Product identification code: CZ0001-015
Specification code: MW-EN 13 162-T5-DS(70,-)-CS(10)60-TR10-PL(5)500-WS-WL(P)-MU1

Isover S-i

Stone wool insulation

TECHNICAL SPECIFICATION

Insulating slabs made of Isover mineral wool. The production is based on the 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 have to be protected suitably (vapour-proof foil, separation layers, water-proofing membrane of the flat warm decks).

APPLICATION

Isover S-i slabs are designed for thermal, acoustic and fire insulation of flat roofs. They are usualy laid in one top layer that covers the bottom slabs. There is a suitable combination with Isover T or Isover R slabs, which are laid as an underlayer with gravity flow systems Isover SD and Isover DK, as well as with Isover AK attic wedge blocks, which help to change the horizontal direction of the water-proofing to the perpendicular direction. A waterproofing membrane can be applied directly on Isover S-i slabs (glued, mechanically attached or with a load). If there is the expectation of increased activity on the roof (due to frequent roof inspection, technology service ...), solidifying paths are a must to prevent roof damage.

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.

PACKAGING, TRANSPORT, WAREHOUSING

Isover S-i insulating slabs are packed on pallets to a height up to 1.3 m. The slabs must be transported in covered vehicles under conditions that keep them dry and prevent other damage. They should be stored flat in a sheltered space to a maximum layer height of 2 m.

DIMENSIONS AND PACKAGING

Thickness [mm]	Length × width [mm]	Transport packaging [m^3]	Volume per package [m^2]	Declared thermal resistance R_D [$m^2 \cdot K \cdot W^{-1}$]
30	2 000 × 1 200	3.024	100.8	0.80
40	2 000 × 1 200	2.880	72.0	1.05
50	2 000 × 1 200	3.000	60.0	1.35
60	2 000 × 1 200	3.024	50.4	1.60
70	2 000 × 1 200	3.024	43.2	1.85
80	2 000 × 1 200	3.070	38.4	2.15
100	2 000 × 1 200	3.120	31.2	2.55
120	2 000 × 1 200	3.168	26.4	3.05
140	2 000 × 1 200	3.024	21.6	3.55
160	2 000 × 1 200	3.072	19.2	4.10

Isover
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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	-1% or -1 mm[1] and +3 mm	Class of thickness tolerances	T5
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 thermal conductivity coefficient λ_D[2]	[W·m^{-1}·K^{-1}]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.037 THK < 100 mm 0.039 THK 100 mm and over		
Design thermal conductivity λ_u[3]	[W·m^{-1}·K^{-1}]	ČSN 73 0540-3	0.038 tl. < 100 mm 0.040 tl. 100 mm and over		
Specific heat capacity c_d	[J·kg^{-1}·K^{-1}]	ČSN 73 0540-3	800		
Mechanical properties					
Compressive stress at 10% deformation σ_{10}	[kPa]	Declaration according to EN 826	60	Declared level of compressive stress at 10% deformation	CS(10)60
Tensile strength perpendicular to faces σ_{mt}	[kPa]	Declaration according to EN 1607	10	Declared level of tensile strength perpendicular to faces	TR10
Point load at a given deformationi F_p	[N]	Declaration according to EN 12430	500	Declared level of point load for 5 mm deformation	PL(5)500
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					
Short-term water absorption W_p	[kg·m^{-2}]	Declaration according to EN 13162+A1 Measurement according to EN 1609	1	Declared level for short-term water absorption	WS
Long-term water absorption by partial immersion W_{lp}	[kg·m^{-2}]	Declaration according to EN 13162+A1 Measurement according to EN 12087	3	Declared level for long-term water absorption by partial immersion	WL(P)
Water vapour diffusion resistance factor μ	[-]	Declaration according to EN 13162+A1 Measurement according to EN 12086	1	Declared value for water vapour diffusion resistance factor	MU1
Other properties					
Density [4]	[kg·m^{-3}]	EN 1602	140–160		

[1] Value with greatest numerical tolerance.
[2] Declared values were set under the following conditions: (reference temperature 10 °C, humidity u_{dry} reached by drying) according to EN ISO 10456.
[3] 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.
[4] The apparent density is only informative in connection with logistics and static needs.

RELATED DOCUMENTS

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

More about the product

www.isover.cz/en/products/isover-s-i

1/7/2024 The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.

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