ISOVER P

Mineral insulation from stone wool

ISOVER SAINT-GOBAIN
Assurance in insulation

CERTIFIED LR
ISO 9001 · ISO 14001
ISO 45001 · ISO 50001

CE

TECHNICAL SPECIFICATION

Insulating slabs made of Orsil 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 made water repellent. The slabs in the construction have to be protected suitably (vapour-proof foil, water-proofing, flat roof bearing layer, etc.)

APPLICATION

ISOVER P slabs are designed for thermal, acoustic and fire insulation of the flat warm decks. The slabs are entirely used as an underlayer to another spreading thermal insulative course, e.g. ISOVER S. Slabs are to be laid on vapour barrier, supporting construction or gravity flow system. The gravity flow systém is possible to create from ISOVER SD gravity flow slabs or as well as from ISOVER DK double gravity flow wedge blocks in gravity flow up to 15%. Whole structure is recommended to complete with ISOVER AK attic wedge blocks which helps to better change the horizontál direction of the water-proofing into the perpendicular direction.

PACKAGING, TRANSPORT, WAREHOUSING

ISOVER P 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 good thermal insulation performance
- fire resistance
- very good acoustic absorption
- low diffusion resistance – water vapour permeable
- environmental friendly and hygienic
- hydrophoby - ISOVER insulation materials are made water repellent
- long life span
- resistant to wood-destroying pests, rodents, and insect
- ease of working - the products can be cut

DIMENSIONS AND PACKAGING

Thickness	[mm]	20	30	60	80	100	120	140	160
Length × width	[mm]	1000 × 1250		2000 × 1200					
Transport packaging	[m³]	1.500	1.575	3.024	2.880	3.120	2.880	2.688	3.072
Volume per package	[m²]	75.00	52.50	50.40	36.00	31.20	24.00	19.20	19.20
Declared thermal resistance R_D	[m²·K·W⁻¹]	0.55	0.80	1.65	2.20	2.75	3.30	3.85	4.40

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 % 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,-)
Thermal technical properties					
Declared value of the thermal conductivity coefficient λ_D[3)	[W·m⁻¹·K⁻¹]	Declaration according to EN 13162+A1	0.036		
		Measurement according to EN 12667			
Design thermal conductivity λ_u[4)	[W·m⁻¹·K⁻¹]	ČSN 73 0540-3	0.037		
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	20	Level of compressive stress at 10% deformation	CS(10)20
Tensile strength perpendicular to faces σ_{mt}	[kPa]	Declaration according to EN 1607	1	Level of tensile strength perpendicular to faces	TR1
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	1	Level for short term water absorption	WS
		Measurement according to EN 1609			
Long term water absorption by partial immersion W_{lp}	[kg·m⁻²]	Declaration according to EN 13162+A1	3	Level for long term water absorption by partial immersion	WL(P)
		Measurement according to EN 12087			
Water vapour diffusion resistance factor μ	[-]	Declaration according to EN 13162+A1	1	Value for water vapour diffusion resistance factor	MU1
		Measurement according to EN 12086			
Other properties					
Density [5)	[kg·m⁻³]	EN 1602	100–142		

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

RELATED DOCUMENTS

- Declaration of Performance CZ0001-033
- Certificate of constancy of performance 1390-CPR-305/11/P
- ISO 9001, ISO 14001, ISO 45001, ISO 50001

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