Specification code: MW-EN 13 162-T5-DS(TH)-CS(10)40-TR15-WS-WL(P)-MU1
Identification code of the product-type: CZ0001-024
SVT code: 7864

ISOVER SAINT-GOBAIN
Assurance in insulation

CERTIFIED
ISO 9001 · ISO 14001
ISO 45001 · ISO 50001

EPD VERIFIED

ISOVER TF

Mineral insulation from stone wool

TECHNICAL SPECIFICATION

Insulating slabs made of ISOVER mineral wool with longitudinal fibres. 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 (layers of the contact wall insulation system).

APPLICATION

ISOVER TF facade slabs with longitudinal fibre are suitable for external thermal insulation composite systems (ETICS) and are glued and mechanically bonded to a sufficiently cohesive and sound wall surface. The layers of contact insulating systems are applied on the slabs: bond, reinforcement grid, penetration, plaster, and paint. Bonding of the slabs can be performed with the glue being applied along the edge and at the patches in centre of the slab. The number of the anchors for machanically anchoring is usually 5 to 6 pc/m², the exact number to be specified by the designer. The anchors will be arranged according to the instructions of the certified insulating system manufacturer.

PACKAGING, TRANSPORT, WAREHOUSING

ISOVER TF insulation slabs are packed into the PE foil covered packets or as the packets on a pallet. ISOVER TF is standardly delivered on pallets. Material have to be transported and stocked under conditions preventing their wetting or other degradation.

BENEFITS

- 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, glued, etc.

DIMENSIONS AND PACKAGING

Thickness	[mm]	20[1)]	30[1)]*	40[1)]*	50[1)]*	60*	80*	100*	120*	140*	150*	160*	180*	200*	220*	240*
Length × width	[mm]		1000 × 600													
Volume per package	[pcs]	10	8	4	4	3	3	2	2	2	2	2	1	1	1	1
	[m²]	6.00	4.80	2.40	2.40	1.80	1.80	1.20	1.20	1.20	1.20	1.20	0.60	0.60	0.60	0.60
	[m³]	0.120	0.144	0.096	0.120	0.108	0.144	0.120	0.144	0.168	0.180	0.192	0.108	0.120	0.132	0.144
Quantity per palette	[m²]	132.00	105.60	81.60	62.40	54.00	39.60	31.20	26.40	21.60	21.60	19.20	18.00	15.60	14.40	13.20
Declared thermal resistance R_D	[m²·K·W⁻¹]	0.50	0.75	1.05	1.30	1.55	2.10	2.60	3.15	3.65	3.90	4.20	4.70	5.25	5.75	6.30

[1)] ETICS add-on, not included in the Qualitative class. A according to CZB.
* It is necessary to consult with the producer for the terms of delivery. For different sizes and packaging options consult the manufacturer.

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	2		
Deviation from flatness S_{max}	[mm]	EN 825	5		
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(70,90)
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	0.038		
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	40	Declared level of compressive stress at 10% deformation	CS(10)40
Tensile strength perpendicular to faces σ_{mt}	[kPa]	Declaration according to EN 1607	15	Declared level of tensile strength perpendicular to faces	TR15
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	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	[kg·m⁻³]	EN 1602	110-190[4)]		

[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 density is not constant and varies with the thickness of the product.

RELATED DOCUMENTS

- Certificate of constancy of performance 1390-CPR-312/11/P
- Declaration of Performance CZ0001-024
- Quality class A
- ISO 9001, ISO 14001, ISO 45001, ISO 50001

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TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	Designation code
Environmental properties / impacts				
Volume of Pre-consumer recycled content for production[5]	[%]	ČSN ISO 14021	75 - 80	
Volume of Post-consumer recycled content for production[5]	[%]	ČSN ISO 14021	0	
Non-hazardous waste disposed[6]	[kg /FU[7]]	EN 15804+A1, ČSN ISO 14025	4.33	NHWD
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025	222	PENRT
Global Warming Potential	[kg CO_2 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	22.5	GWP
Ozone Depletion	[kg CFC 11 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	1.17E-06	ODP
Acidification potential	[kg SO_2 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.161	AP
Eutrophication potential	[kg PO_4^{3-} ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0146	EP
Photochemical ozone creation	[kg C_2H_4 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0227	POPC
Abiotic depletion potential for non-fossil resources	[kg Sb ekv. /FU]	EN 15804+A1, ČSN ISO 14025	3.91E-07	ADP-elements
Abiotic depletion potential for fossil resources	[MJ (Calorific value) /FU]	EN 15804+A1, ČSN ISO 14025	206	ADP-fossil fuels

[5] According to ČSN EN ISO 14021 part 7.8 Recycled content.
[6] In this case it is standard mixed waste.
[7] FU = functional unit (1 m^2 of insulation by 160 mm thick for life cycle phases A1–A3).

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