

## PRODUCT DATA SHEET

# Sarnafil® TS 77-20

Polymeric membrane for mechanically fastened roof waterproofing

### DESCRIPTION

Sarnafil® TS 77-20 (thickness 2.0 mm) is a polyester reinforced, multi-layer, synthetic roof waterproofing sheet based on flexible polyolefins (FPO) containing ultraviolet light stabilizers, flame retardant and an inlay of glass non-woven.

Sarnafil® TS 77-20 is a hot air weldable roof membrane formulated for direct exposure and designed to use in all global climatic conditions. Sarnafil® TS 77-20 is produced with an inlay of glass non-woven for dimensional stability and a polyester reinforcement for high strength.

(DE/E1 FPO-BV-V-PG-GV-2,0)

### USES

Waterproofing membrane for mechanically fastened roofing systems.

### CHARACTERISTICS / ADVANTAGES

- Proven performance over decades
- Resistant to permanent UV exposure
- Resistance to hail
- High dimensional stability due to glass fleece inlay
- Resistant to permanent wind exposure
- Resistant to all common environmental influences
- Resistant to micro-organisms
- Resistant to root penetration
- Compatible to old bitumen

### APPROVALS / CERTIFICATES

- Polymeric sheets for roof waterproofing according to DIN EN 13956, certified by notified body 1213-CPD-3915 and provided with the CE-marking
- DIN SPEC 20000-201
- DIN 18531-2
- Reaction to fire according to DIN EN 13501-1: Class E
- External fire performance tested according to DIN CEN/TS 1187 and classified according to DIN EN 13501-5: BROOF(t1)
- Resistance to flying sparks and radiant heat according to DIN 4102-7 (tested roof structure of Sika)

### PRODUCT INFORMATION

<b>Product declaration</b>	DIN EN 13956 / DIN SPEC 20000-201
<b>Composition</b>	Flexible polyolefins (FPO)
<b>Packaging</b>	Sarnafil® TS 77-20 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 66,00 kg
<b>Shelf life</b>	In unopened and undamaged original packaging, the product retains its properties.

#### PRODUCT DATA SHEET

Sarnafil® TS 77-20

February 2022, Version 04.01

020910012000201001

**Storage conditions**

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.

**Appearance and colour****Surface:**

Standard:	matt
-----------	------

**Colours:**

Top surface:	beige window grey (nearest RAL 7040) Further colours on request
--------------	---

Bottom surface:	black
-----------------	-------

<b>Visible defects</b>	Pass	(DIN EN 1850-2)
<b>Length</b>	15 m (-0 % / +5 %)	(DIN EN 1848-2)
<b>Width</b>	2 m (-0.5 % / +1 %)	(DIN EN 1848-2)
<b>Effective thickness</b>	2,0 mm (-5 % / +10 %)	(DIN EN 1849-2)
<b>Straightness</b>	≤ 30 mm	(DIN EN 1848-2)
<b>Flatness</b>	≤ 10 mm	(DIN EN 1848-2)
<b>Mass per area</b>	2,2 kg/m <sup>2</sup> (-5 % / +10 %)	(DIN EN 1849-2)

