

Isover TRAM MW

Mineral insulation from stone wool

TECHNICAL SPECIFICATION

Mineral insulation blocks Isover TRAM MW are made of hard mineral wool. The production is based on defibring method of the minerals composition melt and additional additives and ingredients.

APPLICATION

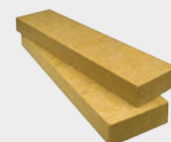
Isover TRAM MW products are solely designed for slanting roofs structures, especially for insulation over rafters where they form parallel stripes that are necessary for the assembly itself. Detailed description of use is presented in the slanting roofs catalogue.

PACKAGING, TRANSPORT, WAREHOUSING

Isover TRAM MW blocks are packed on pallets and covered with protective PE foil. The products have to be transported in covered vehicles under conditions preventing their wetting or other degradation and stored in sheltered place. The products are stored indoors or outdoors depending on the conditions specified in the current ISOVER price list.

BENEFITS

- fire-resistant
- very good thermal insulation performance
- vysoká protipožární odolnost
- 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.
- dimensional stability during temperature change



DIMENSIONS AND PACKAGING

Height	[mm]	200	240	280
Length × width	[mm]	1200 × 100 / 1000 × 100		
Volume per package	[ks]	60 / 72	49 / 60	42 / 51
Declared thermal resistance R_D	[m ² ·K·W ⁻¹]	4.65	5.55	6.50

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 $\Delta\epsilon_l$, in width $\Delta\epsilon_b$, in thickness $\Delta\epsilon_d$	[%]	EN 1604	1	Dimensional stability under the specified temperature and humidity conditions	DS (70,-)
Thermal technical properties					
Declared value of the thermal conductivity coefficient λ_D ²⁾	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13162+A1	0.044		
		Measurement according to EN 12667			
Design thermal conductivity λ_D ³⁾	[W·m ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	0.047		
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	80	Declared level of compressive stress at 10% deformation	CS(10\Y)80
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	1	Declared level for short term water absorption	WS
		Measurement according to EN 1609			
Long term water absorption by partial immersion W_{fp}	[kg·m ⁻²]	Declaration according to EN 13162+A1	3	Declared level for long term water absorption by partial immersion	WL(P)
		Measurement according to EN 12087			
Water vapour diffusion resistance factor μ	[-]	EN 13162+A1	1	Declared value for water vapour diffusion resistance factor	MU1
Other properties					
Density	[kg·m ⁻³]	EN 1602	130		

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.

RELATED DOCUMENTS

- Declaration of Performance CZ0001-017
- Environmental Product Declaration
- ISO 9001, ISO 14001, OHSAS 18001, ISO 50001