

# PRODUCT DATA SHEET

## Sarnafil® MTS

### FPO UNDERLAY MEMBRANE FOR PITCHED ROOFS



#### DESCRIPTION

Sarnafil® MTS is a flexible polyolefin (FPO), vapour-permeable, watertight, hot air weldable, underlay roofing membrane.

#### USES

- Roofing construction with insulation between or over rafters
- Roofs with large areas and complex geometry
- Laying over rafters with no intermediate support
- Roofs pitches  $\geq 5^\circ$

#### CHARACTERISTICS / ADVANTAGES

- Hot air weldable
- Vapour-permeable
- Watertight.
- Wind resistant
- Non-slip surface

#### APPROVALS / CERTIFICATES

- CE Marking and Declaration of Performance to EN 13859-1 - Flexible sheets - For underlays for discontinuous roofs

#### PRODUCT INFORMATION

|                            |   |                       |
|----------------------------|---|-----------------------|
| <b>Composition</b>         | Polyolefin (FPO)  |                       |
| <b>Packaging</b>           | Sarnafil® MTS rolls are wrapped individually in a blue PE-foil.   |                       |
|                            | Packing unit:   | 33 rolls/pallet       |
|                            | Roll weight:  | 20 kg                 |
|                            | Pallet weight:  | 693 kg (incl. pallet) |
| <b>Appearance / Colour</b> | Surface:  | Non-slip              |
|                            | Colours:  |                       |
|                            | Top surface:  | Green                 |
|                            | Bottom surface:   | White                 |
| <b>Shelf life</b>          | 5 years from date of production   |                       |
| <b>Storage conditions</b>  | 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. |                       |
| <b>Product Declaration</b> | EN 13859-1 - Flexible sheets - For underlays for discontinuous roofs  |                       |
| <b>Length</b>              | 25,00 m / 250,00 m  | (EN 1848-2)           |
| <b>Width</b>               | 2,00 m  | (EN 1848-2)           |

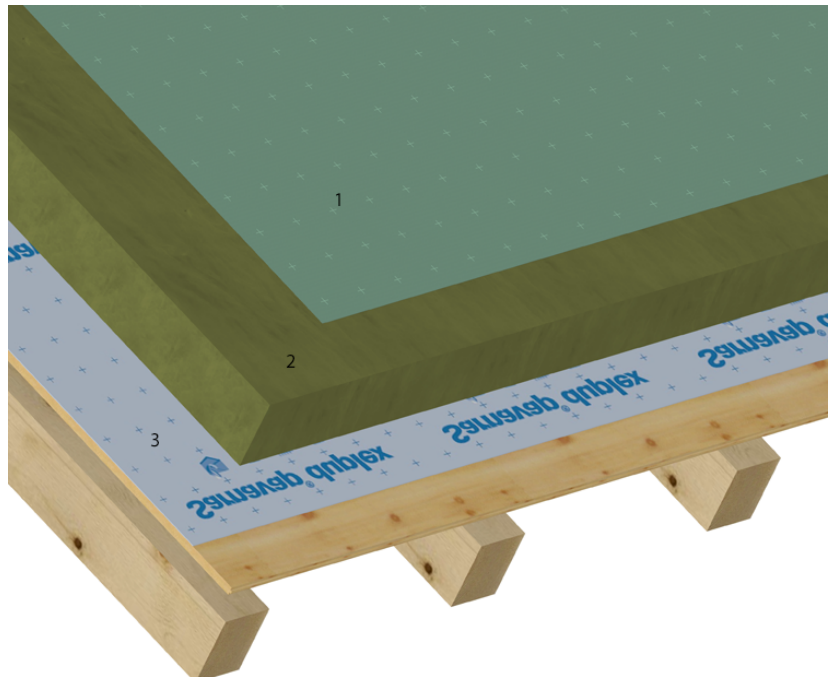
|                           |                             |             |
|---------------------------|-----------------------------|-------------|
| <b>Straightness</b>       | Pass                        | (EN 1848-2) |
| <b>Mass per unit area</b> | 400 (± 50) g/m <sup>2</sup> | (EN 1849-2) |

