

PRODUCT DATA SHEET

Sikaplan® TB-18

POLYMERIC MEMBRANE FOR BALLASTED ROOF WATERPROOFING



DESCRIPTION

Sikaplan® TB-18 (thickness 1.8 mm) is a multi-layer, synthetic roof waterproofing sheet based on premium-quality flexible polyolefins (FPO), containing stabilizers, with inlay of glass non-woven according to EN 13956. Sikaplan® TB-18 is a hot air weldable, UV-resistant roof membrane, designed to use in all global climatic conditions.

USES

Roof waterproofing membrane for roofs with ballast (e.g. gravel, concrete slabs, green roof):

- Loosely laid and Ballasted roofs
- Green roofs
- Utility roofs
- Inverted roofs

Roof waterproofing membrane for exposed roof junction zones:

- Roof waterproofing for junctions and flashings, e.g. wall and parapet junctions, roof lights, etc., which are permanently exposed in installations of Sikaplan® TB-18 roof waterproofing systems with ballast.
- Roof waterproofing for junctions and flashings in installations of Sikaplan® TM exposed roof waterproofing systems.

CHARACTERISTICS / ADVANTAGES

- Resistant to permanent UV irradiation
- High dimensional stability due to glass fleece inlay
- Resistant against impact load
- Resistant to all common environmental influences
- Resistant to mechanical influences
- Resistant to micro-organisms
- Resistant to root penetration
- Compatible to old bitumen
- Hot air welding without use of open flames
- Recyclable

APPROVALS / CERTIFICATES

- Sikaplan® TB-18 is designed and manufactured to meet most international recognised standards.
- Polymeric sheets for roof waterproofing according to EN 13956, certified by notified body 1213-CPD-4855 and provided with the CE marking.
- Reaction to fire according to EN 13501-1.
- Root penetration resistance tested according to FLL-Test Procedure.
- Monitoring and assessment by approved laboratories.
- Quality Management system in accordance with EN ISO 9001/14001.

PRODUCT INFORMATION

Packaging	Sikaplan® TB-18 standard rolls are wrapped individually in a yellow PE-foil.	
	Roll length:	15.00 m
	Roll width:	2.00 m
	Roll weight:	54 kg
Appearance / Colour	Surface:	matt
	Colours:	
	Top surface:	traffic white (nearest RAL 9016)
	Bottom surface:	black
Shelf life	5 years from date of production in unopened, undamaged and original packaging.	
Storage conditions	Rolls must be stored between +5 °C and +30 °C in a horizontal position on pallet, protected from direct sunlight, rain and snow. Do not stack pallets of rolls or any other material during transport or storage.	
Product Declaration	EN 13956	
Visible Defects	Pass	EN 1850-2
Length	15 m (-0 % / +5 %)	(EN 1848-2)
Width	2 m (-0.5 % / +1 %)	(EN 1848-2)
Effective Thickness	1.8 mm (-5 % / +10 %)	(EN 1849-2)
Straightness	≤ 30 mm	(EN 1848-2)
Flatness	≤ 10 mm	(EN 1848-2)
Mass per unit area	1.8 kg/m ² (-5 % / +10 %)	(EN 1849-2)

TECHNICAL INFORMATION

Resistance to Impact	hard substrate	≥ 800 mm	(EN 12691)
	soft substrate	≥ 1000 mm	
Resistance to Static Load	soft substrate	≥ 20 kg	(EN 12730)
	rigid substrate	≥ 20 kg	
Resistance to Root Penetration	Pass		(EN 13948)
Tensile Strength	longitudinal (md) ¹⁾	≥ 6 N/mm ²	(EN 12311-2)
	transversal (cmd) ²⁾	≥ 6 N/mm ²	
	¹⁾ md = machine direction ²⁾ cmd = cross machine direction		
Elongation	longitudinal (md) ¹⁾	≥ 500 %	(EN 12311-2)
	transversal (cmd) ²⁾	≥ 500 %	
	¹⁾ md = machine direction ²⁾ cmd = cross machine direction		
Dimensional Stability	longitudinal (md) ¹⁾	≤ 0.3 %	(EN 1107-2)
	transversal (cmd) ²⁾	≤ 0.2 %	
	¹⁾ md = machine direction ²⁾ cmd = cross machine direction		
Joint Shear Resistance	≥ 400 N/50 mm		(EN 12317-2)
Foldability at Low Temperature	≤ -40 °C		(EN 495-5)
Reaction to Fire	Class E	(EN ISO 11925-2, classification to EN 13501-1)	
Effect of Liquid Chemicals, Including Water	On request		(EN 1847)

