EPS SF04

TECHNICAL DATA SHEET

Description

Expanded Polystyrene (EPS) insulation boards stand as a testament to the innovation in thermal insulation materials. This lightweight yet robust organic foam is a staple in the European construction arena, primarily due to its superior insulating capabilities.
Over the past half-century, these white EPS insulation boards have become a cornerstone in the industry, attributing to their exceptional properties. These boards are engineered using state-of-the-art technology, without the involvement of harmful substances such as Chlorofluorocarbons (CFCs) and Hydrochlorofluorocarbons (HCFCs), collectively known as Freon.
The use of sophisticated manufacturing processes ensures not only a uniform quality across all EPS boards but also minimizes energy expenditure during production. This efficient production methodology offers an excellent balance between cost-effectiveness and high performance, making EPS an optimal choice for insulation applications.
One of the defining features of EPS boards is their self-extinguishing classification, which enhances fire safety in construction settings. This feature further cements the reliability and value of EPS boards as a leading choice for thermal insulation in the construction industry.

Advantages

- Superior heat insulating capabilities
- Exceptional structural characteristics
- Lightweight
- Ease of manipulation and installation
- Extended durability and lifespan
- Safe for both environment and health
- Consistent resistance to moisture
- Biologically neutral
- Cost-effective

Packaging and Storage:

Styrofom insulation panels are sized at 1000x500mm which are wrapped in PE film. The dimensions of a box varies by thickness of the board, as average it is 1000x500x500mm. Styrofom EPS must be transported and stored under conditions that prevent depreciation of the product. They must not be exposed under direct sun-light for long periods of time. The panels are identified on the side with TYPE and THICKNESS and technical label on the front.

Technical Specifications

Specification	Unit	Standard	Value	Code
Shape and Form				
Board Size	%, mm		1000x500	
Length Tolerance	%, mm	EN822	±2	L3
Width Tolerance	%, mm	EN822	±2	W3
Thickness Tolerance	%, mm	EN823	±1	T2
Deviation from squareness of the edge on the length and width S_b	mm·m-1	EN824	±2	S5

Deviation from flatness S_{max}	mm	EN825	10	P10
Relative change in length $\Delta\varepsilon_l$, in width $\Delta\varepsilon_b$, in thickness $\Delta\varepsilon_d$	%	EN1604	1	DS(70,90)1
			±0.2	DS(N)2
			1	DS(70,-)1
Thermal Specifications				
Declared value of the thermal conductivity coefficient λ_D	[W·m-1·K-1]	EN 13163	0.039	
Design Thermal Conductivity	[W·m-1·K-1]	EN 13163	0.039	
Mechanical Specifications				
Compressive stress at 10% deformation σ_{10}	kPa	EN826	70	CS(10)70
Tensile Strength perpendicular to faces σ_{mt}	kPa	EN1607	100	TR100
Bending Strenth σ_b	kPa	EN12089	115	BS115
Fire and Safety Specificatoins				
Reaction to Fire		EN13501-1	Euroclass E	
Long term Thermal Resistance	°C		80	
Hydrothermal Specifications				
Long term water absorption by total immersion W_{lt}	%	EN 12087	5	WL(T)5
Water vapor diffusion resistance factor μ		EN 13163	20-40	MU40
Other Specifications				
Density	kg/m^3	EN 1602	13.3-14.7	

** The declared values are set under the following conditions, according to EN ISO 10456: reference temp. 10°C, humidity U_{dry}.*

**The fire-resistant attributes of EPS are achieved by incorporating a polymer-based flame retardant. Importantly, these insulation boards do not include HBCD in their composition.*

Packaging Specifications

Board Thickness (mm)	Board Size (mm)	Pieces per Box	Yield per Box (m^2)	Volume per Box (m^3)	Declared Thermal Resisitance [m^2·K·W^{-1}]
10	1000x500	50	25.0	0.250	0.25
20	1000x500	25	12.5	0.250	0.50
30	1000x500	17	8.5	0.255	0.80
50	1000x500	10	5.0	0.250	1.35
80	1000x500	6	3.0	0.240	2.15
100	1000x500	5	2.5	0.250	2.70
120	1000x500	4	2.0	0.240	3.20
140	1000x500	4	2.0	0.280	3.75
150	1000x500	3	1.5	0.225	4.05
160	1000x500	3	1.5	0.240	4.30
180	1000x500	2	1.0	0.180	4.85
200	1000x500	2	1.0	0.200	5.40

* Different thicknesses can be offered based on request.