

Isover Fassil

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 slabs are suitable for insulation of the outer walls of ventilated facade systems and are to be inserted into the grid under the cladding, or mechanically bonded to the multi-layer masonry. The slabs can be mechanically bonded using clamps for soft MW insulations. Insulating slabs are not glued to the surface. To harden the surface it is possible to manufacture these slabs coated with black or white mineral non-woven fabric. This possible modification is called Isover Fassil NT. The coating is not adapted to additional adjustments (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 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]	Volume per package			Quantity per palett [m ²]	Declared thermal resistance R_D [m ² ·K·W ⁻¹]
		[pcs]	[m ²]	[m ³]		
30*	1 200 × 600 (625*)	16	11.52	0.35	264.96	0.85
40*	1 200 × 600 (625*)	12	8.64	0.35	198.72	1.15
50	1 200 × 600 (625*)	10	7.20	0.36	165.60	1.45
60	1 200 × 600 (625*)	8	5.76	0.35	132.48	1.75
80	1 200 × 600 (625*)	6	4.32	0.35	99.36	2.35
100	1 200 × 600 (625*)	5	3.60	0.36	82.80	2.90
120	1 200 × 600 (625*)	4	2.88	0.35	66.24	3.50
140	1 200 × 600 (625*)	3	2.16	0.30	56.16	4.10
160	1 200 × 600 (625*)	3	2.16	0.35	49.68	4.70
180*	1 200 × 600 (625*)	2	1.44	0.26	41.76	5.25
200*	1 200 × 600 (625*)	2	1.44	0.29	37.44	5.85

* 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	-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
		60 mm		0.20	0.75	1.00	1.00	1.00	1.00
		80 mm		0.35	1.00	1.00	1.00	1.00	1.00
100 mm		0.45	1.00	1.00	1.00	1.00	1.00		
Thickness	120 mm		0.60	1.00	1.00	1.00	1.00	1.00	
	[-]		EN ISO 11654 (for NRC according ASTM C423)					AW	
	Single number value		α_w					NCR	
	Thickness	60 mm		1.00					0.95
80 mm		1.00					1.00		
100 mm		1.00					1.05		
120 mm		1.00					1.05		
Weighted sound absorption coefficient α_w Noise reduction coefficient NRC			Level of air flow resistivity					AFr	
	[kPa·s·m ⁻²]		14.5						
Environmental properties / impacts									
Non-hazardous waste disposed ⁶⁾	[kg /FU ⁷⁾]	EN 15804+A1, ČSN ISO 14025	1.44	NHWD					
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025	75.3	PENRT					
Global warming potential	[kg CO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	8.01	GWP					
Ozone depletion	[kg CFC 11 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	4.02 E-07	ODP					
Acidification potential	[kg SO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.058	AP					
Eutrophication potential	[kg PO ₄ ³⁻ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00488	EP					
Photochemical ozone creation	[kg C ₂ H ₄ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00759	POPC					
Abiotic depletion potential for non-fossil resources	[kg Sb ekv. /FU]	EN 15804+A1, ČSN ISO 14025	1.2 E-07	ADP-elements					
Abiotic depletion potential for fossil resources	[MJ (Calorific value) /FU]	EN 15804+A1, ČSN ISO 14025	70.2	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 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 thick 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.