

Isover EPS 150

Stabilized expanded polystyrene boards

TECHNICAL SPECIFICATION

EPS (expanded polystyrene) is a light and solid organic foam widely used in the European construction industry, especially as thermal insulation. In the last 50 years, white insulation boards have acquired a strong position in construction thanks to their excellent properties. Isover EPS insulation boards are manufactured using the latest technology without the use of CFC and HCFC (known as Freon). The use of modern technologies ensures consistent quality and minimum energy consumption during production, resulting in an excellent price/performance ratio. All Isover EPS boards are rated as self-extinguishing with improved fire safety.*

APPLICATION

Isover EPS 150 insulation boards are designed especially for thermal insulation with normal requirements for compressive load, such as floors, flat roofs, etc. The boards are suitable for insulating layers of energy-saving buildings (lower energy and passive houses) with standard insulation thickness of 200 to 500 mm.

DIMENSIONS AND PACKAGING

Thickness	[mm]	20	30	40	50	60	80	100	120	140*
Length × width	[mm]	1000 × 500								
Volume per package	[ks]	25	16	12	10	8	6	5	4	3
	[m ²]	12.5	8	6	5	4	3	2.5	2	1.5
	[m ³]	0.250	0.240	0.240	0.250	0.240	0.240	0.250	0.240	0.210
Declared thermal resistance R ₀	[m ² ·K·W ⁻¹]	0.55	0.85	1.10	1.40	1.70	2.25	2.85	3.40	4.00

Subject to prior agreement, the products may be supplied in different thicknesses and sizes. * It is necessary to consult with the producer for the terms of delivery.

EDGES

Standard boards have straight edges; rabbit edges are available at special surcharge (up to max. thickness of 240 mm, the coverage size will be reduced by the rabbit dimension, i.e. 15 mm).

TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	Designation code
Geometric shape				
Length tolerance	[%, mm]	EN 822	±3 mm	Class of length tolerances L3
Width tolerance	[%, mm]	EN 822	±3 mm	Class of width tolerances W3
Thickness tolerance	[%, mm]	EN 823	±2 mm	Class of thickness tolerances T2
Deviation from squareness of the edge on length and width S ₀	[mm·m ⁻¹]	EN 824	±5	Class of squareness on length and width S5
Deviation from flatness S _{max}	[mm]	EN 825	10	Class of flatness P10
Relative change in length Δε _l in width Δε _w in thickness Δε _d	[%]	EN 1604	0,2	Class of dimensional stability under constant normal laboratory conditions DS(N)2
			1	Dimensional stability under the specified temperature and humidity conditions DS (70,-)1
Thermal technical properties				
Declared value of the thermal conductivity coefficient λ ₀ ¹⁾	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13163+A1 Measurement according to EN 12667	0.035	
Design thermal conductivity λ _d ²⁾	[W·m ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	0.035	
Specific heat capacity c _d	[J·kg ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	1270	
Mechanical properties				
Compressive stress at 10% deformation σ ₁₀	[kPa]	EN 826	150	Level of compressive stress at 10% deformation CS(10)150
Long-term compressive stress at 2% deformation	[kPa]		30	
Bending strength σ _b	[kPa]	EN 12089	200	Level of bending strength BS200
Fire safety properties				
Reaction to fire class	[-]	EN 13501-1+A1	E**	
Long-term thermal resistance	[°C]		80	
Hydrothermal properties				
Long term water absorption by total immersion W _t	[%]	EN 12087	5	Level of long-term water absorption by total immersion WL(T)5
Water vapour diffusion resistance factor μ	[-]	EN 13163+A1	30-70	Value for water vapour diffusion resistance factor MU40
Other properties				
Density	[kg·m ⁻³]	EN 1602	23-25***	

¹⁾ Declared values were set under the following conditions (reference temperature 10 °C, humidity u_{dry}, which is reached by drying) according EN ISO 10456.

²⁾ It is valid for typical use in construction with risk of condensation. In the case of construction without any risk of condensation it is possible to use the declared value of thermal conductivity.

* Self-extinguishing properties of EPS are ensured using a polymer-based flame retardant. The insulation boards do not contain HBCD.

** Fire safety of buildings has to be classified for complete structures and systems, the EPS is not used without fire-resistant coatings.

*** The specific density is indicative only and is especially intended for the statics and fire load calculation.

Note: The specific application must meet general requirements of Saint-Gobain Construction Products CZ, Ltd., Isover division, technical materials, valid technical norms, and the specific project.

RELATED DOCUMENTS

- Declaration of Performance CZ0004-006
- ISO 9001, ISO 14001, OHSAS 18001, ISO 50001

4. 7. 2019 The information is valid up to date of publishing. The manufacturer reserves right to change the data.

