PRODUCT DATA SHEET

Sarnafil® G 410-12 EL

POLYMERIC MEMBRANE FOR ROOF WATERPROOFING

PRODUCT DESCRIPTION

Sarnafil® G 410-12 EL (thickness 1.2 mm) is a multi-layer, synthetic roof waterproofing sheet based on premium-quality polyvinyl chloride (PVC) with inlay of glass non-woven containing ultraviolet light stabilizers and flame retardant according to EN 13956.
Sarnafil® G 410-12 EL is a hot air weldable roof membrane, formulated for direct exposure and designed to use in all global climatic conditions. Sarnafil® G 410-12 EL is produced with an integral glass non-woven carrier for dimensional stability. Sarnafil® G 410-12 EL is used with the Adhered System.
Sarnafil® G 410-12 EL has a unique lacquer coating applied to the top of the membrane.
Sarnafil® G 410-12 EL has no built-in stress at the time of production and has a fully encapsulated carrier with no risk to delamination or water-wicking. The dimensional stability of Sarnafil® G 410-12 EL is excellent.

USES

Roof waterproofing membrane for exposed flat roofs:
- Fully bonded roof surfaces with contact adhesive Sarnacol® 2170/2172 depending on substrates.

Roof waterproofing membrane for exposed roof junction zones:
- Roof waterproofing for junctions and flashings, e.g. wall and parapet junctions, roof lights, etc., which are permanently exposed in installations of Sarnafil® G 410-12 EL roof waterproofing systems.
- Roof waterproofing for junctions and flashings in installations of Sarnafil® G 410-EL Felt type exposed roof waterproofing systems.

CHARACTERISTICS / ADVANTAGES

- Outstanding resistance to weathering, including permanent UV irradiation.
- Excellent flexibility in cold temperatures.
- No built-in stress at the time of production.
- High dimensional stability.
- High water vapour permeability.
- Excellent weldability.
- No risk of delamination or water-wicking.
- Lacquer coated surface.
- Recyclable.

APPROVALS / STANDARDS

Sarnafil® G 410-12 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-4919 and provided with the CE-mark.
- Reaction to fire according to EN 13501-1, class E.
- External fire performance tested according to EN 1187 and classified according to EN 13501-5: BROOF(t4) subject to system make up.
- 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

Packaging

Sarnafil® G 410-12 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:	60.00 kg

Appearance / Colour

Surface:	matt
Colours:	
Top surface:	light grey (nearest RAL 7047) lead grey (Sika colour no. 9500)
Bottom surface:	dark grey

Shelf Life

Product does not expire if correctly stored.

Storage Conditions

Rolls must be stored in a horizontal position on pallet and protected from direct sunlight, rain and snow. Do not stack pallets of rolls during transport or storage.

Product Declaration	EN 13956	
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	1.2 mm (-5 / +10 %)	EN 1849-2
Straightness	≤ 30 mm	EN 1848-2
Flatness	≤ 10 mm	EN 1848-2
Mass per unit area	1.5 (-5 / +10 %) kg/m²	EN 1849-2

TECHNICAL INFORMATION

Resistance to Impact	hard substrate	≥ 450 mm	EN 12691
	soft substrate	≥ 800 mm	
Hail Resistance	rigid substrate	≥ 17 m/s	EN 13583
	flexible substrate	≥ 25 m/s	
Resistance to Static Load	soft substrate	≥ 20 kg	EN 12730
	rigid substrate	≥ 20 kg	
Tensile Strength	longitudinal (md)[1)]	≥ 9.5 N/mm²	EN 12311-2
	transversal (cmd)[2)]	≥ 9.0 N/mm²	
	[1)] md = machine direction [2)] cmd = cross machine direction		
Elongation	longitudinal (md)[1)]	≥ 220 %	EN 12311-2
	transversal (cmd)[2)]	≥ 200 %	
	[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		
Joint Peel Resistance	≥ 300 N/50 mm		EN 12316-2

Joint Shear Resistance	≥ 600 N/50 mm	EN 12317-2
Foldability at Low Temperature	≤ -25°C	EN 495-5
External Fire Performance	BROOF(t1) < 20°, > 20°	EN1187 EN13501-5
Reaction to Fire	Class E	EN ISO 11925-2, classification to EN 13501-1
Effect of Liquid Chemicals, Including Water	On request	EN 1847
UV Exposure	Pass (> 5'000 h / grade 0)	EN 1297
Water Vapour Transimission	μ = 15'000	EN 1931
Water Tightness	Pass	EN 1928

SYSTEM INFORMATION

System Structure	Wide range of accessories is available e.g. prefabricated parts, roof drains, scuppers, walkway pad, decor profiles, protection sheets and separation layers. The following materials are strongly recommended: Sarnafil® G 410-15EL Sheet for detailing Sarnafil® Metal Sheet Peel-Stop® Sarna Seam Cleaner Sarnacol® 2170/2172 (contact adhesive) Sarna Cleaner
Compatibility	Not compatible with direct contact to other plastics, e.g. EPS, XPS and not resistant to tar, bitumen, oil and solvent containing materials.

APPLICATION INFORMATION

Ambient Air Temperature	Ambient temperature: -20 °C min. / +60 °C max.
Substrate Temperature	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.
Sarnafil® G 410-12 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) and extruded polystyrene (XPS) 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

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

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 for Sarnafil® G 410-EL types system fully bonded for exposed roofs.
Fully adhered roof surfaces and junction areas:
The roof waterproofing membrane is bonded to substrate by contact adhesive Sarnacol® 2170/2172. Seam overlaps are welded by hot air.
Adhering flashings

Sarnafil® G 410-12 EL is adhered to substrate layers such as reinforced concrete, rendering, timber panels, metal sheets etc. using Sarnacol® 2170/2172 adhesive.
Welding Method:
Overlap seams are welded by electric heat 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
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 should be minimum 20 mm.
The seams must be mechanically tested with screw drivers to ensure the integrity / completion of the weld. Any imperfections must be rectified by hot air welding.

LIMITATIONS

Geographical / Climate
The use of Sarnafil® G 410-12 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.

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.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data and uses.

ECOLOGY, HEALTH AND SAFETY

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)
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.

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.

TECHNICAL ENQUIRIES
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