Isover EPS 200

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 200 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.

PACKAGING, TRANSPORT, WAREHOUSING

Isover EPS insulation boards with dimensions of 1000 × 500 mm and 1000 × 1000 mm are wrapped in PE foil in packages of a max. height of 500 mm. Non-standard sizes such as 1000 × 2000 mm or 1000 × 2500 mm are strapped. The boards must be transported and stored under conditions preventing damage. Do not store for prolonged periods in direct sunlight. The boards are marked on the sides with three colour stripes - yellow, black, black.

BENEFITS

- very good thermal insulation properties
- excellent mechanical properties
- minimum weight
- easy workability
- long life span
- environment and health friendly
- permanent moisture resistance
- biological neutrality
- economical

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
	[m²]	12.5	8	6	5	4	3	2.5	2	1.5
	[m³]	0.250	0.240	0.240	0.250	0.240	0.240	0.250	0.240	0.210
Declared thermal resistance R_D	[m²·K·W⁻¹]	0.55	0.85	1.15	1.45	1.75	2.35	2.90	3.50	4.10

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; rabbet edges are available at special surcharge (up to max. thickness of 240 mm, the coverage size will be reduced by the rabbet 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_b	[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 $\Delta\varepsilon_l$, in width $\Delta\varepsilon_b$, in thickness $\Delta\varepsilon_d$	[%]	EN 1604	0.2	Class od 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_D[1]	[W·m⁻¹·K⁻¹]	Declaration according to EN 13163+A1	0.034		
		Measurement according to EN 12667			
Design thermal conductivity λ_u[2]	[W·m⁻¹·K⁻¹]	ČSN 73 0540-3	0.034		
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	200	Level of compressive stress at 10% deformation	CS(10)200
Long-term compressive stress at 2 % deformation	[kPa]		36		
Bending strength σ_b	[kPa]	EN 12089	250	Level of bending strength	BS250
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_{it}	[%]	EN 12087	5	Level of long-term water absorption by total immersion	WL(T)5
Water vapour diffusion resistance factor μ	[-]	EN 13163+A1	40-100	Value for water vapour diffusion resistance factor	MU100
Other properties					
Density	[kg·m⁻³]	EN 1602	28-30***		

[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 CZ0004-007
- 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.

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