

Isover Maxil

Stone wool insulation



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 Maxil 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. The material is suitable for fire protection system constructions where the density $\geq 75 \text{ kg}\cdot\text{m}^{-3}$ is required.

Superior thermal insulation material with $\lambda_p = 0.034 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

PACKAGING, TRANSPORT, WAREHOUSING

Isover Maxil 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 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.

DIMENSIONS AND PACKAGING

Thickness [mm]	Length × width [mm]	Volume per package			Quantity per pallet [m ²]	Declared thermal resistance R_b [m ² ·K·W ⁻¹]
		[pcs]	[m ²]	[m ³]		
30*	1200 × 600	14	10.08	0.32	120.96	0.85
40*	1200 × 600	10	7.20	0.29	86.40	1.15
50*	1200 × 600	8	5.76	0.29	69.12	1.45
60*	1200 × 600	7	5.04	0.30	60.48	1.75
80*	1200 × 600	5	3.60	0.29	43.20	2.35
100*	1200 × 600	4	2.88	0.29	34.56	2.90

* Consult the 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 S_e	[mm·m ⁻¹]	EN 824	5	
Deviation from flatness S_{max}	[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 (23,90)

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Parameter	Unit	Methodology	Value	Designation code				
Thermal technical properties								
Declared value of thermal conductivity coefficient $\lambda_D^{2)}$	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.034					
Design thermal conductivity $\lambda_D^{3)}$	[W·m ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	0.036					
Specific heat capacity c_p	[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_f	[°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	75					
Acoustic properties⁵⁾								
Practical sound absorption coefficient α_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		40 mm	0.10	0.45	0.95	1.00	1.00
		60 mm	0.20	0.80	1.00	1.00	1.00	1.00
		80 mm	0.40	1.00	1.00	1.00	1.00	1.00
		100 mm	0.50	1.00	1.00	1.00	1.00	1.00
Weighted sound absorption coefficient α_w Noise reduction coefficient NRC	[-]	EN ISO 11654 (for NRC according to ASTM C423)	Level of weighted sound absorption coefficient					AW
		Single number value	α_w					
			40 mm	0.75 (MH)			NCR	
	Thickness		60 mm	1.00			0.85	
			80 mm	1.00			0.95	
		100 mm	1.00			1.00		
Specific air flow resistivity r		Measurement according to EN ISO 9053-1	Level of air flow resistivity					AFr [kPa·s·m ⁻²]
	Thickness	100 mm	32.9					
Environmental properties/impacts								
Volume of pre-consumer recycled content for production ⁶⁾	[%]	ČSN ISO 14021	72					
Volume of post-consumer recycled content for production ⁶⁾	[%]	ČSN ISO 14021	0					
Non-hazardous waste disposed ⁷⁾	[kg /FU ⁸⁾]	EN 15804+A1, ČSN ISO 14025	1.7				NHWD	
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025	85.2				PENRT	
Global warming potential	[kg CO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	9.01				GWP	
Ozone depletion	[kg CFC 11 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	4.82 E-07				ODP	
Acidification potential	[kg SO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0652				AP	
Eutrophication potential	[kg PO ₄ ³⁻ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00611				EP	
Photochemical ozone creation	[kg C ₂ H ₄ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00872				POPC	
Abiotic depletion potential for non-fossil resources	[kg Sb ekv. /FU]	EN 15804+A1, ČSN ISO 14025	7.39 E-07				ADP-elements	
Abiotic depletion potential for fossil resources	[MJ (Calorific value) /FU]	EN 15804+A1, ČSN ISO 14025	80.3				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⁾ According to EN ISO 14021, part 7.8 - Recycled content.

⁷⁾ In this case it is standard mixed waste.

⁸⁾ FU = functional unit (1 m² of insulation at a thickness of 100 mm for life cycle phases A1-A3).

RELATED DOCUMENTS

- Declaration of Performance
- Certificate of constancy of performance
- Environmental Product Declaration
- ISO 9001, ISO 14001, ISO 45001, ISO 50001

1/11/2023 The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.