

Isover TWINNER

Sandwich board from EPS and mineral stone wool



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.

DIMENSIONS AND PACKAGING

Product	Thickness (mm)	Dimensions (mm)	Packaging			Declared thermal resistance R_D ($m^2 \cdot K \cdot W^{-1}$)
			pc	m^2	m^3	
Isover TWINNER	100	1000 x 500	5	2.5	0.250	2.94
Isover TWINNER	120	1000 x 500	4	2.0	0.240	3.52
Isover TWINNER	140	1000 x 500	3	1.5	0.210	4.11
Isover TWINNER	150	1000 x 500	3	1.5	0.225	4.41
Isover TWINNER	160	1000 x 500	3	1.5	0.240	4.70
Isover TWINNER	180	1000 x 500	2	1.0	0.180	5.29
Isover TWINNER	200	1000 x 500	2	1.0	0.200	6.06
Isover TWINNER	220	1000 x 500	2	1.0	0.220	6.66
Isover TWINNER	240	1000 x 500	2	1.0	0.240	7.27
Isover TWINNER	260	1000 x 500	1	0.5	0.130	7.87
Isover TWINNER	280	1000 x 500	1	0.5	0.140	8.48
Isover TWINNER	300	1000 x 500	1	0.5	0.150	9.09

EDGES

The boards are generally fitted with a straight edge.

TECHNICAL PARAMETERS

Parameter	Unit	Value	Norm
Declared thermal conductivity coefficient λ_D	$W \cdot m^{-1} \cdot K^{-1}$	0.033-0.034**	EN 12 667
Tensile strength perpendicular to plane of board	kPa	10	EN 1607
Shear strength	kPa	20	EN 12 090
Shear modulus	kPa	1000	EN 12 090
Diffusion resistance factor (μ) MU	-	20-40	EN 12 086
Fire reaction class	-	B***	EN 13 501-1
Long-term fire resistance	$^{\circ}C$	70	-
Weight by volume**	kg/m^3	25-50****	EN 1602
Length tolerance	mm	± 5	EN 822
Width tolerance	mm	± 4	EN 822
Depth tolerance	mm	+ 4, - 2	EN 823
Flatness tolerance	mm/m	3	EN 825

* EPS Isover self-extinguishing is achieved using hexabromcyclododecane - HBCD fire retardant. Use of this fire retardant does not require instructions for safe use; detailed technical parameters are available in writing upon request.

** λ_D coefficient = 0.034 up to a thickness of 200 mm, λ_D = 0.033 for thicknesses above 200 mm.

*** Reaction to fire class B from MW side, class E from EPS side.

**** Weight by volume is only approximate and depends on the thickness of the product. It is primarily designated for use in static engineering and calculating fire load.

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.

1. 2. 2012 The information is valid up to date of publishing. The manufacturer reserves right to change the data.

PACKAGING, TRANSPORT, WAREHOUSING

Isover TWINNER 1000 x 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 $^{\circ}C$).

BENEFITS

- superior fire resistance – fire reaction class B – s1, d0
- insulation conforms to fire regulations according to CSN 73 0810 even without the use of MW fire strips
- provides excellent thermal insulation
- 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)

RELATED DOCUMENTS

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