

PRODUCT DATA SHEET

Sarnafil® AT-18 FSH SA

1.8 mm thick polymeric FPO membrane for adhered roof waterproofing

DESCRIPTION

Sarnafil® AT-18 FSH SA (thickness 1.8 mm) is a premium multi-layer, self-adhesive, synthetic roof waterproofing sheet based on elastomer modified flexible polyolefin (FPO) with internal glass fiber scrim reinforcement, glass non-woven inlay and a self-healing fleece backing according to EN 13956. The product is hot air weldable, UV and fire resistant. Can be applied in all climatic zones.

USES

Sarnafil® AT-18 FSH SA is used as a waterproofing membrane in the following roofing applications:

- Adhered roofing systems

FEATURES

- Highly flexible membrane allows for easy application
- Self-healing properties prevent water ingress after mechanical damage
- Self-adhering membrane improves application speed

- High durability and long service life
- Hot-air welding application avoids fire risk
- White coloured membranes reduce air conditioning costs by reducing heat transmission into the building
- Increased resistance to damage through wind uplift
- UV-stabilised product with increased service life in areas with high UV-exposure
- Increased resistance to root penetration

CERTIFICATES AND TEST REPORTS

- CE marking and declaration of performance based on EN 13956:2012 Flexible sheets for waterproofing — Plastic and rubber sheets for roof waterproofing — Definitions and characteristics
- Root resistance testing report (FLL), Weißenstephan-Triesdorf / Germany
- Leaching test report according DIN CEN/TC 16637-2

PRODUCT INFORMATION

Composition	Flexible polyolefins (FPO)	
Packaging	Standard rolls are wrapped individually in a PE-foil.	
	Roll width	2 m
	Roll length	10 m
	Roll weight	52 kg
Refer to the current price list for available packaging variations.		
Colour	Top layer colour	window grey (~RAL 7040), traffic white (~RAL 9016)
	Bottom layer colour	dark grey
Shelf life	18 months from date of production	

Storage conditions	The 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 the packaging.	
Product declaration	EN 13956 - Polymeric sheets for roof waterproofing	
Visible defects	Pass	(EN 1850-2)
Length	10 m (+0.5 m / -0 m) 10 m	(EN 1848-2)
Width	2 m (+0.02 m / -0.01 m)	(EN 1848-1)
Effective thickness	1.8 mm (+0.18 mm / -0.09 mm)	(EN 1849-2)
Straightness	≤ 30 mm	(EN 1848-2)
Flatness	≤ 10 mm	(EN 1848-2)
Mass per area	2.6 kg/m ² (+0.26 kg/m ² / -0.13 kg/m ²)	(EN 1849-2)
Appearance	matt	

TECHNICAL INFORMATION

Resistance to impact	Method A, Hard support	≥ 1000 mm	(EN 12691)
	Method B, Soft support	≥ 3500 mm	
Hail resistance	Hard support	≥ 33 m/s	(EN 13583)
	Soft support	≥ 40 m/s	
Resistance to static loading	Soft support	≥ 20 kg	(EN 12730)
	Hard support	≥ 20 kg	
Resistance to root penetration	Pass		(EN 13948)
Dimensional stability	Longitudinal (MD), aged 6 hours at +80 °C	≤ 0.2 %	(EN 1107-2)
	Transversal (CMD), aged 6 hours at +80 °C	≤ 0.1 %	
Joint peel resistance	Failure mode C, no failure of the joint.		(EN 12316-2)
Joint shear resistance	≥ 400 N/50 mm		(EN 12317-2)
Foldability at low temperature	≤ -50 °C		(EN 495-5)
External fire performance	B _{Roof} T1, roof angle < 20°	Pass	(EN 13501-5)
	B _{Roof} T4, roof angle < 10°	Pass	
Reaction to fire	Class E		(EN 13501-1)
Chemical resistance	Resistant to specific chemicals. Contact Sika Technical Services for additional information.		(EN 1847)
Exposure to bitumen	Bitumen compatibility	Pass	(EN 1928; EN 1548)
Resistance to UV exposure	> 5000 hours UV exposure	Grade 0	(EN 1297)
Artificial ageing	Pass		(EN 1297)

Diffusion resistance to water vapour	Resistance factor, Method A, tested at +23 °C and 75 % r.h.	$\mu = 190\,000$	(EN 1931)
Watertightness	Method B: at 10 kPa	Pass	(EN 1928)
Maximum tensile force	Longitudinal (MD) Transversal (CMD)	$\geq 500\text{ N/50 mm}$ $\geq 500\text{ N/50 mm}$	(EN 12311-2)
Elongation at maximum tensile force	Longitudinal (MD) Transversal (CMD)	$\geq 2\%$ $\geq 2\%$	(EN 12311-2)