Exposure to Bitumen	Pass ³⁾ <small>³⁾ Sikaplan® TB is compatible to old bitumen</small>	(EN 1548)
Resistance to UV Exposure	Pass (> 5 000 h / grade 0)	(EN 1297)
Water Vapour Transmission	μ = 150 000	(EN 1931)
Watertightness	Pass	(EN 1928)

SYSTEMS

System Structure	<p>Wide range of accessories is available e.g. prefabricated parts, roof drains, scuppers, protection sheets and separation layers.</p> <p>The following accessories shall be used:</p> <ul style="list-style-type: none"> ▪ Sarnafil® T 66-15 D RAL 9016 Sheet for detailing ▪ Sikaplan® T Metal Sheet ▪ Sarnabar ▪ Sarnafil® T Welding Cord ▪ Sarnafil® T Prep / Sikaplan® T Wet Task Set ▪ Sarnacol® T-660 ▪ Solvent T-660 ▪ Sarnafil® T Clean
Compatibility	<p>Sikaplan® TB-18 may be installed on all thermal insulations and levelling layers suitable for roofing. No additional separation layer is required. Sikaplan® TB-18 is suitable for installation directly on top of existing, carefully cleaned, level bituminous roofing, e.g. re-roofing over old flat roofs. Colour changes in membrane surface may occur in case of direct contact with bitumen.</p> <p>In case of existing roof build-up needs to be removed, Sikaplan® TB-18 can be adhered directly on to the bituminous vapour control layer for partitioning and protection of the day work.</p>

APPLICATION INFORMATION

Ambient Air Temperature	-20 °C min. / +60 °C max.
Substrate Temperature	-30 °C min. / +60 °C max.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY

The substrate surface must be uniform, smooth and free of any sharp protrusions or burrs, etc. The supporting layer must be compatible to the membrane, solvent resistant, clean, dry and free of grease and dust. Metal sheets must be degreased with Sikaplan® Cleaner before adhesive is applied.

APPLICATION

Installation works must be carried out only by Sika instructed contractors for roofing. Installation of some ancillary products, e.g. contact adhesives / cleaners is limited to temperatures above +5 °C. Please observe information given by Product Data Sheets. Special measures may be compulsory for installation below +5 °C ambient temperature due to safety requirements in accordance with national regulations.

APPLICATION METHOD / TOOLS

Installation procedure:

According to the valid installation instructions of manufacturer for Sikaplan® TB types system for ballasted roofs.

Fixing Method:

Loosely laid and covered with ballast. Mechanical fixing at the roof perimeter with Sarnabar® including Sarnafil® T Welding Cord is obligatory to keep membrane in place. Roof waterproofing membrane is installed by loose laid and covered with ballast according to local wind load situation.

Adhered roof junction areas and flashings:

Sikaplan® TB-18 is adhered to substrate layers such as reinforced concrete rendering, timber panels, metal sheets, etc. by contact adhesive Sarnacol® T 660. Seam overlaps are welded by hot air.

Welding Method:

Before welding the seams are prepared with Sarnafil® T Prep. Overlap seams are welded by electric hot air welding equipment, such as manual hot air welding machines and pressure rollers or automatic hot air welding machines with controlled hot air temperature.

Recommended type of equipment:

- Leister® Triac, for manual welding
- Sarnamatic®, for automatic welding

Welding parameters including temperature, machine speed, air flow, pressure and machine settings must be evaluated, adapted and checked on site according to the type of equipment and the climatic situation prior to welding. The effective width of welded overlaps by hot air should be minimum 20 mm.

The seams must be mechanically tested with screw driver to ensure the integrity / completion of the weld. Any imperfections must be rectified by hot air welding.

IMPORTANT CONSIDERATIONS

Geographical / Climate

The use of Sikaplan® TB-18 membrane is limited to geographical locations with average monthly minimum temperatures of -50 °C.

Permanent ambient temperature during use is limited to +50 °C.

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

REGULATION (EC) NO 1907/2006 - REACH

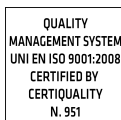
This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in this product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0.1 % (w/w)

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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