

## PRODUCT DATA SHEET

# Sarnafil® TG 76-18 E Felt PS

Polymeric membrane for adhered roof waterproofing

### PRODUCT DESCRIPTION

Sarnafil® TG 76-18 E Felt PS (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 /Glass mix fleece backing according to EN 13956. Sarnafil® TG 76-18 E Felt PS is a hot air weldable, UV-resistant roof membrane, designed to use in all global climatic conditions. Sarnafil® TG 76-18 E Felt PS is produced with an inlay of glass non-woven for dimensional stability.

### USES

Roof waterproofing membrane for fully bonded exposed roofs with Sarnacol® 2142S, designed for sloped applications.

#### Approved Substrates:

- Slated/mineralized bitumen sheets; new and aged
- EPS: compressive strength  $\geq 100$  kPa (10%), Density  $>20$  kg/m<sup>3</sup>
- OSB, plywood, fibre cement boards
- Mineral fibre boards (e.g. Bondrock MV)
- PUR/PIR insulation boards, (e.g. Sarnatherm PIR GT, Kingspan TR 27)
- Concrete, lightweight concrete

### PRODUCT INFORMATION

#### Packaging

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

|               |                |
|---------------|----------------|
| Packing unit: | see price list |
| Roll length:  | 15.00 m        |
| Roll width:   | 2.00 m         |
| Roll weight:  | 60.00 kg       |

### CHARACTERISTICS / ADVANTAGES

- Proven performance over decades
- Various colours available
- Resistant to permanent UV irradiation
- High dimensional stability due to glass fleece inlay
- 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

### APPROVALS / STANDARDS

- Sarnafil® TG 76-18 E Felt PS 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: BROOF(t2), also for direct contact to EPS boards.
- Official Quality Approvals and Agreement Certificates and approvals.
- Monitoring and assessment by approved laboratories.
- Quality Management system in accordance with EN ISO 9001/14001.

|                            |   |                                  |
|----------------------------|---|----------------------------------|
| <b>Appearance / Colour</b> | Surface:  | matt                             |
|                            | <b>Colours:</b>   |                                  |
|                            | Top surface:  | beige<br>grey (nearest RAL 7040) |
|                            | Bottom surface:   | black                            |
| <b>Shelf Life</b>          | 5 years from date of production in unopened, undamaged and original packaging.  |                                  |
| <b>Storage Conditions</b>  | 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. |                                  |
| <b>Product Declaration</b> | EN 13956  |                                  |
| <b>Visible Defects</b>     | Pass  | EN 1850-2                        |
| <b>Length</b>              | 15 m (-0 % / +5 %)  | (EN 1848-2)                      |
| <b>Width</b>               | 2 m (-0.5 % / +1%)  | (EN 1848-2)                      |
| <b>Effective Thickness</b> | 1.8 mm (-5 % / +10 %)   | (EN 1849-2)                      |
| <b>Straightness</b>        | ≤ 30 mm   | (EN 1848-2)                      |
| <b>Flatness</b>            | ≤ 10 mm   | (EN 1848-2)                      |
| <b>Mass per unit area</b>  | 2.0 kg/m <sup>2</sup> (-5 % / +10 %)  | (EN 1849-2)                      |

