

Sika-Trocal® SGmA 1.5 mm

Polymeric membrane for roof waterproofing

Product Description	Sika-Trocal® SGmA 1.5 mm is a multi-layer, synthetic roof waterproofing sheet based on premium-quality polyvinyl chloride (PVC) with inlay of glass non-woven according to EN 13956.	
Uses	Roof waterproofing membrane for roofs with ballast (e.g. gravel, concrete slabs, green roof (intensive, extensive), terraces with pedestrian traffic): <ul style="list-style-type: none">■ Loose laid with ballast■ Green roofs■ Utility roofs	
Characteristics / Advantages	<ul style="list-style-type: none">■ High resistance to ageing■ Resistant to all common environmental influences■ High resistance to mechanical influences■ Resistant to micro-organisms■ High tensile strength■ High dimensional stability■ Excellent flexibility in cold temperatures■ High water vapour permeability■ Outstanding weldability■ Resistance against weathering during installation period■ Recyclable	
Approval / Standards	<ul style="list-style-type: none">■ Polymeric sheets for roof waterproofing according to EN 13956, certified by notified body 1213-CPD-4125/4127 and provided with the CE-mark.■ Reaction to fire according to EN 13501-1.■ Root penetration resistance tested according to FLL-Test Procedure.■ Official Quality Approvals and Agreement 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:	slightly structured
	Colours:	
	Top surface:	beige
	Bottom surface:	beige
Packaging	Packing unit:	15 rolls per pallet
	Roll length:	20.00 m
	Roll width:	2.00 m
	Roll weight:	76.00 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 during correct storage.	



Technical Data

Product Declaration	EN 13956	
Visible defects	Pass	EN 1850-2
Length	15.00 / 20.00 m (- 0 % / + 5 %)	EN 1848-2
Width	2.00 m (- 0.5 % / + 1 %)	EN 1848-2
Straightness	≤ 30 mm	EN 1848-2
Flatness	≤ 10 mm	EN 1848-2
Effective thickness	1.5 mm (- 5 % / + 10 %)	EN 1849-2
Mass per unit area	1.9 kg/m ² (- 5 % / + 10 %)	EN 1849-2
Water tightness	Pass	EN 1928
Effects of liquid chemicals, including water	On request	EN 1847
Reaction to fire	Class E	EN ISO 11925-2, classification to EN 13501-1
Joint shear resistance	≥ 500 N/50 mm	EN 12317-2
Water vapour properties μ	20'000	EN 1931
Tensile stress		EN 12311-2
longitudinal (md) ¹⁾	≥ 9.5 N/mm ²	
transversal (cmd) ²⁾	≥ 8.5 N/mm ²	
Elongation		EN 12311-2
longitudinal (md) ¹⁾	≥ 200 %	
transversal (cmd) ²⁾	≥ 200 %	
Resistance to impact		EN 12691
hard substrate	≥ 600 mm	
soft substrate	≥ 1000 mm	
Resistance to static		EN 12730
load soft substrate	≥ 20 kg	
rigid substrate	≥ 20 kg	
Resistance to root penetration	Pass	EN 13948
Dimension stability		EN 1107-2
longitudinal (md) ¹⁾	≤ 0.3 %	
transversal (cmd) ²⁾	≤ 0.3 %	
Foldability at low temperature	≤ -25 °C	EN 495-5

¹⁾ md = machine direction

²⁾ cmd = cross machine direction

System Information

System Structure

Ancillary products according to local price list:

- Sika-Trocal® S 1.5 mm unreinforced sheet for detailing
 - Sika-Trocal® SG, 1.5 mm roofing sheet for exposed connections and flashings
 - Moulded corner pieces, prefabricated corners and pipe flashings
 - Sika-Trocal® Metal Sheet Type S
 - Sika-Trocal® Cleaner L 100
 - Sika-Trocal® Welding Agent
 - Sika-Trocal® Seam Sealant
 - Sika-Trocal® C 733 (Contact adhesive)
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Application Details

Substrate Quality

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

Sika-Trocal® SGmA 1.5 mm 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 Sika-Trocal® SGmA 1.5 mm membranes 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, PF. Not resistant to tar, bitumen, oil and solvent containing materials.

Resistance

Not applicable for permanent exposure to UV irradiation.

Installation Instructions

Installation Method / Tools

Installation procedure:

According to the valid installation instructions of manufacturer for Sika-Trocal® SGmA-types for ballasted roof system.

Fixing Method:

Loosely laid and covered with ballast. Mechanical fixing at the roof perimeter is recommended to keep membrane in place.

The roof waterproofing membrane is installed by loose laying and covered with ballast according to local wind load situation. If ballast weight is insufficient to restrain against wind uplift the membrane may be fixed mechanically in seam overlap or independent from overlap.

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

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 works. The effective width of welded overlaps should be minimum 20 mm.

If local weather conditions allow cold welding of sheet overlaps with Sika-Trocal® Welding Agent, it is permitted for Sika-Trocal® SGmA, 1.5 mm system with ballast. The effective width of welded overlap by cold welding must be 30 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.

Edges must be sealed by Sika-Trocal® Seam Sealant.

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. for hot air welding
 +5 °C min. / +60 °C max. for cold welding

Ambient temperature: -15 °C min. / +60 °C max. for hot air welding
 +5 °C min. / +60 °C max. for cold welding

Installation of some ancillary products, e.g. contact adhesives/thinners is limited to temperatures above +5 °C. Please refer to the respective 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 EC-regulation of hazardous goods. As a result, a material safety data sheet following EC-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 note: 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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