

PRODUCT DATA SHEET

Sikaplan® SGK-18

POLYMERIC MEMBRANE FOR ADHERED ROOF WATERPROOFING



DESCRIPTION

Sikaplan® SGK-18 is a multi-layer, synthetic roof waterproofing sheet based on premium-quality polyvinyl chloride (PVC) with inlay of glass non-woven and polyester fleece backing according to EN 13956.

USES

Roof waterproofing membrane for exposed flat roofs, adhered by using Sika-Trocal® C-300 adhesive.

Approved Substrates:

- Slated/mineralized bitumen sheets; new and aged
- EPS: compressive strength ≥ 100 kPa (10 %), Density >20 kg/m³
- OSB, plywood, fibre cement boards
- Mineral fibre boards (e.g. Bondrock MV)
- PUR/PIR insulation boards, (e.g. Sarnatherm PIR GT, VV, Kingspan TR 27)
- Concrete, lightweight concrete
- Metal

CHARACTERISTICS / ADVANTAGES

- Resistant to permanent UV irradiation
- High dimensional stability due to glass fleece inlay
- Resistant against impact load and hail
- High water vapour permeability
- Resistant to all common environmental influences
- Compatible to old bitumen due to felt backing
- Hot air welding without use of open flames
- Recyclable

APPROVALS / CERTIFICATES

- Polymeric sheets for roof waterproofing according to EN 13956, certified by notified body 1213-CPD-4125 and provided with the CE marking.
- Reaction to fire according to EN 13501-1.
- External fire performance tested according to ENV 1187 and classified according to EN 13501-5: BROOF(t1) and BROOF(t3).
- 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.

PRODUCT INFORMATION

| | | |
|----------------------------|--|--|
| Packaging | Roll length: | 12.50 m |
| | Roll width: | 2.00 m |
| | Roll weight: | 62.50 kg |
| Appearance / Colour | Surface: | matt |
| | Colours: | |
| | Top surface: | light grey (nearest RAL 7047) |
| | Bottom surface: | dark grey (PVC-p membrane) white (polyester felt) |
| Shelf life | 5 years from date of production in unopened, undamaged and original packaging. Product does not expire during correct storage. | |

| | | |
|----------------------------|---|-------------|
| 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. | |
| Product Declaration | EN 13956 | |
| Visible Defects | Pass | (EN 1850-2) |
| Length | 12.50 m (-0 % / +5 %) | (EN 1848-2) |
| Width | 2.00 m (-0.5 % / +1 %) | (EN 1848-2) |
| Effective Thickness | 1.8 mm (-5 % / +10 %) | (EN 1849-2) |
| Straightness | ≤ 30 mm | (EN 1848-2) |
| Flatness | ≤ 10 mm | (EN 1848-2) |
| Mass per unit area | 2.5 kg/m ² (-5 % / +10 %) | (EN 1849-2) |

