BUILDING TRUST

PRODUCT DATA SHEET

Sarnafil® AT-25

Polymeric FPO membrane for mechanically fastened and ballasted roof waterproofing

PRODUCT DESCRIPTION

Sarnafil® AT-25 (thickness 2,5 mm) is a multi-layer synthetic membrane based on flexible polyolefines (FPO) with an internal fabric and backing according to EN 13956. Sarnafil® AT-25 is a hot air weldable roof membrane formulated for direct exposure and designed for use in all global climatic conditions.

USES

Sarnafil® AT-25 may only be used by experienced professionals.

Waterproofing membrane for:
- Mechanically fastened roofing systems
- Loose laid ballasted roofs with different ballast materials (e.g. gravel, concrete slabs)
- Green roofs (intensive, extensive)
- Utility roofs
- Inverted roofs
- Terraces with pedestrian traffic

CHARACTERISTICS / ADVANTAGES

- Resistant to UV exposure
- Resistant to permanent wind exposure
- Resistant to all common environmental influences
- Hot air weldable
- No open flame equipment required
- High dimensional stability from glass fleece inlay
- Resistant against impact load and hail
- Resistant to mechanical influences
- Resistant to root penetration
- Compatible with old bitumen

ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 SSc 5 (Option 1): Heat Island Reduction - Roof (only traffic white)
- Conformity with LEED v4 MRc 3 (Option 2): Building Product Disclosure and Optimization - Sourcing of Raw Materials
- Conformity with LEED v4 MRc 4 (Option 1 and Option 2): Building Product Disclosure and Optimization - Material Ingredients
- Conformity with LEED v4 MRc 2 (Option 1): Building Product Disclosure and Optimization - Environmental product declarations
- IBU Environmental Product Declaration (EPD) available
- Cradle to Cradle Certified™ Silver

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 13956 - Polymeric sheets for roof waterproofing

PRODUCT INFORMATION

Product Declaration	EN 13956: Polymeric sheets for roof waterproofing
Chemical Base	Flexible polyolefins (FPO)
Reinforcing Material	Multi-layer synthetic membrane based on flexible polyolefines (FPO) with an internal reinforcement of glass-fleece, polyester and a polymer non-woven backing of not more than 70 g/m².
Packaging	Sarnafil® AT-25 standard rolls are wrapped individually in a blue PE-foil.

Packing unit	Refer to price list
Roll length	10,00 m
Roll width	2,00 m
Roll weight	52,00 kg

Refer to current price list for packaging variations.

Shelf Life	5 years from date of production.
Storage Conditions	Product must be stored in original unopened and undamaged 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.

Appearance / Colour

Surface	matt
Colours	
Top surface	window grey (~RAL 7040)
Bottom surface	dark grey

Visible Defects	Pass	(EN 1850-2)
Length	10,00 m (-0 % / +5 %)	(EN 1848-2)
Width	2,00 m (-0,5 % / +1 %)	(EN 1848-2)
Effective Thickness	2,4 mm (-5 % / +10 %)	(EN 1849-2)
Straightness	≤ 30 mm	(EN 1848-2)
Flatness	≤ 10 mm	(EN 1848-2)
Mass per unit area	2,60 kg/m² (-5 % / +10 %)	(EN 1849-2)

TECHNICAL INFORMATION

Resistance to Impact	hard substrate	≥ 4000 mm	(EN 12691)
	soft substrate	≥ 4000 mm	
Hail Resistance	rigid substrate	≥ 34 m/s	(EN 13583)
	flexible substrate	≥ 46 m/s	
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)]	≥ 950 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)]	≥ 18 %	(EN 12311-2)
	transversal (cmd)[2)]	≥ 18 %	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Tear Strength	longitudinal (md)[1)]	≥ 300 N	(EN 12310-2)
	transversal (cmd)[2)]	≥ 300 N	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Joint Peel Resistance	failure mode: C, no failure of the joint		(EN 12316-2)
Joint Shear Resistance	≥ 400 N/50 mm		(EN 12317-2)
Dimensional Stability	longitudinal (md)[1)]	≤ |0,4| %	(EN 1107-2)
	transversal (cmd)[2)]	≤ |0,2| %	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Foldability at Low Temperature	≤ -50 °C		(EN 495-5)
Water Tightness	Pass		(EN 1928)
Water Vapour Transimission	μ = 190 000		(EN 1931)
Exposure to Bitumen	Pass [3)] Sarnafil® AT is compatible to old bitumen		(EN 1548)
Effect of Liquid Chemicals, Including Water	Resistant to many chemicals. Contact Sika Technical Services for additional information.		(EN 1847)
UV Exposure	Pass (> 5000 h / grade 0)		(EN 1297)
External Fire Performance	B_{ROOF} (t4) < 20° (subject to system)		(EN 13501-5)
Reaction to Fire	Class E		(EN ISO 11925-2, classification to EN 13501-1)

