

WHITE EPS 70 RAIL SYSTEM

DATA SHEET

EPS 70 thermal insulation panel



Exteriors

Technical benefits

- 100% recyclable
- Light and easy to apply
- Panel suitable for mechanical system and compliant with BBA requirements
- Guaranteed thermal lambda

Composition

EPS expanded polystyrene thermal insulation panels are made from high quality raw materials, cut by hot wire from previously cured blocks.

Supply

- EPS 70 thermal insulation panels are supplied in polyethylene packaging.

Use

The EPS panels are used externally on walls in external thermal insulation composite systems of new buildings and in renovating old ones.

Substrate preparation

The application surface must be clean, solid and resistant, dry and free of any degradation due to phenomena such as mould or algae. Otherwise, remove any dust, dirt, traces of release agents, crumbling and loose parts, etc. If it rains during application, prevent infiltration of water underneath the layer of insulation. On significantly irregular substrates, level off using plaster such as KC 1, KD 2 or KI 7. Deteriorated concrete must be repaired using special mortars.

Mixing

The insulating panels are fixed to the substrate mechanically, using a structure made up of PVC profiles. The EPS 70 panels have a groove on the side for mechanical fixing, and must be applied to the wall from the bottom upwards, with staggered joints, avoiding cracks between one panel and the next. The A 50, A 96 or AL 88 adhesive must be spread in the middle of the back side of the panel, which is then applied by applying light pressure by hand against the substrate. On corners, the panels must be alternated so as to guarantee adequate absorption of stress.

The horizontal PVC profiles are positioned in the horizontal grooves on the panels and fixed to the substrate using special EJOT NK U anchors for percussion drills or EJOT SDK U screw anchors, positioned every 30 cm; then check alignment and correct if necessary using the special spacers.

The vertical PVC profiles are positioned vertically between one panel and the other, in correspondence with the grooves. Around one day later, and in any case after the adhesive has hardened, fix the panels mechanically to the substrate using the special anchors. Use one anchor for each panel, placing it where the adhesive was applied. (4 anchors per square metre).

Once the panels have been mechanically fixed, the reinforced skim coat can be applied. The panels are always finished with two layers of skim coat, using Fassa A 50, A 96 or AL 88 certified skim coats, and reinforced using alkali-resistant fibreglass reinforcing mesh, such as FASSANET 160.

When the layer of reinforced skim coat has cured, the external thermal insulation composite system finish cycle is completed by applying RSR 421, RX 561, RTA 549 or FASSIL R 336 thick protective coating, after first having applied the specific primer.

Warnings

- Apply the product at temperatures between +5°C and +35°C.
- Store the packed panels in a dry and airy place, protecting them from weathering, direct sunlight and other heat sources.
- The surfaces of the panels must be clean and intact: only remove the packaging from the panels immediately before application.
- Avoid applying the adhesive only in dots.
- Avoid using boards that are damaged, deteriorated, dirty, etc.
- When installing the panels, protect them from water seepage caused by rain.
- Avoid installing the EPS panels for thermal insulation in contact with the ground.

For the installation details please read the instructions indicated in Fassa technical installation manual for ETICS.

Quality

EPS thermal insulation panels are classified and marked according to European standard EN 13163, and are thoroughly tested in our production plants.

Technical Data

Declared thermal conductivity	0.038 W/m·K
Length	500 mm
Width	500 mm
Thickness	20-200 mm
ETA European Technical Approval	

Technical features

There are several types of EPS panels, classified according to EN 13163, which requires the characteristics to be declared in terms of designation codes, showing the specific upper or lower limits.

Specifications	Designation code	Unit of measure	EPS 70
Compressive strength at 10% deformation	CS (10)	KPa	≥ 70
Tensile strength perpendicular to the faces	TS	KPa	≥ 100
Flexural strength	BS	kPa	115
Length	L	mm	L2 (± 2)
Width	W	mm	W2 (± 2)
Thickness	T	mm	T2 (± 2)
Squareness	S	mm/m	S2 (± 2)
Flatness	P	mm/m	P3 (± 3)
Dimensional stability	DS	-	DS(N)5
Declared thermal conductivity	λ_D	W/m·K	0,038
Density	-	kg/m ³	15 approx.
Water vapour diffusion resistance	μ	-	20 - 40
Long-term water absorption by immersion	WL(T)	%	≤ 4
Permeability to water vapour	δ	mg/(Pa·h·m)	0,015-0,030
Water vapour permeability in dry conditions	δ_a	kg/m·s·Pa	$3.6 \cdot 10^{-12}$
Water vapour permeability in wet conditions	δ_u	kg/m·s·Pa	$9 \cdot 10^{-12}$
Specific thermal capacity	C_s	J/Kg·K	1450
Reaction to fire	-	-	class E



Thermal resistance

EPS thermal insulation panels may have different thermal resistance values, depending on the panel thickness. Thermal resistance R_D ($m^2 \cdot K/W$)

Panel thickness (mm)	EPS 70
30	0.79
40	1.05
50	1.32
60	1.58
80	2.5
100	2.63
120	3.16
140	3.68
160	4.21
180	4.74
200	5.26
220	5.79
240	6.32

The above information refers to laboratory testing; it is possible that in practical applications on site these may differ considerably according to the conditions in which the material is applied. In any case the user must check that the product is suitable for the intended application, taking all responsibility for its use. Fassa reserves the right to make technical modifications without notice.

Technical specifications regarding the use of Fassa Bortolo products for structural or fire prevention applications will only be officially valid if provided by Fassa Bortolo's "Technical Service" and "Research, Development and Quality System". Our Technical Service can be contacted by email at area.tecnica@fassabortolo.com.

Please note that for the aforementioned products, the assessment is required by the appointed professional, in accordance with regulations in force.