

PRODUCT DATA SHEET

Sikaplan® S-20

Polymeric PVC membrane for mechanically fastened roof waterproofing

PRODUCT DESCRIPTION

Sikaplan® S-20 (thickness 2,0 mm) is a homogeneous, multi-layer, synthetic roof waterproofing sheet based on polyvinyl chloride (PVC) according to EN 13956.

USES

Sikaplan® S-20 may only be used by experienced professionals.

Waterproofing membrane for:

- Mechanically fastened roofing systems

CHARACTERISTICS / ADVANTAGES

- Resistant to permanent UV exposure
- Resistant to permanent wind exposure
- Resistant against impact load and hail
- High water vapour permeability
- Resistant to all common environmental influences
- Hot air and solvent weldable
- No open flame equipment required

PRODUCT INFORMATION

Product Declaration	EN 13956: Polymeric sheets for roof waterproofing		
Packaging	Roll length:	20 m	15 m
	Roll width:	0,60 m	1,10 m
	Roll weight:	30,0 kg	41,3 kg
Refer to current price list for packaging variations. All 1,1 m wide sheets of Sikaplan®-S come with a PE anti bond tape to one long edge.			
Shelf Life	5 years from date of production		
Storage Conditions	Product must be stored in original unopened and undamaged 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.		

Appearance / Colour	Surface	Smooth
	Colours	
	Top surface	Light grey (~RAL 7047) Lead grey (~RAL 7012) Traffic white (~RAL 9016)
	Bottom surface	Dark grey
	Top surface of sheet, other colours on request, subject to minimum order quantities.	
Visible Defects	Pass	(EN 1850-2)
Length	15,00 m (-0 / +5 %)	(EN 1848-2)
Width	0,60 m, 1,10 m, 2,00 m (-0,5 / +1 %)	(EN 1848-2)
Effective Thickness	2,0 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	≥ 600 mm	(EN 12691)
	soft substrate	≥ 900 mm	
Hail Resistance	rigid substrate	≥ 31 m/s	(EN 13583)
	flexible substrate	≥ 36 m/s	
Tensile Strength	longitudinal (md) ¹⁾	≥ 12 N/mm ²	(EN 12311-2)
	transversal (cmd) ²⁾	≥ 12 N/mm ²	
	¹⁾ md = machine direction ²⁾ cmd = cross machine direction		
Elongation	longitudinal (md) ¹⁾	≥ 250 %	(EN 12311-2)
	transversal (cmd) ²⁾	≥ 250 %	
	¹⁾ md = machine direction ²⁾ cmd = cross machine direction		
Tear Strength	longitudinal (md) ¹⁾	≥ 100 N	(EN 12310-2)
	transversal (cmd) ²⁾	≥ 100 N	
	¹⁾ md = machine direction ²⁾ cmd = cross machine direction		
Joint Peel Resistance	Failure mode: C, no failure of the joint		(EN 12316-2)
Joint Shear Resistance	≥ 500 N/50 mm		(EN 12317-2)
Dimensional Stability	longitudinal (md) ¹⁾	≤ 2.0 %	(EN 1107-2)
	transversal (cmd) ²⁾	≤ 2.0 %	
	¹⁾ md = machine direction ²⁾ cmd = cross machine direction		
Foldability at Low Temperature	≤ -25 °C		(EN 495-5)
Water Tightness	Pass		(EN 1928)
Water Vapour Transimission	μ = 20 000		(EN 1931)
Effect of Liquid Chemicals, Including Water	Resistant to many chemicals. Contact Sika Technical Services for additional information.		(EN 1847)
UV Exposure	Pass (> 5 000 h / grade 0)		(EN 1297)

SYSTEM INFORMATION

System Structure

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

- Sikaplan® S-20 un-reinforced sheet for detailing
- 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)

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. These materials could adversely affect the product properties.

APPLICATION INFORMATION

Ambient Air Temperature

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

Substrate Temperature

-10 °C min. / +60 °C max. for hot air welding
+5 °C min. / +60 °C max. for cold welding

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.

FURTHER DOCUMENTS

Installation instructions

- Sikaplan®-S -types for mechanically fastened roofing systems.

LIMITATIONS

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

- Ensure Sikaplan® S-20 is prevented from direct contact with incompatible materials (refer to compatibility section).
- The use of Sikaplan® S-20 membrane is limited to geographical locations with average monthly minimum temperatures of -10 °C. Permanent ambient temperature during use is limited to +50 °C.
- 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.

ECOLOGY, HEALTH AND SAFETY

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

REGULATION (EC) NO 1907/2006 - REACH

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).

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
- Semi-automatic: Leister Triac Drive

SUBSTRATE QUALITY

The substrate surface must be uniform, smooth and free of any sharp protrusions or burrs, etc. Sikaplan® S-20 must be separated from any incompatible substrates / materials by an effective separation layer to prevent accelerated ageing.

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 - General

The waterproofing membrane is installed by loose laying with mechanical fastening in seam overlaps or independent from overlaps with the Sika-Trocacal® disc system. Overlap seams are hot welded using specialised hot air equipment.

Hot welding method

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 must be a minimum of 20 mm.

Cold welding method

If the temperatures are suitable, overlap seams can be welded using Sika-Trocacal® Welding Agent. The effective width of cold welded overlaps must be a minimum of 30 mm. Cold welded seam edges must be sealed with Sika-Trocacal® Seam Sealant after testing.

Testing overlap seams

The seams must be mechanically tested with a screwdriver (rounded edges) to ensure the integrity/completion of the weld. Any imperfections must be rectified by hot air welding or cold welding if temperature conditions are satisfied.

LOCAL RESTRICTIONS

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

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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Product Data Sheet

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