ISOVER SAINT-GOBAIN
Assurance in insulation

CERTIFIED
ISO 9001 · ISO 14001
OHSAS 18001 · ISO 50001

TEPELNĚ IZOLAČNÍ SYSTÉMY EVROPSKÁ KVALITA

CE

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 properties enable insulation of walls without inserting MW fire strips. Other areas of typical use include e.g. low energy and passive houses.

PACKAGING, TRANSPORT, WAREHOUSING

Isover TWINNER 1000 × 500 mm insulation boards are packaged in PE foil in packages with a max. height of 500 mm. Material must be transported and stored in conditions that prevent degradation. Do not store in direct sunlight (max. thermal resistance of graphite core 70 °C).

BENEFITS

- superior fire resistance – fire reaction class B – s1, d0
- increased fire safety during application
- **provides excellent thermal insulation - λ_D 0,032-0,033 W·m^{-1}·K^{-1}**
- easy workability with minimal weight
- superior protection of grey EPS against sunlight (shading not required when applying, installation possible from scaffolding)
- thickness up to 300 mm (for 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]											
	[m^2]	2.00	1.50	1.50	1.50	1.00	1.00	1.00	1.00	0.50	0.50	0.50
	[m^3]	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_D	[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 m^3.

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_b	[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_D[1)]	[W·m^{-1}·K^{-1}]	Declaration according to EN 13163+A1	0.032		
		Measurement according to EN 12667	-0.033[3)]		
Design thermal conductivity λ_u[2)]	[W·m^{-1}·K^{-1}]	ČSN 73 0540-3	0.034 -0.035		
Mechanical properties					
Tensile strength perpendicular to faces σ_{mt}	[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_{lt}	[%]	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
- Quality class A
- 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.

Division **ISOVER**
Saint-Gobain Construction Products CZ a.s.
Smrčkova 2485/4, 180 00 Praha 8 – Libeň, Česká republika
info@isover.cz • www.isover.cz

SAINT-GOBAIN