

PRODUCT DATA SHEET

Sarnafil® TS 77-20 ER Tex

Polymeric membrane for mechanically fastened roof waterproofing

DESCRIPTION

Sarnafil® TS 77-20 ER Tex (thickness 2.0 mm) is a polyester reinforced, multi-layer, synthetic roof waterproofing sheet based on premium-quality flexible polyolefins (FPO) containing ultraviolet light stabilizers, flame retardant and an inlay of glass non-woven according to EN 13956.

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

USES

Waterproofing membrane for:

- Mechanically fastened roofing systems.

CHARACTERISTICS / ADVANTAGES

- Proven performance over decades.
- Resistant to permanent UV exposure.
- High dimensional stability due to glass fleece inlay.
- Resistant to permanent wind exposure.
- 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.
- Textured surface for reduced slipperiness.
- Recyclable.

SUSTAINABILITY

- Conformity with LEED v4 MRc 3 (Option 2): Building Product Disclosure and Optimization - Sourcing of Raw Materials.
- Conformity with LEED v4 MRc 4 (Option 2): Building Product Disclosure and Optimization - Material Ingredients.
- Conformity with LEED v2009 MRc 4 (Option 2): Recycled Content.

APPROVALS / CERTIFICATES

Sarnafil® TS 77-20 ER Tex 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-3915 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}(t2).
- Quality Management system in accordance with EN ISO 9001/14001.

PRODUCT INFORMATION

Packaging	Sarnafil® TS 77-20 ER Tex standard rolls are wrapped individually in a blue PE-foil.	
	Packing unit:	
	Roll length:	15.00 m
	Roll width:	1.00 m
	Roll weight:	36.00 kg
Please contact our customer service, for information of what packaging sizes are sold in Denmark.		
Appearance / Colour	Surface:	matt, profiled surface for reduced slipperiness.
	Colours:	
	Top surface:	window grey (nearest RAL 7040)
	Bottom surface:	black
Shelf life	5 years from date of production in unopened, undamaged and original packaging.	
Storage conditions	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.	
Product declaration	EN 13956	
Visible defects	Pass	(EN 1850-2)
Length	15 m (-0 % / +5 %)	(EN 1848-2)
Width	1 m (-0.5 % / +1 %)	(EN 1848-2)
Effective thickness	2.0 mm (-5 % / +10 %)	(EN 1849-2)
Straightness	≤ 30 mm	(EN 1848-2)
Flatness	≤ 10 mm	(EN 1848-2)
Mass per unit area	2.40 kg/m ² (-5 % / +10 %)	(EN 1849-2)

TECHNICAL INFORMATION

Resistance to impact	hard substrate	≥ 900 mm	(EN 12691)
	soft substrate	≥ 1250 mm	
Hail resistance	rigid substrate	≥ 28 m/s	(EN 13583)
	flexible substrate	≥ 36 m/s	
Resistance to static loading	soft substrate	≥ 20 kg	(EN 12730)
	rigid substrate	≥ 20 kg	
Tensile strength	longitudinal (md) ¹⁾	≥ 900 N/50 mm	(EN 12311-2)
	transversal (cmd) ²⁾	≥ 800 N/50 mm	
1) md = machine direction 2) cmd = cross machine direction			
Elongation	longitudinal (md) ¹⁾	≥ 12 %	(EN 12311-2)
	transversal (cmd) ²⁾	≥ 12 %	
1) md = machine direction 2) cmd = cross machine direction			
Dimensional stability	longitudinal (md) ¹⁾	≤ 0.2 %	(EN 1107-2)
	transversal (cmd) ²⁾	≤ 0.1 %	
1) md = machine direction 2) cmd = cross machine direction			

Tear strength	longitudinal (md) ¹⁾	≥ 300 N	(EN 12310-2)
	transversal (cmd) ²⁾	≥ 300 N	
<small>1) md = machine direction 2) cmd = cross machine direction</small>			
Joint peel resistance	no failure of the joint		(EN 12316-2)
Joint shear resistance	≥ 500 N/50 mm		(EN 12317-2)
Foldability at low temperature	≤ -20 °C		(EN 495-5)
External fire performance	B _{ROOF} (t2)		(ENV 1187) (EN 13501-5)
Reaction to fire	Class E		(EN ISO 11925-2, classification to EN 13501-1)
Effect of liquid chemicals, including water	On request		(EN 1847)
Exposure to bitumen	Pass ³⁾		(EN 1548)
<small>3) Sarnafil® T is compatible to old bitumen</small>			
Resistance to UV exposure	Pass (> 5000 h / grade 0)		(EN 1297)
Water vapour transmission	μ = 200 000		(EN 1931)
Watertightness	Pass		(EN 1928)

