Identification code of the product-type: S01 03
SVT code: 10391
Specification code: MW-EN 13162-T5-DS(70,-)-CS(10)100-TR10-PL(5)1000-WS-WL(P)-MU1

ISOVER SAINT-GOBAIN
Assurance in insulation

CE

ISOVER XH (eXtra Hard)

Mineral insulation from stone wool

PRODUCT CHARACTERISTICS

Basalt mineral wool insulation panels, produced by means of fibering molten mixture of rock, recycled material, and other ingredients. The resulting mineral fibres are processed into the final panel shape in the production line. These panels are hydrophobized throughout and have a predominantly longitudinal orientation of fibres. The panels in the construction are required to feature suitable protection (vapour-proof foil, water-proofing, flat roof layer, etc.).

APPLICATION

Isover XH panels are designed specifically for thermal, sound and fire insulation of single-skin flat roofs with the highest requirements for pressure load and frequent walkability. The mineral panels are applied dry, typically laid down in one upper layer protecting the thermal arrangement below. They can be combined with ISOVER T, ISOVER R, and ISOVER LAM 70, 50 and 30 panels, which are used as an underlayer, with Isover SD and Isover DK gravity flow systems, and with Isover AK attic wedge blocks, which help in the transition of the horizontal direction of water-proofing into perpendicular direction. Waterproofing layer arrangement (glued, anchored or loaded) is most often applied directly to Isover XH panels. Where frequent inspections of the roof and technological equipment are planned, walkways must be designed to prevent the formation of depressions.

PACKAGING, TRANSPORT, WAREHOUSING

ISOVER XH insulating slabs are packed on the pallets in height up to 1.3 m. The slabs have to be transported in covered vehicles under conditions preventing their wetting or other degradation. They should be stored flat in sheltered space to maximum layer height of 2 m.

BENEFITS

- **very high compressive strength of 100 kPa**
- **very high point load capacity 1000 N**
- 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 insect
- easy workability - can be cut, drilled into, etc.

DIMENSIONS AND PACKAGING

Thickness	[mm]	60	80
Length × width	[mm]	2000 × 1200	
Transport packaging	[m³]	2.88	3.07
Volume per package	[m²]	48.0	38.4
Declared thermal resistance R_D	[m²·K·W⁻¹]	1.50	2.05

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 the thermal conductivity coefficient λ_D[2]	[W·m⁻¹·K⁻¹]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.039		
Design thermal conductivity λ_u[3]	[W·m⁻¹·K⁻¹]	ČSN 73 0540-3	0.040		
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	100	Level of compressive stress at 10% deformation	CS(10)100
Tensile strength perpendicular to faces σ_{mt}	[kPa]	Declaration according to EN 1607	10	Level of tensile strength perpendicular to faces	TR10
The point load at a given deformationi F_p	[N]	Declaration according to EN 12430	1000	Level of point load for 5 mm deformation	PL(5)1000
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	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	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	Value for water vapour diffusion resistance factor	MU1
Other properties					
Density [4]	[kg·m⁻³]	EN 1602	180–210		

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

RELATED DOCUMENTS

- Declaration of Performance CZ0001-055
- Certificate of constancy of performance 1390-CPR-305/11/P
- ISO 9001, ISO 14001, ISO 18001, ISO 50001

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