

Isover TF

Stone wool insulation



TECHNICAL SPECIFICATION

Insulating slabs made of Isover mineral wool with longitudinal fibres. Production is based on drawing the mineral composition melt with other additives and ingredients. The mineral fibres produced are processed into the final slab shape on the production line. The entire fibre surface is hydrophobic and has longitudinal orientation. The slabs in the construction have to be protected suitably (layers of the contact wall insulation system).



APPLICATION

Isover TF facade slabs with longitudinal fibre are suitable for external thermal insulation composite systems (ETICS) and are glued and mechanically bonded to a sufficiently cohesive and sound wall surface. The layers of contact insulating systems are applied on the slabs: bond, reinforcement grid, penetration, plaster, and paint. Bonding of the slabs can be performed with the glue being applied along the edge and at the patches in centre of the slab. The number of the anchors for mechanically anchoring is usually 5 to 6 pc/m², the exact number to be specified by the designer. The anchors will be arranged according to the instructions of the certified insulating system manufacturer.

PACKAGING, TRANSPORT, WAREHOUSING

Isover TF insulation slabs are packed into the PE film covered packets or as packets on a pallet. Isover TF is standardly delivered on wooden pallet except thicknesses of 20 and 30 mm, which are supplied on EPS beams and with interlayer. Material has to be transported and stocked under conditions preventing wetting or other degradation.

BENEFITS

- Very good thermal insulation performance.
- Fire resistance.
- Excellent acoustic properties in terms of noise absorption.
- Low vapour resistance – good water vapour penetrability.
- Environmentally friendly and hygienic.
- Completely hydrophobic.
- Long life span.
- Resistant to wood-destroying pests, rodents, and insects.
- Easy workability – can be cut, drilled into, glued, etc.
- Meets requirements for flush mounting with anchors and 60 mm disk.

DIMENSIONS AND PACKAGING

Thickness [mm]	Length × width [mm]	Volume per package			Quantity per pallet [m ²]	Declared thermal resistance R ₀ [m ² ·K·W ⁻¹]
		[pcs]	[m ²]	[m ³]		
20 ¹⁾²⁾	1 000 × 600	7	6.00	0.120	132.0	0.50
30 ^{1)2)*}	1 000 × 600	6	4.20	0.126	100.8	0.75
50*	1 000 × 600	5	3.00	0.150	60.0	1.30
60*	1 000 × 600	5	2.40	0.144	48.0	1.55
80*	1 000 × 600	3	1.80	0.144	36.0	2.10
100*	1 000 × 600	3	1.20	0.120	28.8	2.60
120*	1 000 × 600	3	1.20	0.144	24.0	3.15
140*	1 000 × 600	2	1.20	0.168	21.6	3.65
150*	1 000 × 600	2	1.20	0.180	19.2	3.90
160*	1 000 × 600	2	1.20	0.192	19.2	4.20
180*	1 000 × 600	2	0.60	0.108	16.8	4.70
200*	1 000 × 600	2	0.60	0.120	15.6	5.25
220*	1 000 × 600	1	0.60	0.132	13.2	5.75
240*	1 000 × 600	1	0.60	0.144	12.0	6.30
260*	1 000 × 600	1	0.60	0.156	12.0	6.80

¹⁾ ETICS add-on, not included in the Qualitative class. A according to CZB.

²⁾ Thicknesses of 20 and 30 mm have different palletisation and are delivered on EPS beams including interlacing.

* Consult with producer for terms of delivery.

TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	Designation code
Geometric shape				
Length <i>l</i>	[% , mm]	EN 822	±2%	
Width <i>b</i>	[% , mm]	EN 822	±1,5%	
Thickness <i>d</i>	[% , mm]	EN 823	-1% nebo -1 mm ¹⁾ a +3 mm	Class of thickness tolerances T5
Deviation from squareness of the edge on length and width <i>S_e</i>	[mm·m ⁻¹]	EN 824	2	
Deviation from flatness <i>S_{max}</i>	[mm]	EN 825	5	
Relative change in length $\Delta\epsilon_l$, in width $\Delta\epsilon_b$, in thickness $\Delta\epsilon_d$	[%]	EN 1604	1	Dimensional stability under the specified temperature and humidity conditions DS(70/90)
Thermal technical properties				
Declared value of thermal conductivity coefficient λ_D ³⁾	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.038	
Design thermal conductivity λ_D ⁴⁾	[W·m ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	0.040	
Specific heat capacity <i>c_d</i>	[J·kg ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	800	
Mechanical properties				
Compressive stress at 10% deformation σ_{10}	[kPa]	Declaration according to EN 826	40	Declared level of compressive stress at 10% deformation CS(10)40
Tensile strength perpendicular to faces σ_{mt}	[kPa]	Declaration according to EN 1607	15	Declared level of tensile strength perpendicular to faces TR15
Fire safety properties				
Reaction to fire class	[-]	Declaration according to EN 13501-1+A1	A1	
Maximum temperature for use	[°C]		200	
Melting temperature <i>t_f</i>	[°C]	DIN 4102 part 17	≥ 1000	
Hydrothermal properties				
Short-term water absorption <i>W_p</i>	[kg·m ⁻²]	Declaration according to EN 13162+A1 Measurement according to EN 1609	1	Declared level for short-term water absorption WS
Long-term water absorption by partial immersion <i>W_{lp}</i>	[kg·m ⁻²]	Declaration according to EN 13162+A1 Measurement according to EN 12087	3	Declared level for long-term water absorption by partial immersion WL(P)
Water vapour diffusion resistance factor μ	[-]	Declaration according to EN 13162+A1 Measurement according to EN 12086	1	Declared value for water vapour diffusion resistance factor MU1
Other properties				
Density	[kg·m ⁻³]	EN 1602	110-190 ⁴⁾	
Environmental properties / impacts				
Volume of pre-consumer recycled content for production ⁵⁾	[%]	ČSN ISO 14021	75-80	
Volume of post-consumer recycled content for production ⁵⁾	[%]	ČSN ISO 14021	0	
Non-hazardous waste disposed ⁶⁾	[kg /FU ⁷⁾]	EN 15804+A1, ČSN ISO 14025	4.33	NHWD
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025	222	PENRT
Global warming potential	[kg CO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	22.5	GWP
Ozone depletion	[kg CFC 11 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	1.17E-06	ODP
Acidification potential	[kg SO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.161	AP
Eutrophication potential	[kg PO ₄ ³⁻ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0146	EP
Photochemical ozone creation	[kg C ₂ H ₄ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0227	POPC
Abiotic depletion potential for non-fossil resources	[kg Sb ekv. /FU]	EN 15804+A1, ČSN ISO 14025	3.91E-07	ADP-elements
Abiotic depletion potential for fossil resources	[MJ (Calorific value) /FU]	EN 15804+A1, ČSN ISO 14025	206	ADP-fossil fuels

¹⁾ Value with greatest numerical tolerance.

²⁾ Declared values were set under the following conditions: (reference temperature 10°C, humidity u_{dry} reached by drying) according EN ISO 10456.

³⁾ 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.

⁴⁾ The density is not constant and varies with the thickness of the product.

⁵⁾ According to EN ISO 14021, part 7.8 Recycled content.

⁶⁾ In this case it is standard mixed waste.

⁷⁾ FU = functional unit (1 m² of insulation at a thickness of 160 mm thick for life cycle phases A1-A3).

RELATED DOCUMENTS

- Declaration of Performance CZ0001-024
- Certificate of constancy of performance
- Quality class A
- ISO 9001, ISO 14001, ISO 45001, ISO 50001

1/8/2023 The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.