BUILDING TRUST

PRODUCT DATA SHEET

Sikaplan® TM-18

POLYMERIC MEMBRANE FOR MECHANICALLY FASTENED ROOF WATERPROOFING

CE

DESCRIPTION

Sikaplan® TM-18 (thickness 1.8 mm) is a polyester reinforced, multi-layer, synthetic roof waterproofing sheet based on premium-quality flexible polyolefins (FPO) containing ultraviolet light stabilizers and flame retardant according to EN 13956.
Sikaplan® TM-18 is a hot air weldable roof membrane formulated for direct exposure.
Suitable for use in hot and tropical climatic conditions.

USES

Waterproofing membrane for:
- Mechanically fastened roofing systems

CHARACTERISTICS / ADVANTAGES

- Resistant to permanent UV irradiation
- Resistant to permanent wind exposure
- Resistant against impact load and hail
- Resistant to all common environmental influences
- Resistant to micro-organisms
- Compatible to old bitumen
- Hot air welding without use of open flames
- Recyclable

SUSTAINABILITY

- Conformity with LEED v4 SSc 5 (Option 1): Heat Island Reduction - Roof (only traffic white)
- Conformity with LEED v4 MRc 2 (Option 1): Conformity with LEED v4 MRc 2 (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations
- Conformity with LEED v4 MRc 3 (Option 2): Building Product Disclosure and Optimization - Sourcing of Raw Materials
- Conformity with LEED v4 MRc 4 (Option 2): Building Product Disclosure and Optimization - Material Ingredients
- Conformity with LEED v2009 SSc 7.2 (Option 1): Heat Island Effect - Roof (only traffic white)
- Conformity with LEED v2009 MRc 4 (Option 2): Recycled Content

APPROVALS / CERTIFICATES

Sikaplan® TM-18 is designed and manufactured to meet the 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-mark.
- Reaction to fire according to EN 13501-1.
- External fire performance tested according to ENV 1187 and classified according to EN 13501-5: Broof (t1).
- Factory Mutual (FM) Approvals Class: 4470.

PRODUCT INFORMATION

Packaging

Sikaplan® TM-18 standard rolls are wrapped individually in a yellow PE-foil.

Packing unit	See price list
Roll length	15.00 m
Roll width	2.00 m
Roll weight	± 59.00 kg

Appearance / Colour	Surface	Matt	
	Colour:		
	Top surface	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	1.80 mm (-5 % / +10 %)		(EN 1849-2)
Straightness	≤ 30 mm		(EN 1848-2)
Flatness	≤ 10 mm		(EN 1848-2)
Mass per unit area	1.98 kg/m² (-5 % / +10 %)		(EN 1849-2)

TECHNICAL INFORMATION

Resistance to Impact	Hard substrate	≥ 800 mm	(EN 12691)
	Soft substrate	≥ 1000 mm	
Hail Resistance	Rigid substrate	≥ 20 m/s	(EN 13583)
	Flexible substrate	≥ 30 m/s	
Resistance to Static Load	Soft substrate	≥ 20 kg	(EN 12730)
	Rigid substrate	≥ 20 kg	
Tensile Strength	Longitudinal (md)[1)]	≥ 900 N/50 mm	(EN 12311-2)
	Transversal (cmd)[2)]	≥ 900 N/50 mm	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Elongation	Longitudinal (md)[1)]	≥ 13 %	(EN 12311-2)
	Transversal (cmd)[2)]	≥ 13 %	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Dimensional Stability	Longitudinal (md)[1)]	≤ 0.5 %	(EN 1107-2)
	Transversal (cmd)[2)]	≤ 0.2 %	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Tear Strength	Longitudinal (md)[1)]	≥ 250 N	(EN 12310-2)
	Transversal (cmd)[2)]	≥ 250 N	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Joint Peel Resistance	No failure of the joint		(EN 12316-2)
Joint Shear Resistance	≥ 500 N/50 mm		(EN 12317-2)
Foldability at Low Temperature	≤ -25 °C		(EN 495-5)
External Fire Performance	BROOF (t1) < 20°		(ENV 1187) (EN 13501-5)

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)] [3)] Sikaplan® TM is compatible to old bitumen	(EN 1548)
Resistance to UV Exposure	Pass (> 5000 h / grade 0)	(EN 1297)
Water Vapour Transmission	μ = 150 000	(EN 1931)
Watertightness	Pass	(EN 1928)

Solar Reflectance Index (ASTM E 1980)

Colour	Initial	3 years aged	Testing Institute
RAL 9016	100	-	CRRC

CRRC tested products are listed in Cool Roof Rating Council (CRRC) product data base.

USGBC LEED Rating (ASTM E 1980)

Colour	Initial	3 years aged
RAL 9016	SRI > 82	-

Conform on the minimum requirements of LEED V4 SS credit 5 option 1 Heat Island reduction - Roof.

SYSTEMS

System Structure

The following accessories shall be used:
Sarnafil® T 66-15 D Sheet for detailing
Sarnafil® TS 77 strips
Sarnafil® T Metal Sheet
Sarnafil® T Welding Cord
Sarnabar® / Sarnafast®
Sarnafil® T Prep
Sarnacol® T 660
Sarnafil® T Clean

Compatibility

Sikaplan® TM-18 may be installed on all thermal insulations and levelling layers suitable for roofing. No additional separation layer is required.
Sikaplan® TM-18 is suitable for installation directly on top of existing, carefully cleaned, levelled bituminous roofing, example re-roofing over old flat roofs.
Colour changes in membrane surface may occur in case of direct contact with bitumen.

APPLICATION INFORMATION

Ambient Air Temperature	-15 °C min. / +60 °C max.
Substrate Temperature	-25 °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 Solvent T 660 before adhesive is applied.

APPLICATION

Installation works to be carried out only by Sika instructed contractors for roofing.

Installation of some ancillary products, example contact adhesives / cleaners is limited to temperatures above +5 °C. Please observe information given by Product Data Sheets.

APPLICATION METHOD / TOOLS

Installation procedure:
According to the valid installation instructions for Sikaplan® TM-types system for mechanically fastened roofing systems.

Fixing Method:
The roof waterproofing sheet is installed by mechanic-

al fastening in seam overlaps or independent from overlaps.

Welding Method:
In case of slightly soiled membrane surface the seams of Sikaplan® TM-18 have to be prepared by using Sarnafil® T Prep. However it is recommended to use Sarnafil® T Prep prior to hot air welding. 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 and Leister Varimat 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 must 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
Permanent ambient temperature during use is limited to +50 °C.

BASIS OF PRODUCT DATA

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

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

Fresh air ventilation must be ensured, when working (welding) in closed rooms.

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 the 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

SIKA NORTHERN GULF
Bahrain / Qatar / Kuwait
Tel: +973 177 38188
sika.gulf@bh.sika.com
gcc.sika.com

SIKA SOUTHERN GULF
UAE / Oman / SIC
Tel: +971 4 439 8200
info@ae.sika.com
gcc.sika.com

SIKA SAUDI ARABIA
Riyadh / Jeddah / Dammam
Tel: +966 11 217 6532
info@sa.sika.com
gcc.sika.com

ISO 9001 - ISO 14001 OHSAS 18001

ISO 9001: Sika UAE LLC, Sika Gulf B.S.C. (c), Sika Saudi Arabia Co. Ltd, Sika Qatar LLC
ISO 14001: Sika UAE LLC, Sika Gulf B.S.C. (c), Sika Saudi Arabia Co. Ltd
OHSAS: Sika UAE LLC, Sika Gulf B.S.C. (c)

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.