



Isover Unirol Profi

Mineral fibreglass insulation

TECHNICAL SPECIFICATION

Rollled insulation mats made of Isover fibreglass wool are covered with hydrophobic fibres on the entire surface. The production method is based on the fibering of glass melt and other additives and ingredients. The mineral fibres produced are processed into the final mat shape on the production line. The insulation in the construction should be protected (vapour-proof foil, suitable protection against dust setting in case of loosely laid insulation, additional construction layers). The insulation is not harmful to the environment or public health, it is resistant to moulds, fungi and wood-destroying insects.



APPLICATION

The fibreglass insulation mats with excellent heat-insulating properties are used as thermal and acoustic insulation of sloping roofs and ceilings.

Superior energy saving type of insulation $\lambda_0 = 0,033 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

PACKAGING, TRANSPORT, WAREHOUSING

The Isover rolls are strongly compressed within the package and wrapped with PE foil (1 MPS = 24 Rolls, volume 4,09 m³). After unpacking, the rolls quickly acquire full thickness. Compressing makes manipulation easier and saves space in warehouses, during transport and on the construction site. Rolls have to be transported in covered vehicles under conditions preventing them from getting wet or being degraded. The products are stored indoors or outdoors depending on the conditions specified in the current Isover price list.

BENEFITS

- Fire resistance.
- 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 insects.
- Easy workability – can be cut, drilled into, etc.
- Dimensional stability during temperature change.
- The product's surface is lined, making for easier and faster cutting.

DIMENSIONS AND PACKAGING

Thickness [mm]	Length × width [mm]	Volume per package			Quantity per pallet [m ²]	Declared thermal resistance R_D [m ² ·K·W ⁻¹]
		[pcs]	[m ²]	[m ³]		
50	9 500 × 1 200	1	11.40	0.57	273.60	1.50
60	8 000 × 1 200	1	9.60	0.58	230.40	1.80
80	6 000 × 1 200	1	7.20	0.58	172.80	2.40
100	4 500 × 1 200	1	5.40	0.54	129.60	3.00
120	4 000 × 1 200	1	4.80	0.58	115.20	3.60
140	3 300 × 1 200	1	3.96	0.55	95.04	4.20
160	2 900 × 1 200	1	3.48	0.56	83.52	4.80
180	2 600 × 1 200	1	3.12	0.56	74.88	5.45
200	2 400 × 1 200	1	2.88	0.58	69.12	6.05
220	2 300 × 1 200	1	2.76	0.61	66.24	6.65

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_e	[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(23,90)

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Thermal technical properties							
Declared value of thermal conductivity coefficient $\lambda_0^{3)}$	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.033				
Design thermal conductivity $\lambda_{10}^{4)}$	[W·m ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	0.036				
Specific heat capacity c_d	[J·kg ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	840				
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	[-]	Declaration according to EN 13162+A1	1	Declared value for water vapour diffusion resistance factor		MU1	
Other properties							
Density	[kg·m ⁻³]	EN 1602	21				
Acoustic properties ⁵⁾							
Practical sound absorption coefficient α_p	[-]	Declaration according to EN 13162+A1	Level of practical sound absorption coefficient			AP	
		Declaration according to EN ISO 11654					
		Measurement according to EN ISO 354					
	Frequency	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
		60 mm	0.40	0.90	0.95	0.95	1.00
	80 mm	0.55	1.00	1.00	1.00	1.00	1.00
	100 mm	1.00	1.00	1.00	1.00	1.00	1.00
Weighted sound absorption coefficient α_w	[-]	EN ISO 11654 (for NRC according ASTM C423)	Level of weighted sound absorption coefficient			AW	
Single number value		α_w	α_{str}	NCR			
		60 mm	1.00	0.78	0.95		
		80 mm	1.00	0.96	1.00		
		100 mm	1.00	1.00	1.00		
Noise reduction coefficient NRC							
Specific air flow resistivity r	[kPa·s·m ⁻²]	Declaration according to EN 13162+A1	Level of air flow resistivity			AFr	
		Measurement according to EN ISO 9053-1	≥ 5				
Environmental properties/impacts							
Non-hazardous waste disposed ⁶⁾	[kg /FU ⁷⁾]	EN 15804+A1, ČSN ISO 14025	0.803	NHWD			
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025	66.9	PENRT			
Global warming potential	[kg CO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	4.25	GWP			
Ozone depletion	[kg CFC 11 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	1.11 E-07	ODP			
Acidification potential	[kg SO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0427	AP			
Eutrophication potential	[kg PO ₄ ³⁻ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00379	EP			
Photochemical ozone creation	[kg C ₂ H ₄ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0113	POPC			
Abiotic depletion potential for non-fossil resources	[kg Sb ekv. /FU]	EN 15804+A1, ČSN ISO 14025	2.36 E-06	ADP-elements			
Abiotic depletion potential for fossil resources	[MJ (Calorific value) /FU]	EN 15804+A1, ČSN ISO 14025	82.4	ADP-fossil fuels			

¹⁾ Value with greatest numerical tolerance.

²⁾ Value with lowest numerical tolerance.

³⁾ Declared values were set under the following conditions: (reference temperature 10 °C, humidity u_{dry} reached by drying) according to EN ISO 10456.

⁴⁾ 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⁾ Informative non-declared value beyond the scope of CPR, obtained by specific tests.

⁶⁾ In this case it is standard mixed waste.

⁷⁾ FU = functional unit (1 m² of insulation at a thickness of 100 mm for life cycle phases A1-A3).

RELATED DOCUMENTS

- Declaration of Performance
- Environmental Product Declaration
- ISO 9001, ISO 14001, ISO 45001

More about the product

www.isover.cz/en/products/isover-unirol-profi



10/1/2024 The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.