Product Data Sheet
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Construction

Sikaplan®-12 G

Polymeric membrane for roof waterproofing

Product Description

Sikaplan® -12 G (thickness 1.2 mm) is a polyester reinforced multi-layer, synthetic roof waterproofing sheet based on premium-quality polyvinyl chloride (PVC) according to EN 13956.

Uses

Roof waterproofing membrane for exposed flat roofs:

- Loose laid and mechanically fastened

Characteristics / Advantages

- Outstanding resistance to weathering, including permanent UV irradiation
- High resistance to ageing
- High resistance to hailstones
- Resistant to all common environmental influences
- High resistance to mechanical influences
- High tensile strength
- Excellent flexibility in cold temperatures
- High water vapour permeability
- Excellent weldability
- Outstanding weldability
- Recyclable

Approval / Standards

- Polymeric sheets for roof waterproofing according to EN 13956, certified by notified body 1213-CPD-3917 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} (t1), BROOF(t3).
- Official Quality Approvals and Agrement Certificates and approvals.
- Monitoring and assessment by approved laboratories.
- Quality Management system in accordance with EN ISO 9001/14001.
- Production according to responsible Care policy of Chemical Industry.

Appearance / Colours

Surface.	structured
Colours:	
Top surface:	light grey (nearest RAL 7047) slate grey (nearest RAL 7015)
Bottom surface:	dark grey

Top surface of sheet in other colours available on request, subject to minimum order quantities.

Packaging

Packing unit:	up to 27 rolls per pallet			
Roll length:	20.00 m			
Roll width:	0.77 m	1.00 m	1.54 m	2.00 m
Roll weight:	23.10 kg	30.00 kg	46.20 kg	60.00 kg

Storage Conditions / Shelf-Life

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

Technical Data

Product Declaration	EN 13956 : 2005	
Visible defects	Pass	EN 1850-2
Length	20 m (- 0 % / + 5 %)	EN 1848-2
Width	1.54 / 2.00 m (- 0.5 % / + 1 %)	EN 1848-2
Straightness	≤ 30 mm	EN 1848-2
Flatness	≤ 10 mm	EN 1848-2
Effective thickness	1.2 mm (- 5 % / + 10 %)	EN 1849-2
Mass per unit area	1.5 kg/m² (- 5 % / + 10 %)	EN 1849-2
Water tightness	Pass	EN 1928
Effects of liquid chemicals, including water	On request	EN 1847
External fire performance:		ENV 1187
	BROOF(t1) < 20°	
Part 1-4	BROOF(t3) < 10°	EN 13501-5
Reaction to fire	Class E	EN ISO 11925-2, classification to EN 13501-1
Hail resistance:		EN 13583
rigid substrate	≥ 17 m/s	
flexible substrate	≥ 25 m/s	
Joint peel resistance	≥ 300 N/50 mm	EN 12316-2
Joint shear resistance	≥ 600 N/50 mm	EN 12317-2
Water vapour transmission properties	μ = 20'000	EN 1931
Tensile strength		EN 12311-2
longitudinal (md)[1)]	≥ 1000 N/50 mm	
transversal (cmd)[2)]	≥ 900 N/50 mm	
Elongation,		EN 12311-2
longitudinal (md)[1)]	≥ 15 %	
transversal (cmd)[2)]	≥ 15 %	
Resistance to impact,		EN 12691
hard substrate	≥ 300 mm	
soft substrate	≥ 600 mm	
Tear strength		EN 12310-2
longitudinal (md)[1)]	≥ 150 N	
transversal (cmd)[2)]	≥ 150 N	
Dimension stability,		EN 1107-2
longitudinal (md)[1)]	≤ 0.5%	
transversal (cmd)[2)]	≤ 0.5 %	
Foldability at low temperature	≤ -25 °C	EN 495-5
UV exposure	Pass (> 5000 h)	EN 1297

[1)] md = machine direction
[2)] cmd = cross machine direction

Syste Information

System Structure

Ancillary products according to local price list:

- Sikaplan®-18 D, un-reinforced sheet for detailing
- Moulded corner pieces, prefabricated corners and pipe flashings
- Sika-Trocal® Metal Sheet Type S
- Sika-Trocal® Cleaner 2000
- Sika-Trocal® Cleaner L 100
- Sika-Trocal® Welding Agent
- Sika-Trocal® Seam Sealant
- Sika-Trocal® C 733 (Contact adhesive)

Application Details

Substrate Quality

The substrate surface must be uniform, smooth and free of any sharp protrusions or burrs, etc.

Sikaplan® -12 G must be separated from any incompatible substrates by an effective separation layer to prevent accelerated ageing. Prevent 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) as this could adversely affect the product properties.

Application Conditions / Limits

Temperature

The use of Sikaplan® -12 G membrane is limited to geographical locations with average monthly minimum temperatures of -25 °C.
Permanent ambient temperature during use is limited to +50 °C.

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.

Installation Instructions

Installation Method / Tools

Installation procedure:
According to the valid installation instructions for Sikaplan®-G -type system for mechanically fastened roofs.

Fixing Method:
Loosely laid and mechanically fastened.
The roof waterproofing sheet is installed by loose laying and mechanical fastening in seam overlaps or independent from overlaps.

Welding Method:
Overlap seams are welded by electric hot welding equipment, such as manual hot air welding machines and pressure rollers or automatic hot air welding machines with controlled hot air temperature capability of minimum 600 °C.

Recommended type of equipment: LEISTER TRIAC PID for manual welding and
LEISTER VARIMAT 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 should be minimum 20 mm.
The seams must be mechanically tested with screw driver or steel needle to ensure the integrity/completion of the weld. Any imperfections must be rectified by hot air welding.
Cold welding of sheet overlaps with Sika-Trocal® Welding Agent is permitted for small repair work within application limits. Cold welded seam edges must be sealed with Sika-Trocal® Seam Sealant after testing.

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Notes on Installation / Limits	Installation works must be carried out only by Sika instructed contractors for roofing. Temperature limits for the installation of the membrane: Substrate temperature: -25 °C min. / +60 °C max. Ambient temperature: -15 °C min. / +60 °C max. 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.
Value Base	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 performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.
Ecology, Health and Safety Information	The product does not fall within the EU-regulation of hazardous goods. As a result, a material safety data sheet following EU-Guideline 91/155 EWG is not needed to bring the product to the market, transport or use it. The product does not damage the environment when used as specified.
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.

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