

## PRODUCT DATA SHEET

# Sarnatherm® EPS 18

Rigid expanded polystyrene board with high thermal insulation properties

### DESCRIPTION

Sarnatherm® EPS 18 are rigid expanded polystyrene boards with high thermal insulating properties. Sarnatherm® EPS 18 is installed directly on the substrate, over an approved waterproofing or vapour barrier, or directly on the existing roof surface prior to the application of the Sika® waterproofing membrane. It is also suitable for several inverted roofing systems and as protection layer before backfilling combined with several Sika® products.

### USES

- Thermal insulation for flat roof, floor or wall system
  - Underdeck insulation
  - Floor insulation
  - Cavity walls insulation
  - External wall insulation
  - Overdeck insulation
- Protection board before backfilling in waterproofing applications

### Areas of Application

- New roofs
- Refurbishment of roofs
- Mechanically attached roofing systems
- Adhered roofing systems
- Waterproofing systems
- Green roof systems
- Wall systems
- Cold chambers or freezers

### CHARACTERISTICS / ADVANTAGES

- High resistance to heat flow i.e. low thermal conductivity
- Permeable to water vapor and low water absorption
- Uniform density distribution
- Relatively high compressive strength compared to other insulation materials
- Good ageing resistance (thermal properties are retained over time)
- Resistance to bacteria and micro-organism growth
- Available in various sizes and thickness
- Light weight
- Easy to handle and install
- Good form stability
- Recyclable
- Non-toxic, odourless and non-irritant to skin
- Presents excellent even surface
- Does not contain CFC/HCFC

### PRODUCT INFORMATION

#### Chemical base

Rigid expanded polystyrene

#### Packaging

Sarnatherm® EPS 18 is available in various dimensions and thicknesses. Typically 6 boards in a bag for thicknesses more than 50 mm. The sheets are packed in plastic cover to avoid any damage during transit or at the site. Care should be taken while handling / transporting to avoid puncturing and damaging the edges and surface of the Sarnatherm® EPS 18.

#### Shelf life

The product does not expire if stored as per storage conditions mentioned.

<b>Storage conditions</b>	The product must be stored properly in original, unopened and undamaged sealed packaging, inside a building. If outside storage cannot be avoided the boards shall be stacked clear of the ground on flat surface or wooden pallets and covered with a polythene sheet or weatherproof tarpaulin and tied securely in a manner that will minimize exposure to sunlight and UV. Protect from rain, snow and water.	
<b>Appearance / Colour</b>	Flat or profiled boards / White	
<b>Thickness</b>	Flat	25–120 mm
	Profiled	80–120 mm
	Wide range of thicknesses are available based on roof built-up needed.	
<b>Density</b>	~27 kg/m <sup>3</sup>	

## TECHNICAL INFORMATION

<b>Compressive strength</b>	~127 kPa
<b>Dimensional Stability</b>	≤ 1 %
<b>Thermal conductivity</b>	≤ 0.0325 W/m·K
<b>Service temperature</b>	-30 °C min. / +75 °C max.
<b>Water absorption</b>	≤ 1 %
<b>Permeability to water vapour</b>	≤ 20 g/m <sup>2</sup> ·24h

## SYSTEM INFORMATION

<b>System structure</b>	<p><b>Ancillary/Complementary products:</b></p> <ul style="list-style-type: none"> <li>▪ S-Felt separation layer</li> <li>▪ Sikaplan® and Sarnafil® membranes and system components</li> <li>▪ Sikalastic® liquid applied membranes</li> <li>▪ SikaShield® bituminous membranes</li> </ul>
<b>Compatibility</b>	<p>Sarnatherm® EPS 18 is compatible with:</p> <ul style="list-style-type: none"> <li>▪ Sarnacol®-2142 S / V polyurethane based adhesive for PVC sheet membrane</li> <li>▪ Sarnacol®-2162 polyurethane based adhesive for insulation board</li> <li>▪ SikaRoof® Board Adhesive for insulation board</li> </ul> <p>Sarnatherm® EPS 18 is not compatible with:</p> <ul style="list-style-type: none"> <li>▪ Solvent of all kinds</li> <li>▪ Heat / fire of all kinds</li> <li>▪ Flexible PVC membranes (a separation layer is required)</li> </ul>

## 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.

## ECOLOGY, HEALTH AND SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### SUBSTRATE QUALITY

The substrate should be smooth, dry and strong enough to support the Sarnafil®, SikaShield® or Sikalastic® roof system.

### APPLICATION

Sarnatherm® EPS 18 is installed either under or over the Sika® roofing / waterproofing membrane depending on the system design. Sarnatherm® EPS 18 can be cut using standard application tools (hot wire knife). Consult the installation manual for more detail.

### Important

Polystyrene should not come in contact with non-felt back PVC membranes. Always place a S-Felt separation layer between the Sarnatherm® EPS 18 and the membrane in both roofing and waterproofing applications.

### Important

During installation in hot, sunny weather, protect the insulation with a white covering to prevent excessive heat build-up and potential warping.

### Mechanically fastened or Fully adhered systems

Sarnatherm® EPS 18 is installed by mechanical attachment, to the roof deck with Sarnafast® fasteners, by full attachment with low rise sprayed urethane foam or partial attachment with foam adhesive (options depend on deck type and Sarnafil® system to be installed). The minimum fasteners' number required is one per m<sup>2</sup> 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.

### Ballasted systems

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.

For advise on other applications, please consult Sika Technical Services.

## 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 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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