SYSTEM INFORMATION

System Structure	The following products must be considered for use depending on roof design: ▪ Sarnafil® AT-18 FSA P self adhered membrane for parapet ▪ Sarnafil® AT D Sheet for detailing ▪ Sarnafil® T Metal Sheet ▪ Sarnabar® / Sarnafast® /Sarnaweld® ▪ Sarnafil® T Welding Cord ▪ Sarnacol® T 660 ▪ Sarnafil® T Clean
Compatibility	The substrate can be one of the following materials: ▪ Concrete, lightweight concrete, screed, brick masonry, plaster, Oriented Strand Boards (OSB), plywood panels, timber boards, metal decking. ▪ All thermal insulation types and levelling layers suitable for roofing. No additional separation layer is required. ▪ Existing bituminous roofing that is clean and level e.g. re-roofing over old flat roofs. Discolouration of the membrane surface may occur if in direct contact with bitumen.

APPLICATION INFORMATION

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

VALUE BASE

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 DOCUMENTS

Installation
- Application Manual

LIMITATIONS

Installation work must only be carried out by Sika® trained contractors, experienced in this type of application.
- Sarnafil® AT-25 must only be applied to compatible substrates (refer to compatibility section).
- Sarnafil® AT-25 must be installed by loose laying and without stretching or installing under tension.
- The use of Sarnafil® AT-25 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

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).

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 temperature capability of a minimum +600 °C.
Recommended type of equipment:
- Manual: Leister Triac
- Automatic : Sarnamatic 681
- Semi-automatic: Leister Triac Drive

SUBSTRATE QUALITY

The substrate surface must be uniform, smooth and free of any sharp protrusions or burrs, etc. Sarnafil® AT-25 must be separated from any incompatible substrates / materials by an effective separation layer to prevent accelerated ageing. 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 Sarna Cleaner before adhesive is applied.

APPLICATION

Installation procedure
Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.
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 air welded using specialised hot air equipment.
Fixing method-Linear fastening (Sarnabar®)
Unroll the Sarnafil® AT-25 membrane, overlap by 80 mm, weld immediately and fix to the substructure by means of the Sarnabar® fasteners. The preferred type of fastening will be advised by Sika. The spacing of the fasteners is in accordance with the project specific Sika calculations. The perimeter piece ends must be secured with the Sarnabar® Load Distribution Plate. For protection fasten a piece of Sarnafil® AT-25 under bar end and plate. Leave a 10 mm clearance between bar ends. Do not fasten in hole nearest bar end. Cover the bar ends with a piece of Sarnafil® AT-25 and weld. After installation the Sarnabar® must immediately be made watertight with a Sarnafil® AT-25 cover strip. At upstands and at all penetrations, the Sarnafil® AT-25 membrane must be secured with a Sarnabar®. The 4 mm diameter S-Welding Cord protects the Sarnafil® AT-25 roof covering against tearing and peeling off by wind uplift.
Fixing method-Spot fastening (Sarnafast®)
Sarnafil® AT-25 must always be installed at right angles to the deck direction. Sarnafil® AT-25 is fixed by means of the Sarnafast® fasteners and barbed washers/tubes along the marked line, 35 mm from the edge of the membrane. Sarnafil® AT-25 is overlapped by 120 mm. The spacing of the fasteners is in accordance with the project specific Sika calculations. At upstands and at all penetrations, the Sarnafil® AT-25 membrane must be secured with a Sarnabar®. The 4 mm diameter S-Welding Cord protects the Sarnafil® AT-25 roof covering against tearing and peeling off by wind uplift.
Fixing method - Field fastening
Sarnafil® AT-25 is fixed by induction welding Sarnadisc hot melt coated washers and Sarnafast® fasteners according to the project specific instructions.

Sarnafil® AT-25 is overlapped by 80 mm. The spacing of the fasteners is in accordance with the project specific Sika calculations. At upstands and at all penetrations, the Sarnafil® AT-25 membrane must be secured with a Sarnabar®. The 4 mm diameter S-Welding Cord protects the Sarnafil® AT-25 roof covering against tearing and peeling off by wind uplift.

Fixing method-Loose laid

The roof waterproofing membrane is installed by loose laying and covered with the appropriate roof material according to the roof design and the local wind loading conditions. Mechanical fixing along the roof perimeter with Sarnabar® including T-Welding Cord must be used to keep membrane in place.

Fully bonded roof junctions and flashings

The membrane is bonded to the substrate and flashing by using Sarnacol® T 660 contact adhesive. Refer to Product Data Sheet.

Self adhered roof junctions / flashings / upstands

The membrane is bonded onto the adjointing surfaces using Sarnafil® AT FSA P self adhered membrane. Refer to Product Data Sheet.

Hot air welding method

Overlap seams must be welded by electric hot air 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. The effective width of welded overlaps for all methods by hot air must be minimum 80 mm.

Testing overlap seams

The seams must be mechanically tested with screwdriver (rounded edges) 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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