Roofing
Product Data Sheet
Edition 11.2012
Identification no: 02 09 01 02 120 0 180000
Version no. 03

Sarnafil® TG 76-18 Felt

Polymeric membrane for roof waterproofing

Roofing

Product Description

Sarnafil® TG 76-18 Felt (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 and Polyester fleece backing according to EN 13956.

Sarnafil® TG 76-18 Felt is a hot air weldable, UV-resistant roof membrane, designed to use in all global climatic conditions. Sarnafil® TG 76-18 Felt is produced with an inlay of glass non-woven for dimensional stability. Sarnafil® TG 76-18 Felt is used for adhered roofs.

Sarnafil® TG 76-18 Felt has no built-in stress at the time of production and has a fully encapsulated carrier with no risk to delamination or water-wicking. The dimensional stability of Sarnafil® TG 76-18 Felt is excellent.

Uses

Waterproofing membrane for:

- Adhered roofs

Characteristics / Advantages

- Outstanding resistance to weathering, including permanent UV irradiation
- Excellent flexibility in cold temperatures
- No built-in stress at the time of production
- High dimensional stability
- High resistance against impact load
- Excellent weldability
- No risk of delamination or water-wicking
- Compatible to old bitumen
- Recyclable

Approval / Standards

Sarnafil® TG 76-18 Felt 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-3914 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: B_{ROOF}(t1).
- Official Quality Approvals and Agrement Certificates and approvals.
- Monitoring and assessment by approved laboratories.
- Quality Management system in accordance with EN ISO 9001/14001.

Appearance / Colours

Surface:	matt
Colours:	
Top surface:	beige grey (nearest RAL 7040)
Bottom surface:	black

Packaging

Sarnafil® TG 76-18 Felt standard rolls are wrapped individually in a blue PE-foil.

Packing unit:	up to 27 rolls per pallet
Roll length:	15.00 m
Roll width:	2.00 m
Roll weight:	63.00 kg

Storage Conditions / Shelf-Life

Rolls must be stored in a horizontal position on pallet and protected from direct sunlight, rain and snow. Product does not expire if correctly stored.

Technical Data

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
Straightness	≤ 30 mm	EN 1848-2
Flatness	≤ 10 mm	EN 1848-2
Effective thickness	1.8 mm (-5 % / +10 %)	EN 1849-2
Mass per unit area	2.1 kg/m² (-5 % / +10 %)	EN 1849-2
Water tightness	Pass	EN 1928
Effects of liquid chemicals, including water	On request	EN 1847
External fire performance		ENV 1187
Part 1-4	$B_{ROOF}(t1)$ < 20°	EN 13501-5
Reaction to fire	Class E	EN ISO 11925-2, classification to EN 13501-1
Hail resistance		EN 13583
rigid substrate	≥ 25 m/s	
flexible substrate	≥ 33 m/s	
Joint peel resistance	≥ 300 N/50 mm	EN 12316-2
Joint shear resistance	≥ 500 N/50 mm	EN 12317-2
Water vapour transmission properties	μ = 150'000	EN 1931
Tensile strength		EN 12311-2
longitudinal (md)[1)]	≥ 800 N/50 mm	
transversal (cmd)[2)]	≥ 600 N/50 mm	
Elongation		EN 12311-2
longitudinal (md)[1)]	≥ 50 %	
transversal (cmd)[2)]	≥ 50 %	
Resistance to impact		EN 12691
hard substrate	≥ 1000 mm	
soft substrate	≥ 1750 mm	
Resistance to static load		EN 12730
soft substrate	≥ 20 kg	
rigid substrate	≥ 20 kg	
Dimension stability		EN 1107-2
longitudinal (md)[1)]	≤ |0.2| %	
transversal (cmd)[2)]	≤ |0.1| %	
Foldability at low temperature	≤ -30 °C	EN 495-5
UV exposure	Pass (> 5'000 h)	EN 1297
Exposure to bitumen[3)]	Pass	EN 1548

[1)] md = machine direction
[2)] cmd = cross machine direction

[3)] Sarnafil® T is compatible to old bitumen

System Information

System Structure	Wide range of accessories is available e.g. prefabricated parts, roof drains, scuppers and walkway pads. The following materials are strongly recommended: Sarnafil® TG 66-15 / TS 77-15E / T 66-15 D Sheet for detailing Sarnafil® TG 66-18 / TS 77-18E for Coverstrips Sarnafil® T Metal Sheet Sarnabar Peelstop Sarnafil® T Prep / Sarnafil® Seam Prep Kit Sarnacol® T 660 Solvent T 660 Sarnacol® 2142S Sarnafil® T Clean

Application Details

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 and free of oil and grease. Cut open any blisters in the old waterproofing and repair. The safety of the existing roof assembly in terms of wind uplift must be ensured. Any insufficiently secured sections or components (e.g. chippings, slating etc.) must be removed to provide a smooth surface. The curing of Sarnacol® 2142S requires moisture. The base layer may therefore be slightly moist (no puddles). If the relative humidity is below 35 % moisten the adhesive after it has been applied.

