



Isover Fassil NT

Stone wool insulation

TECHNICAL SPECIFICATION

Insulating slabs made of Isover mineral wool. Production is based on drawing the mineral 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. The slabs in the construction should be protected suitably against the weather effects (outer sheathing, alternatively diffusion foil).



APPLICATION

Isover Fassil NT slabs are suitable for insulation of outer walls of ventilated facade systems and are to be inserted into the grid under the cladding, or fitted mechanically in the multi-layer masonry. The slabs can be fitted mechanically using clamps for soft MW insulation. Insulating slabs are not glued to the surface. To harden the surface, these slabs are coated with black non-woven fibreglass fabric. It is necessary to protect the coating against an excessive wind impact if used on a ventilated facade. When the material is used to insulate ceilings, it is also necessary to use metal dowel pins with respect to fire security that cannot be positioned at the edge of the slab. The coating is not suitable for additional treatment (painting, gluing, etc.) The material is suitable for fire protection system constructions where a density of $\geq 50 \text{ kg}\cdot\text{m}^{-3}$ is required. **Especially the energy saving insulation type $\lambda_0 = 0.034 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.**

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, etc.
- Dimensional stability during temperature change.

PACKAGING, TRANSPORT, WAREHOUSING

Isover Fassil NT insulation slabs are packed into the PE film with package height up to 0.5 m. The slabs have to be transported in covered vehicles under conditions preventing their wetting or other degradation. The products are stored indoors or outdoors depending on the conditions specified in the current Isover price list.

DIMENSIONS AND PACKAGING

Thickness [mm]	Length × width [mm]	Quantity per pallet [m ³]	Quantity per pallet [m ²]	Declared thermal resistance R ₀ [m ² ·K·W ⁻¹]
50*	1 200 × 1 000	2.520	50.40	1.45
60*	1 200 × 600	3.110	51.84	1.75
80*	1 200 × 600	3.110	38.88	2.35
100*	1 200 × 600	3.024	30.24	2.90
120*	1 200 × 600	3.110	25.92	3.50
140*	1 200 × 600	3.024	21.60	4.10
160*	1 200 × 600	2.765	17.28	4.70
180*	1 200 × 600	3.024	16.80	5.25
200*	1 200 × 600	2.880	14.40	5.85

* Consult the producer for terms of delivery.

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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	-3% or -3 mm ¹⁾ and +5 mm or +5 mm ²⁾	Class of thickness tolerances T4				
Deviation from squareness of the edge on length and width <i>S_e</i>	[mm·m ⁻¹]	EN 824	5					
Deviation from flatness <i>S_{max}</i>	[mm]	EN 825	6					
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,-)				
Thermal technical properties								
Declared value of thermal conductivity coefficient λ_b ³⁾	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.034					
Design thermal conductivity λ_u ⁴⁾	[W·m ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	0.036					
Specific heat capacity <i>c_d</i>	[J·kg ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	800					
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								
Water vapour diffusion resistance factor μ	[-]	Declaration according to EN 13162+A1	1	Declared value for water vapour diffusion resistance factor MU1				
Other properties								
Density	[kg·m ⁻³]	EN 1602	50					
Acoustic properties⁵⁾								
Practical sound absorption coefficient α_p	[-]	EN 13162+A1	Level of practical sound absorption coefficient					AP
		EN ISO 11654						
		Declaration according to EN ISO 354						
	Frequency		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
	Thickness		60 mm	80 mm	100 mm	120 mm		
Weighted sound absorption coefficient α_w Noise reduction coefficient NRC	[-]	EN ISO 11654 (for NRC according ASTM C423)	Level of weighted sound absorption coefficient					AW
		Single number value						
		α_w	NCR					
	Thickness		60 mm	80 mm	100 mm	120 mm		
Specific air flow resistivity <i>r</i>	[kPa·s·m ⁻²]	EN 13162+A1 Measurement according to EN ISO 9053-1	Level of air flow resistivity					AFr
			14.5					
Environmental properties/impacts								
Non-hazardous waste disposed ⁶⁾	[kg /FU ⁷⁾]	EN 15804+A1, ČSN ISO 14025	1.6	NHWD				
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025	78.9	PENRT				
Global warming potential	[kg CO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	8.32	GWP				
Ozone depletion	[kg CFC 11 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	4.41 E-07	ODP				
Acidification potential	[kg SO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0599	AP				
Eutrophication potential	[kg PO ₄ ³⁻ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00554	EP				
Photochemical ozone creation	[kg C ₂ H ₄ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00832	POPC				
Abiotic depletion potential for non-fossil resources	[kg Sb ekv. /FU]	EN 15804+A1, ČSN ISO 14025	4.0 E-07	ADP-elements				
Abiotic depletion potential for fossil resources	[MJ (Calorific value) /FU]	EN 15804+A1, ČSN ISO 14025	74.5	ADP-fossil fuels				

¹⁾ Value with greatest numerical tolerance.

²⁾ Value with lowest numerical tolerance.

³⁾ Declared values were set under the following conditions: (reference temperature 10 °C, humidity u_{dry} reached by drying) according to EN ISO 10456.

⁴⁾ 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.

⁵⁾ Informative non-declared value beyond the scope of CPR, obtained by specific tests.

⁶⁾ In this case it is standard mixed waste.

⁷⁾ FU = functional unit (1 m² of insulation at a thickness of 120 mm for life cycle phases A1-A3).

RELATED DOCUMENTS

- Declaration of Performance CZ0001-006
- Environmental Product Declaration
- ISO 9001, ISO 14001, ISO 45001, ISO 50001

18/5/2023 The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.