TECHNICAL INFORMATION

| | | | |
|---|--|---------------|--|
| Resistance to Impact | hard substrate | ≥ 800 mm | (EN 12691) |
| | soft substrate | ≥ 1500 mm | |
| Hail Resistance | rigid substrate | ≥ 25 m/s | (EN13583) |
| | flexible substrate | ≥ 32 m/s | |
| Tensile Strength | longitudinal (md) ¹⁾ | ≥ 600 N/50 mm | (EN 12311-2) |
| | transversal (cmd) ²⁾ | ≥ 600 N/50 mm | |
| 1) md - machine direction 2) cmd - cross machine direction | | | |
| Elongation | longitudinal (md) ¹⁾ | ≥ 50 % | (EN 12311-2) |
| | transversal (cmd) ²⁾ | ≥ 50 % | |
| 1) md - machine direction 2) cmd - cross machine direction | | | |
| Dimensional Stability | longitudinal (md) ¹⁾ | ≤ 0.3 % | (EN 1107-2) |
| | transversal (cmd) ²⁾ | ≤ 0.3 % | |
| 1) md - machine direction 2) cmd - cross machine direction | | | |
| Tear Strength | longitudinal (md) ¹⁾ | ≥ 150 N | (EN 12310-2) |
| | transversal (cmd) ²⁾ | ≥ 150 N | |
| 1) md - machine direction 2) cmd - cross machine direction | | | |
| Joint Peel Resistance | ≥ 300 N/50 mm | | (EN 12316-2) |
| Joint Shear Resistance | ≥ 500 N/50 mm | | (EN 12317-2) |
| Foldability at Low Temperature | ≤ -25°C | | (EN 495-5) |
| External Fire Performance | BROOF(t1) <20° / ≥20°, BROOF(t3) <10° / <70° | | (EN 13501-5) |
| Reaction to Fire | Class E | | (EN ISO 11925-2, classification to EN 13501-1) |
| Effect of Liquid Chemicals, Including Water | On request | | (EN 1847) |
| Artificial Ageing | Pass (> 5 000 h / grade 0) | | (EN 1297) |
| Water Vapour Transmission | μ = 20 000 | | (EN 1931) |
| Watertightness | Pass | | (EN 1928) |

SYSTEMS

System Structure

The following accessories shall be used:

- Sikaplan® D-18 unreinforced sheet for detailing.
- Sikaplan® G-15 or Sikaplan® SG-15 roofing sheet for stripes.
- Moulded corner pieces, prefabricated corners and pipe flashings
- Sika-Trocal® Metal Sheet Type S
- Sarnabar for peel stop
- Sika-Trocal® Cleaner-2000
- Sika-Trocal® Cleaner L-100
- Sika-Trocal® C-300 (One-component PU adhesive for surface bonding)
- Sika-Trocal® C-733 (Contact adhesive)

Compatibility

The PVC compound is not compatible with direct contact to other plastics, e.g. EPS, XPS, PUR, PIR or PF.
The PVC compound is not resistant to tar, bitumen, oil and solvent containing materials.
Compatibility to bitumen or plastic surfaces below the membrane is achieved by incorporated Polyester fleece backing.

APPLICATION INFORMATION

Ambient Air Temperature -15 °C min. / +60 °C max.

Substrate Temperature -25 °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.

In case of adhesion by Sika-Trocal® C-300, all layers of the built-up and substrate must be secured against wind uplift.

The Polyester fleece laminated to Sikaplan® SGK-18 underside separates sufficiently from any incompatible substrate. It prevents from direct contact to bitumen or plastic material, e.g. expanded polystyrene (EPS), extruded polystyrene (XPS), polyurethane (PUR), polyisocyanurate (PIR) or phenolic foam (PF) for compatibility in the built-up.

APPLICATION

Installation works must be carried out only by Sika instructed contractors for roofing.

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.

APPLICATION METHOD / TOOLS

Installation procedure:

According to the valid installation instructions of manufacturer for Sikaplan® SGK-types for adhered system.

Fixing Method:

Partially adhered by Sika-Trocal® C-300 adhesive. Adhesive is applied to substrate in strips out of the container and spread into thin film by squeegee. The sheet is rolled out into adhesive bed to bond instantly to the polyester fleece surface. The roof perimeter is mechanically fixed by Sarnabar to create a peel stop.

Loosely laid and mechanically fastened:

The roof waterproofing membrane is installed by loose laying and mechanical fastening in seam overlaps or independent from overlaps.

Recommended type of equipment:

- Leister® Triac, for manual welding
- Sarnamatic®, 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.

IMPORTANT CONSIDERATIONS

Geographical / Climate

The use of Sikaplan® SGK-18 membranes is limited to geographical locations with average monthly minimum temperatures of -25 °C. Permanent ambient temperature during use is limited to +50 °C.

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 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

Fresh air ventilation must be ensured, when working (welding) in closed rooms.

REGULATION (EC) NO 1907/2006 - REACH

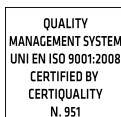
This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in 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)

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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