

Kimitherm EPS 100

ST4-0221



Expanded sintered polystyrene sheets with improved lambda obtained from a block



DESCRIPTION

Kimitherm EPS 100 is an insulating panel in sintered expanded polystyrene with improved lambda, obtained from block, with reaction to fire Class E.

Kimitherm EPS 100 complies with the EN 13163 standard. It is compliant and certified according to the requirements of the ETAG004 for insulation panels for external insulation systems.

ADVANTAGES

- Very good thermal insulation
- High mechanical performances
- Vapour permability

USES

Kimitherm EPS 100 is particularly suitable as an insulator in external coatings.

WORKS

- External thermal insulation composite system (**SA30**);

APPLICATION

Before applying the coating system, it is necessary to check that the surfaces are clean, dust-free and that there are no traces of release agents, greasy, oily stains or any other substance that could affect the adhesion of the panel to the substrate. It will also be necessary to check: consistency of the bottom, planarity of the substrate, presence of cracks or capillary rising problems.

Once the condition of the substrate has been checked and it has been adequately cleaned, it will be bonded and the insulation will be performed using **Betonfix TERMORASA** as a mortar.

Once the mixture to be used as an adhesive has been made, proceed with its application on the insulating plate **Kimitherm EPS 100**, according to the consumption foreseen in the Technical Data Sheet, following one of the two methods:

- Bonding with perimeter curb and central points: a mortar edge of about 5 cm will be made, and in the center of the panel two or three piles ensuring to obtain a bonding surface equal or greater than 40%.
- Full surface bonding: the smoothing mortar will be applied to the entire surface of the insulating slab using a notched trowel. This type of bonding is possible only in the case of substrates with sufficient flatness.

The insulation slabs should be positioned, starting from the bottom upwards, with vertical joints offset and beaten with trowel, checking at regular intervals the flatness of the laid slabs.

Remove any trace of mortar along the sides of the insulating sheets in order to avoid the formation of thermal bridges.

Possible joints between two sheets must be filled with adequate insulating material or polyurethane-based foam.

Along the edges install the insulating panels in an alternate way in order to distribute in a better manner the tensions.

Possible gaps between two panels must be regularised by means of sanding in order to create a smooth surface ready to be covered with the next skimming coat.

In the lowest part of the panel in contact with the ground or exposed to splashes of water, in order to absorb mechanical stresses and problems due to humidity, the use of a reinforcement fiberglass mesh of higher weight, **Kimitech 550+** is recommended for the skimming with **Betonfix TERMORASA**. If the panel is in contact with the ground, waterproof this area with flexible and resistant to permanent humidity cement mortar **Betonfix 300** mixed with **Kimitech ELASTOFIX**. Alternately, in case of starting from the ground, the XPS panel can be applied as an insulation for the first 60 cm, in order to block any rising damp. The panel will also be used in the area below ground level, after the application of a bituminous

membrane and the waterproofing with a flexible cement-based leveling compound.

It is advisable to proceed with the installation of the panel immediately after the laying of the skim coat on the back, especially in hot and windy periods. At the end of the laying we will proceed with a straight edge to check the flatness of the entire surface.

The anchoring of the panels will be performed using the anchoring system **Kimitherm T-CONNECT** including a dowel combined with a pin.

Between 3 and 4 days after the panels installation, apply the first coat of skimming coat mortar **Betonfix TERMORASA**, reinforced with the 160 g/m² mesh **Kimitech 350**. While laying the mesh, push accurately and gently this reinforcement into the coat of fresh mortar. Once the first coat of mortar is set, apply the second layer of **Betonfix TERMORASA**.

Once the necessary curing time for the skimming coat has passed, proceed with the finishing coats using one of the following ones: Acrylic tonachino cycle (**Kimipaint HYDRO** as primer, **Kimipaint DECO** as finishing coat), siloxane tonachino cycle (**Kimipaint SIL BASE** as primer, **Kimipaint SIL TOP** as finishing coat) or acrylic paint cycle (**Betonfix R52** as primer, **Kimipaint EASY** as finishing paint coat).