SYSTEMS

System structure	<p>The following accessories shall be used:</p> <ul style="list-style-type: none"> ▪ Sarnafil® T 66-15 D Sheet for detailing ▪ Sarnafil® TS 77-E Strips ▪ Sarnafil® T Metal Sheet ▪ Sarnabar® / Sarnafast® ▪ Sarnafil® T Welding Cord ▪ Sarnafil® T Prep / Sarnafil® T Wet Task Set ▪ Sarnacol® T 660 ▪ Solvent T 660 ▪ Sarnafil® T Clean
Compatibility	<p>Sarnafil® TS 77-20 ER Tex may be installed on all thermal insulations and levelling layers suitable for roofing. No additional separation layer is required.</p> <p>Sarnafil® TS 77-20 ER Tex is suitable for installation directly on top of existing, carefully cleaned, levelled bituminous roofing, e.g. re-roofing over old flat roofs.</p> <p>Colour changes in membrane surface may occur in case of direct contact with bitumen.</p>

APPLICATION INFORMATION

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

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, solvent resistant, clean, dry and free of grease and dust. Metal sheets must be degreased with Solvent T 660 before adhesive is applied.

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.

APPLICATION METHOD / TOOLS

Installation procedure:

According to the valid installation instructions of manufacturer for Sarnafil® TS 77-20 ER Tex-types system for mechanically fastened roofing systems.

Fixing Method, linear fastening (Sarnabar®):

Unroll the Sarnafil® TS 77-20 ER Tex membrane, overlap by 80 mm, weld immediately and fix to the substructure by means of Sarnabar®. The preferred type of fastening will be advised by Sika. The spacing of the fasteners is in accordance with the project specific calculations made by Sika. The perimeter piece ends must be secured with the Sarnabar® Load Distribution Plate. For protection fasten a piece of Sarnafil® TS 77-20 ER Tex under bar end and plate. Leave a 10 mm clearance between bar ends. Do not fasten in hole nearest bar end. Cover the bar ends with a piece of Sarnafil® TS 77-20 ER Tex and weld. After installation the Sarnabar® must immediately be made watertight with a Sarnafil® T cover strip. At upstands and at all penetrations, the Sarnafil® TS 77-20 ER Tex membrane must be secured with a Sarnabar®. The Sarnafil® T Welding Cord protects the Sarnafil® TS 77-20 ER Tex roof covering against tearing and peeling of by wind uplift.

Fixing Method, spot fastening (Sarnafast®):

Sarnafil® TS 77-20 ER Tex must always be installed at right angles to the deck direction. Sarnafil® TS 77-20 ER Tex is fixed by means of the Sarnafast® fasteners and barbed washers/tubes along the marked line, 35 mm from the edge of the membrane. Sarnafil® TS 77-20 ER Tex is overlapped by 120 mm. At upstands and at all penetrations, the Sarnafil® TS 77-20 ER Tex membrane must be secured with a Sarnabar®. The Sarnafil® T Welding Cord protects the Sarnafil® TS 77-20 ER Tex roof covering against tearing and peeling of by wind uplift.

Welding Method:

Before welding the seams must be 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 for manual welding and Sarnamatic 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 must 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.

IMPORTANT CONSIDERATIONS

Geographical / Climate

The use of Sarnafil® TS 77-20 ER Tex membrane is limited to geographical locations with average monthly minimum temperatures of -50 °C.

Permanent ambient temperature during use is limited to +50 °C.

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 declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

PRODUCT DATA SHEET

Sarnafil® TS 77-20 ER Tex
October 2020, Version 02.01
020910012020201001

ECOLOGY, HEALTH AND SAFETY

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

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

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

Sika Danmark A/S
Hirsemarken 5
3520 Farum
Tlf. +45 48 18 85 85
www.sika.dk



PRODUCT DATA SHEET
Sarnafil® TS 77-20 ER Tex
October 2020, Version 02.01
020910012020201001

SarnafilTS77-20ERTex-en-DK-(10-2020)-2-1.pdf