BUILDING TRUST

PRODUCT DATA SHEET

Sarnafil® S 327-15 EL

POLYMERIC MEMBRANE FOR MECHANICALLY FASTENED ROOF WATERPROOFING

PRODUCT DESCRIPTION

Sarnafil® S 327-15 EL (thickness 1.5 mm) is a polyester reinforced, multi-layer, synthetic roof waterproofing sheet based on premium-quality polyvinyl chloride (PVC) containing ultraviolet light stabilizers and flame retardant according to EN 13956.
Sarnafil® S 327-15 EL is a hot air weldable roof membrane formulated for direct exposure and designed to use in all global climatic conditions.

USES

Waterproofing membrane for:
- Mechanically fastened roofing systems.

CHARACTERISTICS / ADVANTAGES

- Proven performance over decades.
- Lacquer coated surface.
- Various colours available.
- Resistant to permanent UV irradiation.
- Resistant to permanent wind exposure.
- Resistant to all common environmental influences.
- Hot air welding without use of open flames.
- High water vapour permeability.
- Recyclable.

ENVIRONMENTAL INFORMATION

- Conformity with LEED v4 SSc 5 (Option 1): Heat Island Reduction - Roof (only traffic white).
- Conformity with LEED v4 MRc 2 (Option 1): Conformity with LEED v4 MRc 2 (Option 1): Building Product Disclosure and Optimization – Environmental Product Declarations.
- 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 SSc 7.2 (Option 1): Heat Island Effect - Roof (only traffic white).
- Conformity with LEED v2009 MRc 4 (Option 2): Recycled Content.
- IBU Environmental Product Declaration (EPD) available.

APPROVALS / STANDARDS

Sarnafil® S 327-15 EL is designed and manufactured to meet most international recognised standards.
- Polymeric sheets for roof waterproofing according to EN 13956, certified by notified body 1213-CPD-4920 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 (t4).
- Factory Mutual (FM) Approvals Class: 4470.
- Official Quality Approvals and Agrement Certificates and approvals.
- Monitoring and assessment by approved laboratories.
- Quality Management system in accordance with EN ISO 9001/14001.

PRODUCT INFORMATION

Product Declaration	EN 13956	
Packaging	Sarnafil® S 327-15 EL standard rolls are wrapped individually in a blue PE-foil.	
	Packing unit:	see price list
	Roll length:	20.00 m
	Roll width:	2.00 m
	Roll weight:	72.00 kg
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.	
Appearance / Colour	Surface:	matt
	Colours:	
	Top surface:	light grey (nearest RAL 7047) lead grey (nearest RAL 7012) copper brown (nearest RAL 8004) patina green (Sika colour no. 6525) traffic white (nearest RAL 9016)
	Bottom surface:	dark grey
	Top surface of sheet in other special colours available on request, subject to minimum order quantities.	
Visible Defects	Pass	(EN 1850-2)
Length	20 m (- 0 % / + 5 %)	(EN 1848-2)
Width	2 m (- 0.5 % / + 1 %)	(EN 1848-2)
Effective Thickness	1.5 mm (- 5 % / + 10 %)	(EN 1849-2)
Straightness	≤ 30 mm	(EN 1848-2)
Flatness	≤ 10 mm	(EN 1848-2)
Mass per unit area	1.8 kg/m² (- 5 % / + 10 %)	(EN 1849-2)

TECHNICAL INFORMATION

Resistance to Impact	hard substrate	≥ 600 mm	(EN 12691)
	soft substrate	≥ 900 mm	
Hail Resistance	rigid substrate	≥ 24 m/s	(EN 13583)
	flexible substrate	≥ 32 m/s	
Resistance to Static Load	soft substrate	≥ 20 kg	(EN 12730)
	rigid substrate	≥ 20 kg	
Tensile Strength	longitudinal (md)[1)]	≥ 1100 N/50 mm	(EN 12311-2)
	transversal (cmd)[2)]	≥ 1100 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		