## TECHNICAL INFORMATION

|   |                                 |  |              |
|---|---------------------------------|--|--------------|
| <b>Resistance to Impact</b>   | hard substrate                  | ≥ 1000 mm                                    | (EN 12691)   |
|   | soft substrate                  | ≥ 1500 mm                                    |              |
| <b>Hail Resistance</b>  | rigid substrate                 | ≥ 25 m/s                                     | (EN 13583)   |
|   | flexible substrate              | ≥ 33 m/s                                     |              |
| <b>Resistance to Static Load</b>  | soft substrate                  | ≥ 20 kg                                      | (EN 12730)   |
|   | rigid substrate                 | ≥ 20 kg                                      |              |
| <b>Tensile Strength</b>   | longitudinal (md) <sup>1)</sup> | ≥ 500 N/50 mm                                | (EN 12311-2) |
|   | transversal (cmd) <sup>2)</sup> | ≥ 500 N/50 mm                                |              |
| <sup>1)</sup> md = machine direction<br><sup>2)</sup> cmd = cross machine direction |                                 |  |              |
| <b>Elongation</b>   | longitudinal (md) <sup>1)</sup> | ≥ 2 %  | (EN 12311-2) |
|   | transversal (cmd) <sup>2)</sup> | ≥ 2 %  |              |
| <sup>1)</sup> md = machine direction<br><sup>2)</sup> cmd = cross machine direction |                                 |  |              |
| <b>Dimensional Stability</b>  | longitudinal (md) <sup>1)</sup> | ≤  0.2  %                                    | (EN 1107-2)  |
|   | transversal (cmd) <sup>2)</sup> | ≤  0.1  %                                    |              |
| <sup>1)</sup> md = machine direction<br><sup>2)</sup> cmd = cross machine direction |                                 |  |              |
| <b>Joint Peel Resistance</b>  | ≥ 300 N/50 mm                   | (EN 12316-2)                                 |              |
| <b>Joint Shear Resistance</b>   | ≥ 300 N/50 mm                   | (EN 12317-2)                                 |              |
| <b>Foldability at Low Temperature</b>   | ≤ -20 °C                        | (EN 495-5)                                   |              |
| <b>External Fire Performance</b>  | BROOF (t2) < 20°, > 20°         | (EN 13501-5)<br>(ENV 1187)                   |              |
| <b>Reaction to Fire</b>   | Class E                         | EN ISO 11925-2, classification to EN 13501-1 |              |

|  |  |           |
|--|--|-----------|
| <b>Effect of Liquid Chemicals, Including Water</b> | On request   | (EN 1847) |
| <b>Exposure to Bitumen</b>                         | Pass <sup>3)</sup><br>3)Sarnafil® T is compatible to old bitumen | (EN 1548) |
| <b>UV Exposure</b>                                 | Pass (> 5 000 h / grade 0 )                                      | (EN 1297) |
| <b>Water Vapour Transimission</b>                  | μ = 150 000  | (EN 1931) |
| <b>Water Tightness</b>                             | Pass   | (EN 1928) |

## APPLICATION INFORMATION

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

**Substrate Temperature** -30 °C min. / +60 °C max.

## SYSTEM INFORMATION

**System Structure** Wide range of accessories is available e.g. prefabricated parts, roof drains, scuppers and walkway pads.

**The following accessories shall be used:**

- Sarnafil® T 66-15 D Sheet for detailing
- Sarnafil® T Metal Sheet
- Sarnabar
- Sarnafil® T Prep / Sarnafil® T Wet Task Set
- Sarnacol® T 660
- Solvent T 660
- Sarnacol® 2142S
- Sarnafil® T Clean

**Compatibility** Sarnafil® TG 76-18 E Felt PS may be installed on all thermal insulations and levelling layers suitable for roofing. No additional separation layer is required. Sarnafil® TG 76-18 E Felt PS 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 E Felt PS to standard insulations and substrates. Adhering Sarnafil® TG 76-18 E Felt PS 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).

## VALUE BASE

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

## LIMITATIONS

The use of Sarnafil® TG 76-18 E Felt PS membrane is limited to geographical locations with average monthly minimum temperatures of -50 °C. Permanent ambient temperature during use is limited to + 50 °C.

## ECOLOGY, HEALTH AND SAFETY

Fresh air ventilation must be ensured, when working (welding) in closed rooms. Installation of RAL 9016 SR type requires the use of UV protection goggles.

## REGULATION (EC) NO 1907/2006 - REACH

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 this 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

## 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 METHOD / TOOLS

### Installation procedure:

According to the valid installation instructions of manufacturer for systems with Sarnafil® TG 76-18 E Felt PS types for fully adhered roofs.

### Adhering:

- Lay out and align Sarnafil® TG 76-18 E Felt PS with the felt-free edge along upstands.
- From the end of the run fold back the membrane to approximately half-way.
- Apply Sarnacol® 2142S with a roller evenly over the exposed substrate/surface. Very absorbent surfaces/substrates, e.g. mineral fiber, require two coats of adhesive. The first coat of approx. 250 - 550 g/m<sup>2</sup> must be completely dry before applying the second.
- The curing time of Sarnacol® 2142S depends on humidity. The higher the humidity, the quicker the adhesive will set.
- Roll the membrane immediately into the wet adhesive.
- Press down the membrane with a heavy roller (approx. 50 kg).
- Roll back the second half of the membrane and repeat the procedure.

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

### Welding:

- The adhered Sarnafil® TG 76-18 E Felt PS may only be welded together after the adhesive bond is sufficiently strong.
- Butt joints shall 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 / 681 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 shall 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.

## APPLICATION

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

## 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.

## 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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