

S-Vap 5000E SA

Self-adhesive Vapour Control Layer & Carrier Membrane

Product Description

S-Vap 5000E SA is a multi-layer self-adhesive vapour control layer and carrier membrane made of polymer modified bitumen with a glass-fibre mat reinforcement and an aluminium foil as top layer.

Uses

S-Vap 5000E SA is applied over most common substrates such as concrete, metal decks, plywood, timber boards, oriented strand fibre board (OSB) deck and Decotherm insulation.

Special application within adhered systems:

- Adhered system: Self-adhesion strength limits max wind up lift design load
- Combined adhered system: Self adhesion strength is part of wind-up lift design

Temporary waterproofing layer: S-Vap 5000E SA can also be used as temporary waterproofing layer, as top layer can be left exposed for up to 4 weeks.

Important: If used in an adhered roof build-up, additional installation requirements must be applied e.g. use of Primer 600 to achieve full self adhesion strength:

- Self adhesion strength on metal decks, max. design load of 2.4 kN/m²
- Self-adhered on concrete deck in combination with Primer 600, max. design load 2.8 kN/m².
- Self-adhered on plywood/OSB deck in combination with Primer 600, max. design load 2.8 kN/m².

Characteristics / Advantages

- Ease and speed of installation, due to self-adhesive property of back layer and its specific weight.
- Can be used in a totally adhered roof build-up. No additional fasteners required for securing the thermal insulation boards to the structural deck.
- Can be used as temporary waterproof layer for up to 4 weeks, as a top layer without the need for additional weight/ballast and/or mechanical fastening.
- Due to its high adhesion strength can withstand high wind loads; design load between 2.4 kN/m² to 2.8 kN/m².
- High adhesion/bonding strength leading to an air tight roof construction.
- High tearing resistance under foot traffic makes it ideal for use on profiled metal decks.
- High water vapour resistance makes it suitable in combination with all membranes.
- Wide application range, in regard to use in different system applications and/or in combination with different structural deck types, substrates.
- Improved fire resistance achieved by added flame-retardant.
- Can be bonded on roof slopes and up vertical abutments.

Tests

Approvals / Standards

- CE marking according EN 13970
- Reaction to fire according to EN 13 501-1
- Fire behaviour according BS 476-6,7
- Quality management system EN ISO 9001/14001

Product Data

Form

Appearance	Surface:	Aluminium foil with S-Vap 5000E SA printed on it.
Colour	Top surface:	Aluminium matt and product name printed in blue. Additionally a line to mark overlap area (7.5 cm), on one roll side.
	Bottom surface:	White/black with release liner (PE-LD foil)
Packaging	Packing unit:	see price list
	Roll length:	30.00 m
	Roll width:	1.38 m
	Roll weight:	28.00 kg

Storage

Storage Conditions	Store rolls in vertical position and protected against sunlight, rainfall, snow and heat. During cold weather the rolls shall be protected against frost. Do not stack pallets of rolls during transport or storage.
Shelf-Life	The product must be installed within 12 months of production date.

Technical Data

Product Declaration		EN 13970
Chemical Basis	Polymer modified bitumen (self adhesive) with a glass fleece carrier, a composite aluminium foil as top layer and a PE-LD release liner.	
Length	30.00 m (+ 2 %)	EN 1848-2
Width	1.38 m (+ / - 5 mm)	EN 1848-2
Thickness	0.60 mm (+ / - 10 %)	EN 1849-2
Mass per unit area	600 g/m ² (+ / - 100 g)	EN 1849-2
Straightness	Pass	EN 1848-1
Visible defects	Pass	EN 1850-1
Reaction to fire, freely suspended	Class E	EN ISO 11952-2: 2002, classification to EN 13501-1
Water vapour permeability	> 1800m	EN 1931
Water tightness	Pass	EN 1928
Tensile strength	≥ 440 N	EN 29073-3
Elongation at break	≥ 2 %	EN 29073-3

Resistance to impact	Ø 10 mm	EN 12 691
Cold bending test	-20 °C	EN 495-5
Tear resistance (nail shank)	≥ 100 N	EN 12 310-1
Joint peel strength	≥ 50 N/50 mm	EN 12 316-2
Joint shear strength	≥ 5 N/50 mm	EN 12 317-2
Durability against alkaline	Pass	EN 1847
Durability against aging	Pass	EN1296/EN1931

System Information

System Structure:

- Primer 600 (on concrete and plywood/OSB substrates, if required)
- Decostik SP, to adhere specified insulation board onto S-Vap 5000E SA
- Decotherm – Tissue faced PIR Thermal Insulation
- S-Vap 5000E SA – Multi Layer self adhesive carrier membrane

Application Details

Consumption ~ 1.06m² / square metre surface

Substrate Quality

S-Vap 5000E SA is released on all major structural decks; concrete decks, corrugated/profiled metal deck, and plywood/OSB decks. Any other substrate type requires approval by Sika.
Generally, substrates must be in plane, even and clean; further free of dust, oil and grease.
Depending on substrate type and roofing assembly (system application) S-Vap 5000E SA may only be used in combination with Primer 600.



Concrete deck:

In plane concrete deck and or/levelled screed. Substrate shall fulfil general requirements and shall not contain any pointy and/or coarse-grained surface areas. Primer 600 must be used in any case, approx. 200 g/m² – 400 g/m² depending on surface smoothness and porosity, if used in an adhered system.

Plywood/OSB deck:

Substrate shall be clean and dry.
The substrate must be primed first approx. 200 g/m², if used in an adhered system.

Corrugated metal deck:

Corrugated metal deck shall be clean, dry and free of oil, dust and grease.
No primer is required.

Vertical areas / upstands and flashing

Flashings and terminations form the edges of the vapour control function and airtight layer; thus these must be executed with care (until top edge of the insulation boards).

