

Isover UNI

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 (outer cassette sheathing, diffusion and vapour-proof foil).



APPLICATION

Isover Uni slabs are suitable for unloaded insulation of outer walls (ventilated facades under the cladding with insulant inserted into cassettes or frames), insulation of pitched roofs, ceilings, drop ceilings and other light sandwich constructions. The material is suitable for fire protection partition walls where a density $\geq 40 \text{ kg}\cdot\text{m}^{-3}$ is required.

PACKAGING, TRANSPORT, WAREHOUSING

Isover Uni insulation slabs are packed into PE film with package height up to 0.5 m. The slabs must be transported in covered vehicles under conditions that keep them dry and prevent other damage. 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 _D [m ² ·K·W ⁻¹]
		[pcs]	[m ²]	[m ³]		
40	1200 × 600	12	8.64	0.35	198.72	1.10
50	1200 × 600	10	7.20	0.36	165.60	1.40
60	1200 × 600	8	5.76	0.35	132.48	1.70
80	1200 × 600	6	4.32	0.35	99.36	2.25
100	1200 × 600	5	3.60	0.36	82.80	2.85
120	1200 × 600	4	2.88	0.35	66.24	3.40
140	1200 × 600	3	2.16	0.30	56.16	4.00
150	1200 × 600	3	2.16	0.33	51.84	4.25
160	1200 × 600	3	2.16	0.35	49.68	4.55
180	1200 × 600	2	1.44	0.26	41.76	5.10
200	1200 × 600	2	1.44	0.29	37.44	5.70

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,-)

TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	Designation code					
Thermal technical properties									
Declared value of thermal conductivity coefficient λ_p ³⁾	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.035						
Design thermal conductivity λ_d 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_f	[°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 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	0.15	0.40	0.85	0.95	0.95	1.00	
Weighted sound absorption coefficient α_w	[-]	EN ISO 11654 (for NRC according to ASTM C423)	Level of weighted sound absorption coefficient				AW		
		Single number value							
		Thickness	40 mm	0.70 (MH)	0.79	0.80		0.80	
Sound Absorption Average α_{str}	[-]	EN ISO 11654 (for NRC according to ASTM C423)					NCR		
			Thickness	60 mm	1.00	0.93		0.95	0.95
			Thickness	80 mm	1.00	1.01		1.00	1.00
Noise Reduction Coefficient NRC	[-]	EN ISO 11654 (for NRC according to ASTM C423)					1.05		
			Thickness	80 mm	1.00	1.01		1.00	1.00
			Thickness	100 mm	1.00	1.05		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	12.3						
Environmental properties / impacts									
Volume of pre-consumer recycled content for production ⁵⁾	[%]	ČSN ISO 14021	72						
Volume of post-consumer recycled content for production ⁵⁾	[%]	ČSN ISO 14021	0						
Non-hazardous waste disposed ⁶⁾	[kg /FU ⁷⁾]	EN 15804+A1, ČSN ISO 14025	0.946	NHWD					
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025	49	PENRT					
Global warming potential	[kg CO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	4.97	GWP					
Ozone depletion	[kg CFC 11 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	2.72 E-07	ODP					
Acidification potential	[kg SO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0361	AP					
Eutrophication potential	[kg PO ₄ ³⁻ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00356	EP					
Photochemical ozone creation	[kg C ₂ H ₄ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00471	POPC					
Abiotic depletion potential for non-fossil resources	[kg Sb ekv. /FU]	EN 15804+A1, ČSN ISO 14025	6.73 E-07	ADP-elements					
Abiotic depletion potential for fossil resources	[MJ (Calorific value) /FU]	EN 15804+A1, ČSN ISO 14025	45.9	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⁾ According to EN ISO 14021, part 7.8 – Recycled content.

⁶⁾ In this case it is standard mixed waste.

⁷⁾ FU = functional unit (1 m² of insulation at a thickness of 100 mm thick for life cycle phases A1-A3).

RELATED DOCUMENTS

- Declaration of Performance CZ0001-005
- Environmental Product Declaration
- ISO 9001, ISO 14001, ISO 45001

6/6/2023 The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.