Application Conditions / Limits

Temperature	The use of Sarnafil® TG 76-18 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.
Compatibility	Sarnafil® TG 76-18 Felt may be installed on all thermal insulations and levelling layers suitable for roofing. No additional separation layer is required. Sarnafil® TG 76-18 Felt is suitable for installation directly on top of existing, carefully cleaned, level bituminous roofing, e.g. re-roofing over old flat roofs. Sarnacol® 2142S single-component PUR adhesive is designed for adhering felt-backed Sarnafil® TG 76-18 Felt to standard insulations and substrates. Adhering Sarnafil® TG 76-18 Felt by means of Sarnacol® 2142S is particularly suitable for re-roofing over old bitumen waterproofing. (Not suitable for re-roofing over synthetic, rubber or ECB roofing).

Installation Instructions

Installation Method / Tools

Installation procedure:
According to the valid installation instructions of manufacturer for systems with Sarnafil® TG 76 Felt-types for fully adhered roofs.

Adhering:
- Use Sarnacol® 2142S only at temperatures above +5 °C
- Use only on slopes less than 10°
- Lay out and align Sarnafil® TG 76-18 Felt with the felt-free edge along upstands.
- From the end of the run fold back Sarnafil® TG 76-18 Felt to approximately half-way.
- Using a roller (pile length approx. 15 mm) apply Sarnacol® 2142S evenly over the surface exposed by the folded back Sarnafil® sheet.
- Very absorbent surfaces, e.g. mineral fibre, require two coats of adhesive. The first coat of approx 300 g/m^2 must be completely dry before applying the second.
- Roll the folded back Sarnafil® TG 76-18 Felt sheet immediately into the wet adhesive.
- Press down the Sarnafil® TG 76-18 Felt with a weighted roller (50 kg).
- Fold back the other half of the Sarnafil® TG 76-18 Felt membrane.
- According to site conditions (roof geometry) adjoin the next Sarnafil® sheet at the end of the adhered membrane to form a butt joint or lay the following rolls alongside with overlapped joints.

Peeling protection must be provided at all upstands and roof penetrations, as work proceeds. The roof built up must be mechanically secured by a peelstop or Sarnabar.

Welding:
- The adhered Sarnafil® TG 76-18 Felt may only be welded together after the adhesive bond is sufficiently strong.
- Butt joints should be covered with a Sarnafil® TG 66-15 cover strip welded on either side.

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 PID for manual welding
Sarnamatic 661^{plus} 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.

Notes on Installation / Limits

Installation works to be carried out only by Registered Sarnafil T Trained Contractors.

Temperature limits for the installation of the membrane:

Substrate temperature: -30 °C min. / +60 °C max.
Ambient temperature: -20 °C min. / +60 °C max.

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.

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.
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 Information	The product does not fall within the EU-regulation of hazardous goods. As a result, a material safety data sheet following EU-Guideline 91/155 EWG is not needed to bring the product to the market, transport or use it. The product does not damage the environment when used as specified.
Protective Measures	Fresh air ventilation must be ensured, when working (welding) in closed rooms. Regulatory safety requirements must be observed.
Transportation Class	The product is not classified as hazardous good for transport.
Disposal	The material is recyclable. Any disposal must be in accordance with regulatory requirements.

Roofing

All data in our product information are based on our current knowledge and experience. They do not release users from careful testing of the application and strict observation of the relevant processing regulations because of the wide range of possible influences during the application and use of our products. Legally valid assurances of specific characteristics or suitability for special purposes of application other than those provided in our documentation for the specific product cannot be inferred from our information. Any protective rights or existing laws and provisions must be followed by the recipient or processor of our products at their own responsibility. Moreover our general terms and conditions of sale and guarantee are valid.

Sika Ltd, Bankside 300, Peachman Way, Broadland Business Park, Norwich, NR7 0WF.

Tel: 01603 709360 Fax: 01603 433436 Email: sarnafilroofing@uk.sika.com

Registered Office: Sika Ltd, Watchmead, Welwyn Garden City, Hertfordshire, AL7 1BQ
Registered in England: 226822