



# **Isover Tram MW**

Stone wool insulation

#### **TECHNICAL SPECIFICATION**

Mineral insulation blocks Isover Tram MW are made of hard mineral wool. The production is based on the defibring method of the mineral 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 strips that are necessary for the assembly itself. A detailed description of use is presented in the slanting roof catalogue.

### PACKAGING, TRANSPORT, WAREHOUSING

Isover Tram MW blocks are packed on pallets and covered with protective PE film. The products must be transported in covered vehicles under conditions that keep them dry and prevent other damage. The products are stored in a sheltered place indoors or outdoors depending on the conditions specified in the current ISOVER price list.

#### **BENEFITS**

- Fire resistance.
- Very good thermal insulation performance.
- High 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.
- Dimensional stability during temperature change.

#### DIMENSIONS AND PACKAGING

Height [mm]	Length × width [mm]	Volume per package [pcs]	Declared thermal resistance $R_D$ [m <sup>2</sup> ·K·W <sup>-1</sup> ]
200	1 200 × 100 / 1 000 × 100	60 / 72	4.50
240	1 200 × 100 / 1 000 × 100	49 / 60	5.45
280	1 200 × 100 / 1 000 × 100	42 / 51	6.35

#### TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	Designation code	
Geometric shape					
Length /	[%, mm]	EN 822	±2%		
Width b	[%, mm]	EN 822	±1.5%		
Thickness d	[%, mm]	EN 823	-1% or -1 mm <sup>1)</sup> and +3 mm	Class of thickness tolerances	T5
Deviation from squareness of the edge on length and width $S_b$	[mm·m <sup>-1</sup> ]	EN 824	5		
Deviation from flatness $S_{max}$	[mm]	EN 825	6		
Relative change in length $\Delta \varepsilon_{\it l}$ , in width $\Delta \varepsilon_{\it b}$ , in thickness $\Delta \varepsilon_{\it d}$	[%]	EN 1604	1	Dimensional stability under the specified temperature and humidity conditions	DS (70,-)



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Parameter	Unit	Methodology	Value	Designation code	
Thermal technical properties					
Declared value of thermal conductivity coefficient $\lambda_{\scriptscriptstyle D}^{3)}$	[W·m <sup>-1</sup> ·K <sup>-1</sup> ]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.044		
Design thermal conductivity $\lambda_u^{4}$	[W·m <sup>-1</sup> ·K <sup>-1</sup> ]	ČSN 73 0540-3	0.047		
Specific heat capacity $c_d$	[J·kg <sup>-1</sup> ·K <sup>-1</sup> ]	ČSN 73 0540-3	800		
Mechanical properties					
Compressive stress at 10% deformation $\sigma_{_{10}}$	[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 $t_t$	[°C]	DIN 4102 part 17	≥ 1000		
Hydrothermal properties					
Short-term water absorption $W_{\scriptscriptstyle p}$	[kg·m <sup>-2</sup> ]	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 <sup>-2</sup> ]	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 $\mu$	[-]	Declaration according to EN 13162+A1 Measurement according to EN 12086	1	Declared value for water vapour diffusion resistance factor	MU1
Other properties					
Density	[kg·m <sup>-3</sup> ]	EN 1602	130		

<sup>&</sup>lt;sup>1)</sup> Value with greatest numerical tolerance.

## **RELATED DOCUMENTS**

- Declaration of Performance CZ0001-017
- Certificate of constancy of performance 1390-CPR-312/11/P
- ISO 9001, ISO 14001, ISO 45001, ISO 50001

11/7/2023 The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.

Value with greatest numerical tolerance.

2) Declared values were set under the following conditions: (reference temperature 10°C, humidity u<sub>dry</sub> reached by drying) according 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.