**TECHNICAL INFORMATION**

<b>Resistance to impact</b>	hard substrate	≥ 1250 mm	(DIN EN 12691)
	soft substrate	≥ 1500 mm	
<b>Hail resistance</b>	rigid substrate	≥ 30 m/s	(DIN EN 13583)
	flexible substrate	≥ 40 m/s	
<b>Resistance to static loading</b>	soft substrate	≥ 20 kg	(DIN EN 12730)
	rigid substrate	≥ 20 kg	
<b>Resistance to root penetration</b>	Pass		(DIN EN 13948)
<b>Tensile strength</b>	longitudinal (md) <sup>1)</sup>	≥ 1000 N/50mm	(DIN EN 12311-2)
	transversal (cmd) <sup>2)</sup>	≥ 900 N/50mm	
<sup>1)</sup> md = machine direction <sup>2)</sup> cmd = cross machine direction			
<b>Elongation</b>	longitudinal (md) <sup>1)</sup>	≥ 13 %	(DIN EN 12311-2)
	transversal (cmd) <sup>2)</sup>	≥ 13 %	
<sup>1)</sup> md = machine direction <sup>2)</sup> cmd = cross machine direction			
<b>Tear strength</b>	longitudinal (md) <sup>1)</sup>	≥ 300 N	(DIN EN 12310-2)
	transversal (cmd) <sup>2)</sup>	≥ 300 N	
<sup>1)</sup> md = machine direction <sup>2)</sup> cmd = cross machine direction			
<b>Joint peel resistance</b>	Failure mode: C, no failure of the joint		(DIN EN 12316-2)
<b>Joint shear resistance</b>	≥ 500 N/50 mm		(DIN EN 12317-2)
<b>Dimensional stability</b>	longitudinal (md) <sup>1)</sup>	≤ 0.2 %	(DIN EN 1107-2)
	transversal (cmd) <sup>2)</sup>	≤ 0.1 %	
<sup>1)</sup> md = machine direction <sup>2)</sup> cmd = cross machine direction			

**PRODUCT DATA SHEET**

Sarnafil® TS 77-20

February 2022, Version 04.01

020910012000201001

<b>Foldability at low temperature</b>	≤ -40 °C	(DIN EN 495-5)
<b>Watertightness</b>	Pass	(DIN EN 1928)
<b>Water-vapour transmission rate</b>	μ = 190000 (±30 %)	(DIN EN 1931)
<b>Exposure to bitumen</b>	Pass <sup>3)</sup> <small><sup>3)</sup> Sarnafil® T is compatible to old bitumen</small>	(DIN EN 1548)
<b>Effect of liquid chemicals, including water</b>	On request	(DIN EN 1847)
<b>Resistance to UV exposure</b>	Pass (> 5000 h / grade 0)	(DIN EN 1297)
<b>External fire performance</b>	B <sub>ROOF</sub> (t1) < 20°  Resistance to flying sparks and radiant heat according to DIN 4102-7 (tested roof structure of Sika) Fulfilled for roof pitch ≤ 20°	(DIN CEN/TS 1187) (DIN EN 13501-5) (DIN CEN/TS 1187) (DIN 4102-7)
<b>Reaction to fire</b>	Class E	(EN ISO 11925-2, classification to DIN EN 13501-1)

## SYSTEM INFORMATION

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

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

- Sarnafil® T 66-15 D Sheet for detailing
- Sarnafil® TS 77 strips
- Sarnafil® T Metal Sheet
- Sarnafil® T Welding Cord
- Sarnabar® / Sarnafast® Fastening system
- Sarnafil® T Prep / Sarnafil® T Wet Task Set
- Sarnacol® T 660
- Sarnafil® T Clean

**Compatibility** Sarnafil® TS 77-20 may be installed on all thermal insulations and levelling layers suitable for roofing. No additional separation layer is required. Sarnafil® TS 77-20 is suitable for installation directly on top of existing, carefully cleaned, levelled bituminous roofing, e.g. re-roofing over old flat roofs. Colour changes in 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.

## 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.

## IMPORTANT CONSIDERATIONS

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

- Ensure Sarnafil® TS 77-20 is prevented from direct

contact with incompatible materials (refer to compatibility section)

- Sarnafil® TS 77-20 must be installed by loose laying and without stretching or installing under tension
- The use of Sarnafil® TS 77-20 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

### 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.

### SUBSTRATE QUALITY

The substrate surface must be uniform, smooth and free of any sharp protrusions or burrs, etc. Sarnafil® TS 77-20 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 Solvent T 660 before adhesive is applied.

## 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.

#### Sika Deutschland GmbH

Roofing  
Kornwestheimer Strasse 103-107  
70439 Stuttgart  
Tel.: +49 711/8009-0  
roofing@de.sika.com  
www.sika.de/dachabdichtung



#### PRODUCT DATA SHEET

Sarnafil® TS 77-20  
February 2022, Version 04.01  
020910012000201001

SarnafilTS77-20-en-DE-(02-2022)-4-1.pdf