## TECHNICAL INFORMATION

|   |  |                    |  |
|---|--|--------------------|--|
| <b>Tensile Strength</b>   | longitudinal (md) <sup>1)</sup>  | 400 (± 50) N/50 mm | (EN 12311-1)   |
|   | transversal (cmd) <sup>2)</sup>  | 300 (± 50) N/50 mm |  |
| <small><sup>1)</sup> md = machine direction<br/><sup>2)</sup> cmd = cross machine direction</small> |  |                    |  |
| <b>Elongation</b>   | longitudinal (md) <sup>1)</sup>  | 50 (±10) %         | (EN 12311-1)   |
|   | transversal (cmd) <sup>2)</sup>  | 60 (±10) %         |  |
| <small><sup>1)</sup> md = machine direction<br/><sup>2)</sup> cmd = cross machine direction</small> |  |                    |  |
| <b>Dimensional Stability</b>  | longitudinal (md) <sup>1)</sup>  | 0 (-0,8 / +0,5) %  | (EN 1107-2)  |
|   | transversal (cmd) <sup>2)</sup>  | 0 (-0,8 / +0,5) %  |  |
| <small><sup>1)</sup> md = machine direction<br/><sup>2)</sup> cmd = cross machine direction</small> |  |                    |  |
| <b>Tear Strength</b>  | longitudinal (md) <sup>1)</sup>  | 200 (± 50) N       | (EN 12310-1)   |
|   | transversal (cmd) <sup>2)</sup>  | 200 (± 50) N       |  |
| <small><sup>1)</sup> md = machine direction<br/><sup>2)</sup> cmd = cross machine direction</small> |  |                    |  |
| <b>Foldability at Low Temperature</b>   | -20 °C   |                    | (EN 1109)  |
| <b>Reaction to Fire</b>   | Class E  |                    | (EN ISO 11925-2: 2002, Classification to EN 13501-1) |
| <b>Artificial Ageing</b>  | By long term exposure to the combination of UV radiation and elevated temperature and heat   |                    | (EN 13859-1 Appendix C; EN 1296/1297)                |
|   | <b>Maximum tensile force:</b>  |                    |  |
|   | longitudinal (md) <sup>1)</sup>  | 350 (± 50) N/50 mm | (EN 12311-1)   |
|   | transversal (cmd) <sup>2)</sup>  | 250 (± 50) N/50 mm |  |
|   | <b>Maximum tensile elongation:</b>   |                    |  |
|   | longitudinal (md) <sup>1)</sup>  | 30 (± 10) %        | (EN 12311-1)   |
|   | transversal (cmd) <sup>2)</sup>  | 35 (± 10) %        |  |
| <b>Natural Weathering</b>   | 4 months*<br><small>*special sealing measurements have to be taken at penetrations of the sub-roof membrane at pitch ≤ 12°</small> |                    |  |
| <b>Water Vapour Transmission</b>  | 1,0 (± 0,5) m  |                    | (EN 1931)  |
| <b>Resistance to Water Penetration</b>  | W1   |                    | (EN 1928: 2001)                                      |
| <b>Service Temperature</b>  | -30 °C min. / +70 °C max.  |                    |  |

# SYSTEMS

## System Structure



The following products must be considered for use depending on roof design:

**1. Sarnafil® MTS membrane**

- Sarnafil® MTD flashing strip
- Sarnafil® MTD universal pipe connector, prefabricated piece for round penetrations
- Sarnafil® MTD universal corner flashing, prefabricated pieces for corner flashings
- Sarnafil® MTD Lux, prefabricated pieces for surroundings for roof window
- Sarnafil® nail gasket
- Sarnafil® T membrane-clad metal flashing, for welded eave termination
- Sarnacol® T-660, contact adhesive
- Solvent T-660, cleaner and thinner Sarnacol® T-660, grease of metal surfaces
- Sarnatape® adhesive tape for seam as well as flashings and terminations

**2. Insulation**

- As required by national or local regulations

**3. Sarnavap® vapour barrier**

- Sarnavap® duplex
- Sarnavap®-1000 R / -1000 E
- Sarnavap® adhesive tapes / Sarnavap® Primer-130

### Compatibility

Not compatible in direct contact with PVC, tar, asphalt, hot bitumen, lime water, wood preservatives with surfactants and substances containing oil, solvents or wetting agents. These materials could adversely affect the product properties.

## APPLICATION INFORMATION

### Ambient Air Temperature

|                 |                           |
|-----------------|---------------------------|
| Hot air welded  | -20 °C min. / +60 °C max. |
| Adhesive bonded | +5 °C min. / +40 °C max.  |

## 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
- Or other suitable equipment.

### SUBSTRATE QUALITY

The rafter substrate must be flat and free of any sharp protrusion, clean, dry and free of grease, bitumen, oil and dust. Any protective treatments applied to the substrate must be dry before installing Sarnafil® MTS.

### 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 membrane is installed by loose laying. Overlap seams are hot welded using specialised hot air equipment.

#### 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 screw driver or steel needle to ensure the integrity/completion of the weld. Any imperfections must be rectified by hot air welding.

## FURTHER INFORMATION

Installation instructions

- Sarnafil® MTS

## IMPORTANT CONSIDERATIONS

Installation work must only be carried out by Sika® trained and approved contractors, experienced in this type of application.

- Roof construction and associated components must comply with national and local regulations.
- Ensure Sarnafil® MTS is prevented from direct contact with incompatible materials (refer to compatibility section).
- The use of Sarnafil® MTS membrane is limited to geographical locations with average monthly minimum temperatures of -30 °C. Permanent ambient temperature during use is limited to +70 °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.
- Remove ponding water.
- Remove snow layers.

## 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.

## 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

### Protective Measures

Fresh air ventilation must be ensured, when working (welding) in closed rooms. Local safety regulations must be observed.

### Transportation Class

The product is not classified as hazardous good for transport.

### Disposal

The material is recyclable. Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

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

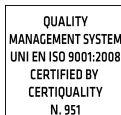
This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed 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)

## 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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Product Data Sheet  
Sarnafil® MTS  
September 2019, Version 02.01  
020910132300081001

SarnafilMTS-en-IT-(09-2019)-2-1.pdf