BUILDING TRUST

PRODUCT DATA SHEET

Sikaplan® TM-12 Felt

Polymeric tpo membrane for insulated panel roof waterproofing

DESCRIPTION

Sikaplan® TM-12 Felt (thickness 1.2 mm) is a multi-layer, synthetic roof waterproofing sheet based on premium-quality thermoplastic polyolefins (TPO), containing stabilizers, with inlay of Polyester scrim and Polyester fleece backing.
Sikaplan® TM-12 Felt (thickness 1.2 mm) is a hot air weldable roof membrane formulated for direct exposure. Sikaplan® TM-12 Felt (thickness 1.2 mm) is produced with a polyester reinforcement for high strength. Sikaplan® TM-12 Felt (thickness 1.2 mm) is provided as a component of waterproofing insulated roof panel.
The dimensional stability of Sikaplan® TM-12 Felt is excellent.

USES

Roof waterproofing membrane for fully bonded exposed roof panels with urethane adhesive.

CHARACTERISTICS / ADVANTAGES

- Resistant to UV exposure
- Various colours available
- Resistant against impact load and hail
- Resistant to all common environmental influences
- Resistant to micro-organisms
- Compatible with old bitumen
- Hot air welding without use of open flames

CERTIFICATES AND TEST REPORTS

- KS Marking and Declaration of Performance to KS F 4911 - Waterproofing Sheets of Synthetic Polymer
- Quality Management system in accordance with ISO 9001

PRODUCT INFORMATION

Composition	Thermoplastic polyolefins (TPO)	
Packaging	Sikaplan® TM-12 Felt standard rolls are wrapped individually in a blue PE-foil.	
	Roll length	400.00 m
	Roll width	1.14 m
	Roll weight	±602 kg
Appearance / Colour	Surface:	matt
	Colour:	
	Top surface:	white (nearest RAL 9016) light grey (nearest RAL 7035)
	Bottom surface:	black
Shelf Life	5 years from date of production.	

Storage Conditions	Product must be stored in original unopened and undamaged sealed packaging in dry conditions and temperatures between + 5°C and +30°C, Store in a horizontal position. Do not stack pallets of the rolls on top of each other, or under pallets of any other materials during transport or storage. Always refer to packaging.		
Product Declaration	ASTM D6878		
Length	400 m (-0 % / +3 %)		(ASTM D751)
Width	1.14 m (-0 % / +3 %)		(ASTM D751)
Overall Thickness	1.2 mm (-10 % / +15 %)		(ASTM D751)
Thickness Above Scrim	≥ 0.38 mm(-10 % / +15 %)		(ASTM D7635/D7635M)

TECHNICAL INFORMATION

Tensile Strength	Longitudinal (md)[1)] Transversal (cmd)[2)] [1)] md = machine direction [2)] cmd = cross machine direction	≥ 976 N ≥ 976 N	(ASTM D751)
Elongation at Break	Longitudinal (md)[1)] transversal (cmd)[2)] [1)] md = machine direction [2)] cmd = cross machine direction	≥ 15 % ≥ 15 %	(ASTM D751)
Linear Dimensional Change	≤ ± 1 % (6 hours at 70 °C)		(ASTM D1204)
Tear Strength	Longitudinal (md)[1)] Transversal (cmd)[2)] [1)] md = machine direction [2)] cmd = cross machine direction	≥ 245 N ≥ 245 N	(ASTM D751)
Seam Strength	≥ 290 N		(ASTM D751)
Retention of Properties after Heat Ageing	Weight change Inspect at 7× magnification for cracks when bent over a 3 in. diameter madrel	≤ ± 1.5 % Pass	(ASTM D573)
Resistance to Weathering	Visual inspection	Pass (0.7 W/m², 4000 hours)	(ASTM G155)
Natural Weathering	Ozone resistance	Pass	(ASTM D1149)
Water Absorption	≤ ± 3.0 %		(ASTM D471)
Flexibility at Low Temperature	Brittleness point	≤ -40 °C	(ASTM D2137)

APPLICATION INFORMATION

Ambient Air Temperature	-15 °C min. / +60 °C max.	

SYSTEM INFORMATION

System Structure	The following products must be considered for use depending on roof design: ▪ Sikaplan® TD-15 KR Sheet for detailing ▪ Sarnafil® TS 77 strips ▪ Sarnafil® T Metal Sheet ▪ Sarnafil® T Welding Cord ▪ Sarnabar® / Sarnafast® ▪ Sarnafil® T Prep / Sarnafil® T Wet Task Set ▪ Sarnacol® T 660 ▪ Solvent T 660 ▪ Sarnafil® T Clean Wide range of accessories is available e.g. prefabricated parts, roof drains, scuppers, walkway pads and decor profiles.
Compatibility	Sikaplan® TM-12 Felt may be provided in the form of panel adhered with urethane insulation. Therefore no additional seperaration layer is required.

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.

FURTHER INFORMATION

Installation

- Application Manual

IMPORTANT CONSIDERATIONS

- Fresh air ventilation must be ensured, when working (welding) in closed rooms.
- Installation work must only be carried out by Sika® trained and approved contractors, experienced in this type of application
- Ensure Sikaplan® TM-12 Felt is prevented from direct contact with incompatible materials (refer to compatibility section)
- Sikaplan® TM-12 Felt must be installed by loose laying and without stretching or installing under tension
- The use of Sikaplan® TM-12 Felt membrane is limited to geographical locations with average monthly minimum temperatures of -50 °C. Permanent ambient temperature during use is limited to +50 °C
- The use of some ancillary products such as adhesives, cleaners and solvents is limited to temperatures above +5 °C. Observe temperature limitations in the appropriate Product Data Sheets
- Special measures may be compulsory for installation below +5 °C ambient temperature due to safety requirements in accordance with national regulations

ECOLOGY, HEALTH AND SAFETY

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).

APPLICATION INSTRUCTIONS

EQUIPMENT

Hot welding overlap seams
Electric hot air welding equipment, such as hand held manual hot air welding equipment and pressure rollers or automatic hot air welding machines with controlled hot air temrerature capability of a minimum 600 °C.
Recommended type of equipment:
Manual : Leister Triac
Automatic : Leister Varimat
Semi-automatic : Leister Triac Drive

APPLICATION

Installation procedure
Reference must be made to further documentation where applicable, such as relevant method statement, application manual and installation or working instructions.

Fixing method - General
The waterproofing membrane is installed by loose laying (without stretching membrane or installing under tension) with mechanical fastening in seam overlaps or independent from overlaps. Overlap seams are hot welded using specialised hot air equipment.

Fixing method-Spot fastening
Sikaplan® TM-12 Felt is fixed by fasteners and washers/tubes along the marked line, 35 mm from the edge of the membrane. Sikaplan® TM-12 Felt is overlapped by 140 mm. The spacing of the fasteners is in accordance with the project specific Sika calculations. At upstands and at all penetrations, the membrane must be secured by additional fasteners and washers/tubes. That protects the Sikaplan® TM-12 Felt roof covering against tearing and peeling off by winduplift.

Hot welding method
Overlap seams must be welded by electric hot welding equipment. 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 conditions prior to welding.

Testing overlap seams
The seams must be mechanically tested with screwdriver or steel needle to ensure the integrity/completion of the weld. Any imperfections must be rectified by hot air welding.

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.

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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