

PRODUCT DATA SHEET

Sarnafil® G 410-15 L Felt

POLYMERIC MEMBRANE FOR ADHERED ROOF WATERPROOFING

DESCRIPTION

Sarnafil® G 410-15 L Felt is a PVC, multi-layer, lacquered, matt finish, weldable sheet membrane for roof waterproofing. Contains a glass fibre reinforcing inlay, ultraviolet light stabilisers and flame retardants to provide a low maintenance and durable membrane. It can be quickly installed as a fully bonded system or as a loose laid ballasted system. Thickness 1,5 mm.

USES

Sarnafil® G 410-15 L Felt may only be used by experienced professionals.

Waterproofing membrane for:

- Fully bonded, exposed roofs
- Ballasted roofs (e.g. Green roofs, Utility roofs, Inverted roofs, Gravel roofs)

CHARACTERISTICS / ADVANTAGES

- Proven performance over decades
- Lacquer coated surface
- Various colours available
- Fast installation with Sarnacol® adhesives
- Resistant to UV exposure
- High dimensional stability from glass fleece inlay
- High water vapour permeability
- Resistant to all common environmental influences
- Resistant to mechanical influences
- Resistant to micro-organisms
- Heat weldable
- Recyclable (Delete if recycling facilities or recycling offerings for roofing membranes are not available in local country)

SUSTAINABILITY

- 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
- BRE Environmental Product Declaration (EPD)

APPROVALS / STANDARDS

- CE Marking and Declaration of Performance to EN 13956 - Polymeric sheets for roof waterproofing
- FM Approved, Certificate of Compliance, Sarnafil® G 410 EL Felt, Approval Identification No. 3047304

PRODUCT INFORMATION

Chemical base	Polyvinyl Chloride (PVC)	
Packaging	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
Appearance / Colour	Surface:	matt
	Colours:	
	Top Surface:	light grey (nearest RAL 7047) lead grey (Sika colour no. 9500)
	Bottom surface:	dark grey
	Top surface colour available in other colours subject to minimum order quantities.	
Shelf life	5 years from date of production.	
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.	
Product Declaration	EN 13956 - Polymeric sheets for roof waterproofing	
Visible Defects	Pass	(EN 1850-2)
Length	15,00 m (-0 / +5 %)	(EN 1848-2)
Width	2,00 m (-0,5 / +1 %)	(EN 1848-2)
Effective Thickness	1,5 mm (-5 / +10 %)	(EN 1849-2)
Overall Thickness	1,5 mm (-5 / +10 %)	(GB 12952)
Straightness	≤ 30 mm	(EN 1848-2)
Flatness	≤ 10 mm	(EN 1848-2)
Mass per unit area	2,20 kg/m ² (-5 / +10 %)	(EN 1849-2)

TECHNICAL INFORMATION

Resistance to Impact	hard substrate	≥ 500 mm	(EN 12691)
	soft substrate	≥ 1250 mm	
		watertight	(GB/T20624.2)
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	
		watertight	(GB/T328.25)
Tensile Strength	longitudinal (md) ¹⁾	≥ 650 N/50 mm	(EN 12311-2)
	transversal (cmd) ²⁾	≥ 650 N/50 mm	
		≥ 120 N/cm	(GB/T328.9)
¹⁾ md = machine direction ²⁾ cmd = cross machine direction			

