

PRODUCT DATA SHEET

Sikatherm® EPS 100

FLAME RETARDANT, EXPANDED POLYSTYRENE BOARDS (EPS) WITH HIGH THERMAL INSULATION PROPERTIES



DESCRIPTION

Sikatherm® EPS 100 are boards of expanded polystyrene with high thermal insulating properties, which remain unaffected in time. Also available in graphite version.

USES

Thermal insulation underneath waterproofing layer in following roofing system structures:

- Sarnafil® S 327, TS 77 mechanically fastened single ply membrane systems
- Sikaplan® G, VG, VGWT, TM mechanically fastened single ply membrane systems
- Sarnafil® G 410, TG 66 loose laid ballast membrane systems
- Sikaplan® SGmA, TB loose laid ballast membrane systems

CHARACTERISTICS / ADVANTAGES

- Homogeneity of the physical and mechanical characteristics of the product and therefore isotropical behaviour
- Stability against tension, distortion, break, degradation and ageing.
- Ideal for new constructions and refurbishment projects
- Lightweight, applying thus low load on the roofing structure
- Available also in graphite version
- 100% recyclable

APPROVALS / CERTIFICATES

CE-marking and Declaration of Performance as Thermal insulation product for buildings – Factory made expanded polystyrene (EPS) with self-extinguishing properties according to EN 13163:2012 based on certificate of constancy of performance of the construction product issued by notified product certification body.

PRODUCT INFORMATION

Composition	EPS
Packaging	Boards individually wrapped with polyethylene sheet.
Colour	White, grey
Shelf life	Unlimited if storage conditions are met.
Storage conditions	The packaging of Sikatherm® EPS 100 shall not be considered adequate for long term outside protection. Ideally, boards shall be stored inside a building. If however, outside storage cannot be avoided the boards shall be stacked clear of the ground and covered with a polythene sheet or weatherproof tarpaulin.
Dimensions	2500 mm x 1000 mm

Other dimensions are available following special order.

Thickness tolerance (T): ± 2 (EN 822)

Length tolerance (L): ± 3 (EN 822)

Width tolerance (W): ± 3 (EN 822)

Squareness tolerance (S): ± 5 (EN 825)

Flatness tolerance (P): ± 10 (EN 824)

Thickness	20-300 mm
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TECHNICAL INFORMATION

Compressive Strength	≥ 100 kPa at 10% deformation [CS(10)]	(EN 826)
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Tensile Strength in Flexure	≥ 150 kPa	(EN 12090)
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Dimensional Stability	DS(N) $\leq 2\%$	(EN 1603)
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Reaction to Fire	Class E	(EN 13501-1)
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Thermal Conductivity	$\lambda_d = [W/m K]$	(EN 12667)	
	Value		Type
	0,034		White
	0,031	Graphite	

Thermal Resistance	$R_d = [m^2 K/W]$	(EN 12667)		
	Thickness		White	Graphite
	20		0,588	0,645
	30		0,882	0,968
	40		1,176	1,290
	50		1,471	1,613
	60		1,765	1,935
	70		2,059	2,258
	80		2,353	2,581
	100		2,941	3,226
	120		3,529	3,871
	140		4,118	4,516
	160		4,706	5,161
	180		5,294	5,806
	200		5,882	6,452
	220		6,471	7,097
	240		7,059	7,742
260	7,647	8,387		
280	8,235	9,032		
300	8,824	9,677		

Diffusion Resistance to Water Vapour	30-70	(EN 12086)
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Permeability to Water Vapour	0,009 – 0,020 mg/(Pa·h·m)	(EN 12086)
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SYSTEMS

System Structure

Ancillary products and system components according to local price list.

Roof waterproofing singly ply membranes :

- Sarnafil® TS, TG, G
- Sikaplan® G, VG, VGWT, SGmA, SGK, TM, TB

Fasteners and fixings:

- Sarnafast® range

Vapour control layers:

- Sarnavap® range

Separation layer with PVC membranes:

- SikaRoof® Felt product range, polyester or polypropylene based, > 300gr/m²
- S-Glass Fleece-120

Compatibility

Sikatherm® EPS 100 is compatible with FPO and PVC single ply membranes Sikaplan® / Sarnafil®.

No additional separation layer is required, when TPO based Sikaplan® / Sarnafil® is applied over the board surface.

When PVC based Sikaplan® / Sarnafil® is applied over the board surface, SikaRoof® Felt >300gr/m² geotextile or S-Glass Fleece 120 has to be installed.

APPLICATION INFORMATION

Ambient Air Temperature

Limited to appropriate roof waterproofing membrane system temperature limitations. Please refer to the respective Product Data Sheets.

Substrate Temperature

Limited to appropriate roof waterproofing membrane system temperature limitations. Please refer to the respective Product Data Sheets.

APPLICATION INSTRUCTIONS

APPLICATION METHOD / TOOLS

Sikatherm® EPS 100 is installed by mechanical attachment, over suitable Vapour Control Layer, to the roof deck with Sarnafast fasteners. The minimum fasteners' number required is one per m² of thermal insulation.

The requirements for securing the waterproofing membrane shall be considered separately.

The detailed fastening system of the thermal insulation shall be considered separately for each project according to local requirements.

In ballasted roof the boards are loose laid. The specified ballast should be installed as soon as possible, once the waterproofing membrane has been installed. Mechanical fixation can also be used for the thermal insulation in ballasted roof Systems.

IMPORTANT CONSIDERATIONS

- Installation works to be carried out only by Sika instructed contractors for roofing.
- Temperature limits will depend on waterproofing membrane installation limits. Use of some ancillary products, e.g. adhesives is limited to temperatures above +5 °C. Please refer to the respective Product Data Sheets.

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

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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Product Data Sheet

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