ISOVER
SAINT-GOBAIN
Assurance in insulation

CERTIFIED
ISO 9001 · ISO 14001
ISO 45001 · ISO 50001

EPD VERIFIED

CE

ISOVER Fassil
Mineral insulation from stone wool

TECHNICAL SPECIFICATION

Insulating slabs made of ISOVER mineral wool. The production is based on defibring method of the minerals composition melt and additional 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 into the multi-layer masonry. The slabs can be mechanically bond using the 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 the density ≥ 50 kg·m^{-3} is required.
Especially the energy saving insulation type λ_D = 0.034 W·m^{-1}·K^{-1}.

PACKAGING, TRANSPORT, WAREHOUSING

ISOVER Fassil insulation slabs are packed into the PE foil 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.

BENEFITS

- very good thermal insulation performance
- fire-resistant
- 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 insect
- easy workability – can be cut, drilled into, etc.
- dimensional stability during temperature change

DIMENSIONS AND PACKAGING

Thickness	[mm]	30*	40*	50	60	80	100	120	140	160	180*	200*
Length × width	[mm]			1200 × 600 (625*)								
Volume per package	[pcs]	16	12	10	8	6	5	4	3	3	2	2
	[m²]	11.52	8.64	7.20	5.76	4.32	3.60	2.88	2.16	2.16	1.44	1.44
	[m³]	0.35	0.35	0.36	0.35	0.35	0.36	0.35	0.30	0.35	0.26	0.29
Quantity per palette	[m²]	264.96	198.72	165.60	132.48	99.36	82.80	66.24	56.16	49.68	41.76	37.44
Declared thermal resistance R$_D$	[m²·K·W^{-1}]	0.85	1.15	1.45	1.75	2.35	2.90	3.50	4.10	4.70	5.25	5.85

* It is necessary to consult with the producer for the terms of delivery.

TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	Designation code	
Geometric shape					
Length *l*	[%, mm]	EN 822	±2 %		
Width *b*	[%, mm]	EN 822	±1.5 %		
Thickness *d*	[%, mm]	EN 823	-3 % or -3 mm[1] and +5 % or 5 mm[2]	Class of thickness tolerances	T4
Deviation from squareness of the edge on length and width S$_b$	[mm·m^{-1}]	EN 824	5		
Deviation from flatness S$_{max}$	[mm]	EN 825	6		
Relative change in length $\Delta\varepsilon_l$, in width $\Delta\varepsilon_b$, in thickness $\Delta\varepsilon_d$	[%]	EN 1604	1	Dimensional stability under the specified temperature and humidity conditions	DS(70,-)
Thermal technical properties					
Declared value of the thermal conductivity coefficient λ_D[3]	[W·m^{-1}·K^{-1}]	Declaration according to EN 13162+A1	0.034		
		Measurement according to EN 12667			
Design thermal conductivity λ_u[4]	[W·m^{-1}·K^{-1}]	ČSN 73 0540-3	0.036		
Specific heat capacity c$_d$	[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 t$_t$	[°C]	DIN 4102 part 17	≥ 1000		
Hydrothermal properties					
Water vapour diffusion resistance factor μ	[-]	EN 13162+A1	1	Declared value for water vapour diffusion resistance factor	MU1
Other properties					
Density	[kg·m^{-3}]	EN 1602	50		

[1] Whichever gives the greatest numerical tolerance.
[2] Whichever gives the smallest numerical tolerance.
[3] Declared values were set under the following conditions (reference temperature 10 °C, humidity u_{dry} which is reached by drying) according EN ISO 10456.
[4] 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.

RELATED DOCUMENTS

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

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Specification code: MW-EN 13 162-T4-DS(70,-)-MU1
Identification code of the product-type: CZ0001-006
SVT code: 429

ISO 9001 · ISO 14001
ISO 45001 · ISO 50001

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TECHNICAL PARAMETERS

Parameter	Unit	Methodology		Value					Designation code	
Acoustic properties[5]										
The practical sound absorption coefficient a_p	[-]	EN 13162+A1		Level of practical sound absorption coefficient					AP	
		EN ISO 11654								
		Measurement according to EN ISO 354								
		Frequency		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	
		Thickness	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	
			120 mm	0.60	1.00	1.00	1.00	1.00	1.00	
Weighted sound absorption coefficient a_w Noise Reduction Coefficient NRC	[-]	EN ISO 11654 (for NRC according ASTM C423)		Level of weighted sound absorption coefficient					AW	
	Single number value			a_w			NRC			
	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			
Specific air flow resistivity r	[kPa·s·m^{-2}]	EN 13162+A1		Level of air flow resistivity					AFr	
		Measurement according to EN ISO 9053-1		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_2H_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	

[5] Informative non-declared value beyond scope of CPR, obtained by concrete tests.
[6] In this case it is standard mixed waste.
[7] FU = functional unit (1 m^2 of insulation by 100 mm thick for live cycle phases A1–A3).

Example of product application ISOVER Fassil

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