STORAGE

Standard dimension of the insulation panel: 1000x500 mm. Protect from humidity. Store the product in a dry, sheltered place. Stored in these conditions and in unopened containers, the product remains stable for 24 months.

Characteristics	Encoding EN 13163	Unit of measure	Kimitherm EPS100
Thermal Conductivity	λ_d	W/m·k	0,035
60 mm thickness	R_d	m ² · K/W	1,7
80 mm thickness	R_d	m ² · K/W	2,2
100 mm thickness	R_d	m ² · K/W	2,8
120 mm thickness	R_d	m ² · K/W	3,3
Length	L2	mm	± 2
Width	W2	mm	± 2
Thickness	T2	mm	± 1
Orthogonality	S2	mm/mm	± 2/1000
Planarity	P4	mm	4
Fire reaction	Euroclass		E
Compressive resistance at 10% of deformation	CS(10)	Kpa Kg/cm ²	≥ 100 1,00
Flexural resistance	BS	KPa	>150
Tensile resistance	TR	KPa	>150
Dimensional stability	DS(N)	%	0,2
Water absorption for partial immersion	WL(T)	%	≤ 1
Water vapour permeability	MU	Adimens.	30-70
Bulk density (+ 6%)	p	Kg/m ³	20

WARNING

Product intended for professional use.

The marking obligations are not related to the intrinsic nature of a given product, but to the use for which a specific material is used: before ordering in Kimia, it will be the customer's responsibility to submit all the available documentation to the construction supervision so that they can establish the suitability of the materials (in terms of certifications and performance) in relation to the use for which they are intended.

The information and requirements indicated in this Technical Data Sheet are based on our current knowledge and experience and are to be considered, in any case, purely indicative. They cannot guarantee the final result of the applied product and they have to be confirmed by exhaustive practical applications; therefore the user must test the suitability of the product for the intended application and its purpose. Users must always refer to the latest version of the local technical data sheet related to the product.

TECHNICAL SPECIFICATION

SK30 - External thermal insulation composite system;

(SK 30) External thermal insulation after bonding and skimming expanded polystyrene insulation panels such as Kimitherm EPS 100 by Kimia S.p.A. or similar product with Betonfix smoothing mortar TERMORASA by Kimia S.p.A. or similar product.

Kimitherm EPS 100 expanded polystyrene panel by Kimia SpA or similar product, compliant with the UNI EN 13163 standard and certified according to the requirements of ETAG004 for insulation panels for external insulation systems. Its characteristics: size 1000x500 mm, fire reaction class E, thermal conductivity equal to 0.035 W/(mK), flexural strength > 150 KPa, tensile strength > 150 KPa, compressive strength at 10% deformation > 100 KPa, water vapor permeability: 30-70.

The ready-to-use skimming mortar will be prepared and applied following scrupulously the indications given on the technical data sheet provided by the Manufacturer and will be compliant and certified according to the requirements of ETAG004 for skim coats and adhesives for coat insulation systems and it will be respect the following specifications: Bulk density UNI 9446: 1,22 ± 0,1 g/cm³; Fresh mortar bulk density EN 1015-6: 1680 ± 50 Kg/m³; Maximum granulometry EN 1015-1: 0,5 mm; Duration EN 1015-9: 75 ± 5 minuti; Consistency UNI 7044/72: 50-70%, Minimum temperature for application: 5°C.

The application can be carried out in two ways: bonding of a perimeter curb and central points or full surface bonding.

After fixing the panels using the fixing system Kimitherm T-CONNECT by Kimia S.p.A. or similar product, installation of the leveling layer by incorporating glass fiber mesh Kimitech 350 by Kimia S.p.A. or similar product.

Finishing by cycle with acrylic tonachino consisting of Kimipaint HYDRO primer by Kimia S.p.A. or similar product and Kimipaint DECO by Kimia S.p.A. or similar product, cycle with siloxane tonachino consisting of Kimipaint SIL BASE primer by Kimia S.p.A. or similar product and Kimipaint SIL TOP finish by Kimia S.p.A. or similar product, or cycle with acrylic paint consisting of primer Betonfix R52 by Kimia S.p.A. or similar product and Kimipaint EASY by Kimia S.p.A. or similar product.