Permeability to Water Vapour	μ: ~3 600	(EN ISO 1931 Method B)
Water Vapour Transmission	~5.8 g/m ² /day	(EN ISO 1931 Method B)
External Fire Performance	B _{Roof} (t1), B _{Roof} (t2), B _{Roof} (t3)	(EN 13501-5)
Reaction to Fire	Euroclass E	(EN 13501-1)
Chemical Resistance	Salt spray	1000 hours continuous exposure (ASTM B117)
	Prohesion testing	1000 hours cyclic exposure (ASTM G85-94: Annex A5)
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 technical service for specific information.		
Solar Reflectance Index	≥ 109*	(ASTM 1980)
* All values refer to the initial (properly cured, non-weathered) status of Sikalastic®-621 TC white (RAL 9016).		

APPLICATION INFORMATION

Ambient Air Temperature +5 °C min. / +35 °C max.

Relative Air Humidity 5 % r.h. min. / 85 % r.h. max.

Substrate Temperature +5 °C min. / +60 °C max.
≥3 °C above dew point

Substrate Moisture Content ≤4 % pbw moisture content.
Test method: Sika®-Tramex meter
No rising moisture according to ASTM (Polyethylene-sheet).

Substrate Pre-Treatment**Substrate****Primer**

Cementitious substrates

Sika® Concrete Primer or
Sika® Bonding Primer

Brick & Stone

Sika® Concrete Primer or
Sika® Bonding Primer

Ceramic tiles (unglazed), and concrete slabs

Sika® Concrete Primer or
Sika® Bonding Primer

Bituminous felt & coating

Normally not required
Sikalastic® Metal Primer*

Metals

Sikalastic® Metal Primer

Ferrous or galvanised metals, lead, copper, aluminium, brass or stainless steel

Wooden substrates

Timber based roof decks require a complete layer of Sikalastic® Carrier.

For small exposed timber sections:
Sika® Concrete Primer or
Sika® Bonding Primer

Paints & Coatings

Subject to adhesion and compatibility tests

Existing Sikalastic® MTC System

Sika® Reactivation Primer

Single ply membranes

Consult Sika Technical Department

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

For the consumption rates and waiting time / overcoating you please 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.

Waiting Time / Overcoating**Ambient conditions****Minimum waiting time**

+5 °C / 50 % r.h.

18 hours

+10 °C / 50 % r.h.

8 hours

+20 °C / 50 % r.h.

6 hours

After four days the surface must be cleaned and primed with Sika® Reactivation Primer before continuing.

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

Applied Product Ready for Use**Ambient conditions****Rain resistance****Touch dry****Full cure**

+5 °C / 50 % r.h.

10 minutes*

8–12 hours

16–24 hours

+10 °C / 50 % r.h.

10 minutes*

4 hours

8–12 hours

+20 °C / 50 % r.h.

10 minutes*

3 hours

6–8 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.

PRODUCT INFORMATION

Packaging	Please refer to individual Product Data Sheet
Shelf life	Please refer to individual Product Data Sheet
Storage conditions	Please refer to individual Product Data Sheet

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The surface must be sound, of sufficient strength, clean, dry and free of dirt, oil, grease and other contamination. Depending on the material the substrate must be primed or mechanically cleaned. Grinding may be necessary to level the surface. Suitable substrates are such as: concrete, bituminous felts and coatings, metal, brickwork, asbestos cement, ceramic tiles, wooden substrates.

For detailed information regarding substrate preparation and primer chart please refer to Method Statement No. 850 94 01.

MIXING

Mixing is not required, however if the product is settled or separated on opening, stir gently but thoroughly in order to achieve a uniform colour. Stirring gently will minimise air entrainment.

APPLICATION

Prior the application of SikaRoof® MTC-18 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. Please note, always begin with details prior to the installation of the horizontal surface.

1. Apply first coat of Sikalastic®-601 BC. Work only so far in advance that the material stays liquid
2. Roll in the Sika® Reemat Premium. Overlap the Reemat a minimum 5 cm and ensure overlaps are sufficiently wet to bond both layers. The roller may require only a little extra material to keep wetted but no further significant material needs to be added at this stage.
3. After the coat is dry enough to walk on, seal the roof area with second coat of Sikalastic®-621 TC.

CLEANING OF TOOLS

Removal of fresh remnants from tools and application equipment can be carried out using Thinner S immediately after use. Hardened / cured material can only be mechanically removed.

FURTHER DOCUMENTS

For detailed information regarding substrate preparation, primer chart and application method of SikaRoof® MTC-18 refer to Method Statement No. 850 94 01.

LIMITATIONS

- Do not apply SikaRoof® MTC on substrates with rising moisture.
- SikaRoof® MTC is not suitable for permanent water immersion.
- 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.
- Do not dilute Sikalastic®-601 BC & Sikalastic®-621 TC with any solvent.
- Do not use SikaRoof® MTC for indoor applications.
- Do not apply close to the air intake vent of a running air conditioning unit.
- Do not apply SikaRoof® MTC directly on insulation boards. Instead use Sikalastic® Carrier between Insulation board and SikaRoof® MTC.
- Volatile bituminous materials may stain and or soften below the coating.
- Areas with high movement, irregular substrates, or timber based roof decks require a complete layer of Sikalastic® Carrier.
- Do not apply cementitious products (e.g. tile mortar) directly onto SikaRoof® MTC.

BASIS OF PRODUCT DATA

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

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.

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.

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