Elongation	longitudinal (md) ¹⁾	≥ 65 %	(Standard)
	transversal (cmd) ²⁾	≥ 65 %	
		≥ 100 %	(GB/T328.9)
	¹⁾ md = machine direction ²⁾ cmd = cross machine direction		
Dimensional Stability	longitudinal (md) ¹⁾	≤ 0,2 %	(EN 1107-2)
	transversal (cmd) ²⁾	≤ 0,1 %	
		≤ 0,1%	(GB/T328.13)
	¹⁾ md = machine direction ²⁾ cmd = cross machine direction		
Tear Strength	≥ 220 N		(GB/T328.19)
Joint Peel Resistance	Failure mode: C, no failure of the joint		(EN 12316-2)
	≥ 3 N/mm		(GB/T328.21)
Joint Shear Resistance	≥ 600 N/50 mm		(EN 12317-2)
Foldability at Low Temperature	≤ -25 °C		(EN 495-5)
	no crack		(GB/T328.15)
Reaction to Fire	Class E	(EN ISO 11925-2, classification to EN 13501-1)	
	E		(GB 8624 / EN 13501-1)
Effect of Liquid Chemicals, Including Water	Tensile strength retention	≥ 85%	(GB 12952)
	Elongation retention	≥ 80%	
	Low temperature bend	no crack	
Retention of Properties after Heat Ageing	Tensile strength retention	≥ 85%	(GB/T18244)
	Elongation retention	≥ 80%	
	Low temperature bend	no crack	
Resistance to UV Exposure	Pass (> 5000 h / grade 0)		(EN 1297)
Artificial Ageing	Tensile strength retention	≥ 85%	(GB/T18244)
	Elongation retention	≥ 80%	
	Low temperature bend	no crack	
Water Vapour Transmission	μ = 15 000		(EN 1931)
Water Absorption	wet weight	≤ 4%	(GB 12952)
	dry weight	≥ -0.4%	
Watertightness	Pass		(EN 1928)
	Watertight		(GB/T328.10)
Solar Reflectance	0,80		(GJB 2502.2)
Solar Reflectance Index	106 (white, initial)		(ASTM E 1980)

SYSTEM INFORMATION

System Structure

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

- Sarnafil® G 410-12EL sheet for detailing
- Sarnafil® Metal Sheet
- Sarnabar®
- Sarna Seam Cleaner
- Sarnacol® 2170 / 2172 Spray (contact adhesive)
- Sarna Cleaner

Ancillary Products: Prefabricated parts, roof drains, scuppers, walkway

pad, decor profiles and protection sheets.

Compatibility	Not compatible in direct contact with bitumen, tar, fat, oil, solvent containing materials and other plastic materials, e.g. expanded polystyrene (EPS), extruded polystyrene (XPS), polyurethane (PUR), polyisocyanurate (PIR) or phenolic foam (PF). These materials could adversely affect the product properties.
----------------------	---

APPLICATION INFORMATION

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

SUBSTRATE QUALITY

The substrate surface must be uniform, smooth and free of any sharp protrusions or burrs, etc. Sarnafil® G 410-15 L Felt 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 Sarna Cleaner before adhesive is applied.

APPLICATION

Installation procedure

Strictly follow installation procedures as defined in method statements, application manuals and working instructions which must always be adjusted to the actual site conditions.

Fixing method

The roof waterproofing membrane is installed by loose laying and covered with ballast according to local wind loading conditions. Mechanical fixing along the roof perimeter with Sarnabar® including S-Welding Cord must be used to keep membrane in place. Flat roofs with a minimum 50 mm thick gravel ballast and protective layer:

Install S-Felt protective layer or Sarnafil® Protective Sheet.

Evenly spread washed gravel of 8-16 of 16-32 mm diameter.

Hot welding overlap seams

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. The effective width of welded overlaps by hot air must be minimum 20 mm.

Fully bonded roof surfaces and flashings

The membrane is bonded to the substrate and flashing by using Sarnacol® 2170 / 2172 Spray contact adhesive.

Testing overlap seams

The seams must be mechanically tested with screwdriver or steel needle to ensure the integrity/completion of the weld. Any imperfections must be rectified by hot air welding.

FURTHER DOCUMENTS

Installation

- Application Manual

IMPORTANT CONSIDERATION

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

- Ensure Sarnafil® G 410-15 L Felt is prevented from direct contact with incompatible materials (refer to compatibility section).
- Do not apply to wet, damp or unclean surfaces.
- 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.

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.

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 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)

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 Limited (Vietnam)

Nhon Trach 1 Industrial Zone,
Nhon Trach Dist., Dong Nai Province,
Vietnam
Tel: (84-251) 3560 700
Fax: (84-251) 3560 699
sikavietnam@vn.sika.com



Product Data Sheet

Sarnafil® G 410-15 L Felt
March 2020, Version 01.01
020905052150155003

SarnafilG410-15LFelt-en-VN-(03-2020)-1-1.pdf