

TECHNICAL SPECIFICATION

Insulating slabs made of ISOVER 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 hydrophobic.

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

APPLICATION

ISOVER R 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 system 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 horizontal direction of the water-proofing into the perpendicular direction.

DIMENSIONS AND PACKAGING

Thickness	[mm]	60	80	100	120	140	160
Length × width	[mm]	2000 × 1200					
Transport packaging	[m ³]	2.88	3.07	3.12	3.17	2.69	3.07
Volume per package	[m ²]	48.0	38.4	31.2	26.4	19.2	19.2
Declared thermal resistance R _D	[m ² ·K·W ⁻¹]	1,65	2,20	2,75	3,30	3,85	4,40

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 % or +5 mm ²⁾	Class of thickness tolerances T4
Deviation from squareness of the edge on length and width S _D	[mm·m ⁻¹]	EN 824	5	
Deviation from flatness S _{max}	[mm]	EN 825	6	
Relative change in length Δε _l , in width Δε _b , in thickness Δε _d	[%]	EN 1604	1	Dimensional stability under the specified temperature and humidity conditions DS(70,90)
Thermal technical properties				
Declared value of the thermal conductivity coefficient λ _D ³⁾	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.036	
Design thermal conductivity λ _D 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	30	Declared level of compressive stress at 10% deformation CS(10)30
Tensile strength perpendicular to faces σ _{mt}	[kPa]	Declaration according to EN 1607	1	Declared level of tensile strength perpendicular to faces TR1
The point load at a given deformationi F _p	[N]	Declaration according to EN 12430	250	Declared level of point load for 5 mm deformation PL(5)250
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				
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 ρ 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
- Environmental Product Declaration
- ISO 9001, ISO 14001, ISO 45001, ISO 50001

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