Tear Strength	longitudinal (md)[1)]	≥ 200 N	(EN 12310-2)
	transversal (cmd)[2)]	≥ 200 N	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Joint Peel Resistance	no failure of the joint		(EN 12316-2)
Joint Shear Resistance	≥ 800 N/50 mm		(EN 12317-2)
Dimensional Stability	longitudinal (md)[1)]	≤ |0.3| %	(EN 1107-2)
	transversal (cmd)[2)]	≤ |0.2| %	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Foldability at Low Temperature	≤ -25 °C		(EN 495-5)
Water Tightness	Pass		(EN 1928)
Water Vapour Transimission	μ = 15'000		(EN 1931)
Effect of Liquid Chemicals, Including Water	On request		(EN 1847)
UV Exposure	Pass (> 5000 h / grade 0)		(EN 1297)
External Fire Performance	B_{ROOF} (t4) 0° - 70° (subject to construction)		(EN 13501-5)
Reaction to Fire	Class E		(EN ISO 11925-2, classification to 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 accessories shall be used: ▪ Sarnafil® Metal Sheet PVC ▪ Sarnabar® / Sarnafast® ▪ S-Welding Cord PVC ▪ Sarna Seam Cleaner ▪ Sarna Cleaner
Compatibility	Not compatible with direct contact to other plastics, e.g. EPS, XPS, PUR, PIR or PF. Not resistant to tar, bitumen, oil and solvent containing materials.

APPLICATION INFORMATION

Ambient Air Temperature	-20 °C min. / +60 °C max.
Substrate Temperature	-30 °C min. / +60 °C max.

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

Geographical / Climate
The use of Sarnafil® S 327-15 EL 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.

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.
Sarnafil® S 327-15 EL must be separated from any incompatible substrates by an effective separation layer to prevent accelerated ageing. Prevent from direct contact with bitumen, tar, fat, oil, solvent containing material and direct contact to other plastic materials, e.g. expanded polystyrene (EPS), extruded polystyrene (XPS), or phenolic foam (PF) as this could adversely affect the product properties.
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 Sarna Cleaner before adhesive is applied.

APPLICATION METHOD / TOOLS

Installation procedure:
According to the valid installation instructions for Sarnafil® S 327 EL-types system for mechanically fastened roofing systems.

Fixing Method, linear fasting (Sarnabar®):
Unroll the Sarnafil® S 327-15 EL membrane, overlap by 80 mm, weld immediately and to fix 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® S 327-15 EL 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® S 327-15 EL and weld. After installation the Sarnabar® must immediately be made watertight with a Sarnafil® S 327-15 EL cover strip. At upstands and at all penetrations, the Sarnafil® S 327-15 EL membrane must be secured with a Sarnabar®. The 4 mm diameter S-Welding Cord protects the Sarnafil® S 327-15 EL roof covering against tearing and peeling off by wind uplift.

Fixing Method, spot fasting (Sarnafast®):
Sarnafil® S 327-15 EL must always be installed at right angles to the deck direction. Sarnafil® S 327-15 EL 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® S 327-15 EL is overlapped by 120 mm. The spacing of the fasteners is in accordance with the project specific calculations made by Sika. At upstands and at all penetrations, the Sarnafil® S 327-15 EL membrane must be secured with a Sarnabar®. The 4 mm diameter S-Welding Cord protects the Sarnafil® S 327-15 EL roof covering against tearing and peeling off by wind uplift.
Welding Method:
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® 681/661^{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 must be minimum 20 mm.
The seams must be mechanically tested to ensure the integrity / completion of the weld.Any imperfections must be rectified by hot air welding.

APPLICATION

Installation works must be carried out only by Sika Sarnafil Registered Roofing 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.

SIKA IRELAND LIMITED
Ballymun Industrial Estate
Ballymun
Dublin 11, Ireland
Tel: +353 1 862 0709
Web: www.sika.ie
Twitter: @SikaIreland