Isover Aku

Stone wool insulation

TECHNICAL SPECIFICATION

Insulating slabs made of Isover mineral wool. The production is based on the defibring method of the mineral 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.

APPLICATION

Isover Aku slabs are suitable for plasterboard wall systems with 625 mm spacing as an acoustic and thermal insulation. The material is suitable for fire protection partition walls where the density $\geq 40\,kg\cdot m^{-3}$ is required.

PACKAGING, TRANSPORT, WAREHOUSING

Isover Aku 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

- Fire resistance.
- Very good thermal insulation performance.
- 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 [m²]	Declared thermal resistance R_D [m²·K·W⁻¹]
		[pcs]	[m²]	[m³]		
40	1 000 × 625	12	7.500	0.30	150.00	1.10
50	1 000 × 625	10	6.250	0.31	137.50	1.40
60	1 000 × 625	8	5.000	0.30	100.00	1.70
70	1 000 × 625	6	3.750	0.26	97.50	2.00
80	1 000 × 625	6	3.750	0.30	75.00	2.25
90	1 000 × 625	5	3.125	0.28	68.75	2.55
100	1 000 × 625	5	3.125	0.30	68.75	2.85

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 mm 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,-)

SAINT-GOBAIN

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TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	Designation code	
Thermal technical properties					
Declared value of thermal conductivity coefficient λ_D [3]	[W·m^{-1}·K^{-1}]	Declaration according to EN 13162+A1	0.035		
		Measurement according to EN 12667			
Design thermal conductivity λ_u [4]	[W·m^{-1}·K^{-1}]	ČSN 73 0540-3	0.038		
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	[-]	Declaration according to EN 13162+A1	1	Declared value for water vapour diffusion resistance factor	MU1
Other properties					
Density	[kg·m^{-3}]	EN 1602	40		

Acoustic properties [5]

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	40 mm	0.15	0.40	0.85	0.95	0.95	1.00
		60 mm	0.25	0.70	1.00	1.00	1.00	1.00
		80 mm	0.35	0.95	1.00	1.00	1.00	1.00
		100 mm	0.45	1.00	1.00	1.00	1.00	1.00

Weighted sound absorption coefficient a_w Sound Absorption Average a_{stf} Noise reduction coefficient NRC	[-]	EN ISO 11654 (for NRC according ASTM C423)		Level of weighted sound absorption coefficient		AW
	Single number value		a_w	a_{stf}	NCR	
	Thickness	40 mm	0.70 (MH)	0.79	0.80	
		60 mm	1.00	0.93	0.95	
		80 mm	1.00	1.01	1.00	
		100 mm	1.00	1.05	1.05	

Specific air flow resistivity r	[kPa·s·m^{-2}]	EN 13162+A1	Level of air fl ow resistivity	AFr
		Measurement according to EN ISO 9053-1	12.3	

[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. [5] Interpolated and extrapolated values. [6] According to EN ISO 14021, part 7.8 – Recycled content.

RELATED DOCUMENTS

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

More about the product

www.isover.cz/en/products/isover-aku

2/1/2025   The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.