APPLICATION INFORMATION

Ambient air temperature	Maximum Minimum	+60 °C +5 °C
Substrate temperature	Maximum Minimum	+60 °C +5 °C

SYSTEM INFORMATION

System structure	Substrate	Primer
	PIR glass tissue phased	SikaRoof® Primer-600 or SikaRoof® Primer-780
	PIR aluminium phased	No priming required
	EPS ($\geq 20\text{ kg/m}^3$ density, compressive strength $>100\text{ kPa}$)	No priming required
	Mineral wool (glass tissue phased, compressive strength $>80\text{ kPa}$)	SikaRoof® Primer-600 or SikaRoof® Primer-780
	Metal composite panel (only approved panels)	No priming required
	Bitumen (sanded or slated)	SikaRoof® Primer-600
	Galvanized steel	No priming required
	OSB 3 or Plywood	SikaRoof® Primer-600 or SikaRoof® Primer-780
	Concrete	SikaRoof® Primer-600 or SikaRoof® Primer-780

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.

FURTHER DOCUMENTATION

- Application Manual Sarnafil® AT.

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
 - Automatic hot-air welding machines with controlled hot-air temperature capability of a minimum +600 °C
- Recommended equipment:

Manual Leister Triac

Automatic Varimat

SUBSTRATE PREPARATION

The substrate surface must be smooth and uniform.

1. Remove any sharp protrusions or burrs from the substrate.
2. If contaminants such as grease or dust are present, clean the supporting layer.
3. Depending on the substrate, apply the required primer as described in System structure.
4. Ensure that the supporting layer is dry.

APPLICATION

IMPORTANT

Strictly follow installation procedures

Strictly follow installation procedures as defined in Method Statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

IMPORTANT

Application by trained personnel

The application of this Product must only be carried out by an applicator that is trained or approved by Sika. The applicator must also be experienced in this type of application.

SUBSTRATE PRIMING

1. Apply primer to the substrate in accordance with the primer's PDS if required.

SELF-ADHERED ROOF JUNCTIONS, FLASHINGS OR UPSTANDS

1. Bond the Product to adjoining surfaces using Sarnafil® AT-18 FSA P self-adhered membrane. Refer to individual Product Data Sheet.

IMPORTANT

Peeling protection

Failure to provide peeling protection at all upstands and roof penetrations greater than 500 mm × 500 mm will result in the possibility of roof detachment.

1. Provide peeling protection at all upstands and roof penetrations greater than 500 mm × 500 mm.

FIXING METHOD - SELF ADHERED

1. Lay out and align the membrane with the felt-free edge.
2. Starting from the end of the run, fold the membrane halfway.
3. Cut the release liner.
4. Apply the self-adhesive membrane to the substrate.
5. Fold back the other half of the membrane and repeat steps 2 to 4 to fully expose the adhesive layer of the membrane.

6. Roll out the membrane to cover the roofing substrate.
7. Press down the membrane with a roller weighted with approximately 50 kg.
8. **IMPORTANT** According to site conditions such as the roof geometry, attach the next sheet at the end of the adhered membrane to form a butt joint, or lay consecutive rolls alongside one another, applying them with 80 mm overlap. Repeat steps 2 to 7 until the roof is fully covered.
9. Mechanically secure the roof build-up with a peeling protection using Sarnabar®.

HOT-WELDING OVERLAP SEAMS

Overlap seams must be welded by electric hot-welding equipment. Prior to 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 conditions. The effective width of overlaps welded by hot air must be a minimum of 20 mm.

TESTING OVERLAP SEAMS

1. Mechanically test seams with a rounded-edge screwdriver to ensure the integrity and completion of the weld.
2. Rectify any imperfections using hot-air welding.

MAINTENANCE INSTRUCTIONS

MAINTENANCE

ENSURING DURABLE WATERPROOFING FUNCTIONALITY

IMPORTANT

The puncture size is greater than the ability of the membrane to self-heal

The bottom layer of the membrane seals to prevent any leakage in case of punctures. However, if the puncture is large enough to see through, the waterproofing properties of the membrane may be compromised.

1. If larger punctures are noticed during inspection, repair them as described below.

The self-healing effect lasts up to 10 000 cycles. To optimise the durability and waterproofing performance of the roof carry out the following:

1. Carry out an inspection of the roof for damage annually.
2. If a leak is detected, weld a patch using Sika Sarnafil AT products as a repair.

For further information on leak detection and patch repairs, contact Sika Technical Services.

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 exact product data and uses.

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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ISO 9001, 14001, 45001 – SGS:
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- Sika International Chemicals LLC
- Sika Gulf B.S.C. (c)
ISO 9001, 14001 – SGS:
- Sika Saudi Arabia Limited
ISO 9001, 14001 – TÜV:
- Sika UAE LLC (Branch)
ISO 9001 – SGS:
- Sika MB LLC

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 ISO 45001.



Product Data Sheet

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