- Without primer: Plywood, OSB, metallic substrates (free of oil and grease), plasticizer-free synthetics (except for rigid polystyrene), bituminous materials (after sand or slate chips surfacing has been removed)
- With Primer 600: Concrete, masonry, raw wood products, porous materials require 2 primer coatings, approx. 200 g/m² - 500 g/m².

Decootherm[®] Insulation:

Decootherm[®] Insulation shall be properly installed, smooth without steps at joints, clean, dry and free of oil, dust and grease.
The boards must be primed with Primer 600 at approximately 150 g/m²

Substrate Preparation	Remove loose ends, clean or prime depending on substrate.
Application Conditions / Limits	
Notes on Application/ Limits	Installation works shall be performed only by a QA Contractor where a Sika Liquid Plastics Product Guarantee is required.
Installation Instructions	
Application Guidline	Depending on system used (mechanically fastened/ballasted/adhered) refer to relevant system information.
Application Method	Fixing Method – Adhered Systems: S-Vap 5000E SA is adhered to the substrate. In case of a concrete or plywood/OSB substrate Primer 600 must be applied as substrate treatment, to achieve the required adhesion strength. An approved thermal insulation board must be selected. In an adhered system, the specified thermal insulation board is being adhered to the S-Vap 5000E SA, using Decostik SP adhesive. Finally S-Vap 5000E SA is adhered to the insulation boards, which are primed with Primer 600.



Installation Procedure

Before beginning adhere the S-Vap 5000E SA, the substrate must be checked (clean without any surface contaminations, free of foreign objects and or surface toppings, oil and grease free, and dry).

On profiled metal decks, the sheets must be laid in the direction of the deck, where the side/longitudinal seams are fully supported, positioned on the top flange of the profiled metal deck. At the end of the roll, an additional 20 cm wide S-Vap 5000E SA strip has to be adhered firmly on the already laid VCL sheets, positioned on centre and running perpendicular to the deck direction (laid rolls). This provides a firm backer to which the ends of the sheets can be adhered to.

S-Vap 5000E SA seams (side and end laps) are formed with an overlap of 7.5 cm by self-adhesion, no additional primer needed. To achieve tightly sealed seams the laps must be rolled down firmly with a pressure roller (silicone roller) or by applying pressure. If seams are not immediately closed after unrolling the S-Vap 5000E SA, all seams need to be properly cleaned with a proprietary solvent cleaner. Allow the cleaners to evaporate completely.

Roll out first S-Vap 5000E SA in the direction of the metal profile. Following rolls must be rolled out and aligned with the line marking which marks the overlap area at 7.5 cm. Adhere the first part of the self-adhesive vapour barrier and peel away the release liner sideways.

At T-joints the edge of the middle, covered sheet is to be bevelled (chamfered) at 45°. Using a silicone roller, all laps including the steps at bevels (chamfers) are to be firmly pressed together after being adhered into position. All flashings, upstands and penetrating elements e.g. vent pipe must be closed airtight, whereby the S-Vap 5000E SA must always be attached on the warm side of the insulation.

The full area of S-Vap 5000E SA must be pressed into place immediately after adhering, using pressure roller or similar.

OSB and Plywood boards of more than 50 cm width are not primed at the joints. Leave a strip of max. 10 cm width free of primer each side of the joint, to facilitate smaller movements of the boards. Where the width of the OSB or Plywood boards is less than 50 cm, the boards are primed with Primer 600 to a full spread.

If the S-Vap 5000E SA layer is to serve as temporary waterproofing during construction (4 weeks), a slope of at least 2 % (1:50) must be provided to ensure drainage. Roof drainage lines must be adequately sized.

When used as a carrier membrane

Any blisters in the S-Vap 5000E SA caused by trapped air or outgassing can be cut and resealed by applying pressure using a 40mm silicone seam roller. To retain the temporary waterproofing characteristics of the S-Vap 5000E SA, blisters should only be cut and resealed immediately prior to applying the base coat of the waterproofing system.

Tool Cleaning

Tools and equipment must be cleaned with cleaner immediately after use.

Notes on Installation/ Limits

Installation works shall be performed only by specialist contractors for roofing.

Temperature limits for the installation of the S-Vap 5000E SA:

Substrate temperature: at least +5 °C min.

Ambient temperature: at least +5 °C min.

Note:

The limiting factor in the wind uplift resistance of the adhered roofing assembly will be under the adhesion strength of the S-Vap 5000E SA to the substrate. See information under "Uses".

S-Vap 5000E SA is not suitable as permanent waterproofing. It is not designed as roofing membrane and therefore can not replace the waterproofing membrane.

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 A Safety Data Sheet following EC-Regulation 1907/2006, Article 31 is not needed to bring the product to the market, to transport or to use it. The product does not damage the environment when used as specified.

REACH **European Community Regulation on chemicals and their safe use (REACH: EC 1907/2006)**

This product is an article within the meaning 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. Therefore, there are no registration requirements for substances in articles within the meaning of Article 7.1 of the Regulation.

Based on our current knowledge, this product does not contain SVHC (substances of very high concern) from the candidate list published by the European Chemicals Agency in concentrations above 0.1 % (w/w).

Protective Measures .Local safety regulations must be observed.

Transportation Class The product is not classified as hazardous good for transport.

Disposal Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.

Setting

Setting Time Final strength is achieved after approx. 1 week, depending on the temperature and humidity.

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.

Disclaimer 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.



Specification assistance NBS is the industry standard specification system, which allows architects, specifiers and engineers to insert clauses into specifications by manufacturer and product, making the process quicker and more efficient. We are members of NBS Plus and therefore detailed up-to-date product information is readily available to create accurate specifications.

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Roofing

