

Isover TWINNER

Insulation board are designed for ETICS façade systems



TECHNICAL SPECIFICATION

TWINNER is a sandwich thermal and noise insulation board made of Isover EPS GreyWall graphite insulation core with enhanced insulating effect and a 30 mm-thick Isover TF Profi cover layer. Bonding is achieved using an industrial polyurethane adhesive that ensures high tensile and shear strength and enables efficient production of 100-300 mm-thick insulation boards for energy-efficient buildings. Isover TWINNER insulation boards are manufactured using the latest CFC-/HCFC (also known as Freon) -free technologies. The EPS insulating component has a self-extinguishing design with improved fire safety.*

APPLICATION

Isover TWINNER insulation boards are designed for ETICS façade systems, especially suitable for buildings with increased fire safety demands, e.g. residential buildings higher than 12 m, when superior fire resistance enables insulation of walls without inserting MW fire strips. Other areas of typical use include e.g. low energy and passive houses.

DIMENSIONS AND PACKAGING

Thickness [mm]	120	140	150	160	180	200	220	240	260	280	300
Length × width [mm]	1000 × 500										
Volume per package [ks]	2.00	1.50	1.50	1.50	1.00	1.00	1.00	1.00	0.50	0.50	0.50
[m ²]	0.240	0.210	0.225	0.240	0.180	0.200	0.220	0.240	0.130	0.140	0.150
Declared thermal resistance R _b [m ² ·K·W ⁻¹]	3.50	4.10	4.40	4.70	5.25	6.05	6.65	7.25	7.85	8.45	9.05

* It is necessary to consult with the producer for the terms of delivery. Minimum delivery quantity 10 m³.

EDGES

The boards are generally fitted with a straight edge.

TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	Designation code
Geometric shape				
Length tolerance	[%, mm]	EN 822	±2 mm	Class of length tolerances L2
Width tolerance	[%, mm]	EN 822	±2 mm	Class of width tolerances W2
Thickness tolerance	[%, mm]	EN 823	±1 mm	Class of thickness tolerances T1
Deviation from squareness of the edge on length and width S ₂	[mm·m ⁻¹]	EN 824	±2	Class of squareness on length and width S2
Deviation from flatness S _{max}	[mm]	EN 825	3	Class of flatness P3
Thermal technical properties				
Declared value of the thermal conductivity coefficient λ _b ¹⁾	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13163+A1 Measurement according to EN 12667	0.032 -0.033 ²⁾	
Design thermal conductivity λ _t ²⁾	[W·m ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	0.034 -0.035	
Mechanical properties				
Tensile strength perpendicular to faces σ _{nt}	[kPa]	EN 1607	10	Level of tensile strength perpendicular to faces TR10
Shear modulus GMi	[kPa]	EN 12090	1000	Value of shear modulus GMi
Fire safety properties				
Reaction to fire class	[-]	EN 13501-1+A1	B**	
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	[-]		according to EPS and MW parts	
Other properties				
Density	[kg·m ⁻³]	EN 1602	25-50***	

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.

³⁾ Part MW 0.036 W·m⁻¹·K⁻¹; part EPS 0.032 W·m⁻¹·K⁻¹.

* 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

- Certificate no. AO212/C5a/2011/0510/P

1. 9. 2017 The information is valid up to date of publishing. The manufacturer reserves right to change the data.

