ISOVER
SAINT-GOBAIN
Assurance in insulation

CERTIFIED
ISO 9001 · ISO 14001
ISO 45001 · ISO 50001

EPD VERIFIED

CE

ISOVER Orsik
Mineral insulation from stone wool

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 should be protected suitably against the weather effects, increased relative inner humidity and condensate (diffusion and vapour-proof foil).

APPLICATION

ISOVER Orsik slabs are suitable for unloaded thermal, acoustic and fire insulation of pitch roofs especially with insertion between rafters and additional frame as well, into partition walls, wood ceilings insulations, false ceilings, and cavities.

PACKAGING, TRANSPORT, WAREHOUSING

ISOVER Orsik insulation slabs are packed into the PE foil with package height up to 0.5 m. The slabs have to be transported in covered vehicles under conditions preventing their wetting or other degradation. 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
- 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

Thickness	[mm]	40	50	60	70	80	90	100	120	140	160	180	200
Length × width	[mm]	1200 × 625						1200 × 600					
Volume per package	[pcs]	12	10	8	6	6	4	5	4	4	3	3	2
	[m²]	9.00	7.50	6.00	4.50	4.50	3.00	3.60	2.88	2.88	2.16	2.16	1.44
	[m³]	0.36	0.38	0.36	0.32	0.36	0.27	0.36	0.35	0.40	0.35	0.39	0.29
Quantity per palette	[m²]	207.00	165.00	138.00	117.00	103.50	87.00	82.80	66.24	57.60	49.68	43.20	37.44
Declared thermal resistance R_D	[m²·K·W⁻¹]	1.05	1.35	1.60	1.85	2.15	2.40	2.70	3.20	3.75	4.30	4.85	5.40

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	-5 % or -5 mm[1] and +15 % or +15 mm[2]	Class of thickness tolerances	T2
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		
Thermal technical properties					
Declared value of the thermal conductivity coefficient λ_D[3]	[W·m⁻¹·K⁻¹]	Declaration according to EN 13162+A1	0.037		
		Measurement according to EN 12667			
Design thermal conductivity λ_u[4]	[W·m⁻¹·K⁻¹]	ČSN 73 0540-3	0.039		
Specific heat capacity c_d	[J·kg⁻¹·K⁻¹]	ČSN 73 0540-3	800		
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					
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	30		

[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.

RELATED DOCUMENTS

- Declaration of Performance CZ0001-004
- Environmental Product Declaration
- Certificate of constancy of performance 1390-CPR-0305/11/P
- ISO 9001, ISO 14001, ISO 45001, ISO 50001

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Parameter	Unit	Methodology		Value					Designation code
Acoustic properties[5)]									
The practical sound absorption coefficient a_p	[-]	EN 13162+A1		Level of practical sound absorption coefficient					AP
		EN ISO 11654							
		Measurement according to EN ISO 354							
		Frequency		125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
		Thickness	40 mm	0.15	0.40	0.80	0.90	0.95	0.95
			60 mm	0.20	0.65	1.00	1.00	0.95	1.00
			80 mm	0.30	0.90	1.00	1.00	1.00	1.00
			100 mm	0.45	1.00	1.00	1.00	1.00	1.00
Weighted sound absorption coefficient a_w Sound Absorption Average a_{stF} Noise Reduction Coefficient NRC	[-]	EN ISO 11654 (for NRC according ASTM C423)		Level of weighted sound absorption coefficient					AW
		Single number value		a_w		a_{stF}		NCR	
		Thickness	40 mm	0.70 (H)		0.75		0.75	
			60 mm	0.95		0.90		0.90	
			80 mm	1.00		0.99		1.00	
			100 mm	1.00		1.04		1.05	
Specific air flow resistivity r		EN 13162+A1		Level of air flow resistivity					AFr
	[kPa·s·m^{-2}]	Measurement according to EN ISO 9053-1		≥ 5					
Environmental properties / impacts									
Volume of Pre-consumer recycled content for production[6)]	[%]	ČSN ISO 14021		65.5 - 75.5					
Volume of Post-consumer recycled content for production[6)]	[%]	ČSN ISO 14021		0					
Non-hazardous waste disposed[7)]	[kg /FU[8)]]	EN 15804+A1, ČSN ISO 14025		0.64			NHWD		
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025		31.5			PENRT		
Global Warming Potential	[kg CO_2 ekv. /FU]	EN 15804+A1, ČSN ISO 14025		3.45			GWP		
Ozone Depletion	[kg CFC 11 ekv. /FU]	EN 15804+A1, ČSN ISO 14025		1.77E-07			ODP		
Acidification potential	[kg SO_2 ekv. /FU]	EN 15804+A1, ČSN ISO 14025		0.025			AP		
Eutrophication potential	[kg PO_4^{3-} ekv. /FU]	EN 15804+A1, ČSN ISO 14025		0.00215			EP		
Photochemical ozone creation	[kg C_2H_4 ekv. /FU]	EN 15804+A1, ČSN ISO 14025		0.00338			POPC		
Abiotic depletion potential for non-fossil resources	[kg Sb ekv. /FU]	EN 15804+A1, ČSN ISO 14025		5.53E-08			ADP-elements		
Abiotic depletion potential for fossil resources	[MJ (Calorific value) /FU]	EN 15804+A1, ČSN ISO 14025		29.6			ADP-fossil fuels		

[5)] Informative non-declared value beyond scope of CPR, obtained by concrete tests.
[6)] According to ČSN EN ISO 14021 part 7.8 Recycled content.
[7)] In this case it is standard mixed waste.
[8)] FU = functional unit (1 m^2 of insulation by 100 mm thick for live cycle phases A1–A3).

Example of product application ISOVER ORSIK

21. 6. 2021   The information is valid up to date of publishing. The manufacturer reserves right to change the data.

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