

Isover UNIROL PROFI

Mineral fibreglass insulation

TECHNICAL SPECIFICATION

Rolled 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 $\lambda_b = 0,033 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$.

DIMENSIONS AND PACKAGING

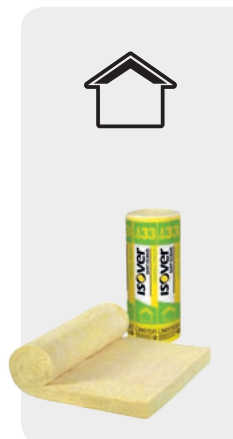
Thickness	50	60	80	100	120	140	160	180	200	220
Length x width	9500 x 1200	8000 x 1200	6000 x 1200	4500 x 1200	4000 x 1200	3300 x 1200	2900 x 1200	2600 x 1200	2400 x 1200	2300 x 1200
Volume per package	1	1	1	1	1	1	1	1	1	1
Declared thermal resistance R_b	1.50	1.80	2.40	3.00	3.60	4.20	4.85	5.45	6.05	6.65

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-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



TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	Designation code				
Geometric shape								
Length / Width <i>b</i>	[%, mm]	EN 822	±2 %					
Thickness <i>d</i>	[%, mm]	EN 823	±1.5 %					
Deviation from squareness of the edge on length and width S_b	[mm·m ⁻¹]	EN 824	-5 % or -5 mm ¹⁾ and +15 mm or +15 mm ²⁾	Class of thickness tolerances				
Deviation from flatness S_{max}	[mm]	EN 825	5					
Relative change in length $\Delta\epsilon_{lh}$ in width $\Delta\epsilon_{bh}$ in thickness $\Delta\epsilon_d$	[%]	EN 1604	6	Dimensional stability under the specified temperature and humidity conditions				
Thermal technical properties								
Declared value of the thermal conductivity coefficient λ_b ³⁾	[W·m ⁻¹ ·K ⁻¹]	Declaration according to EN 13162+A1 Measurement according to EN 12667	0.033					
Design thermal conductivity λ_w ⁴⁾	[W·m ⁻¹ ·K ⁻¹]	CSN 73 0540-3	0.036					
Specific heat capacity c_p	[J·kg ⁻¹ ·K ⁻¹]	CSN 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_f	[°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				
Other properties								
Density	[kg·m ⁻³]	EN 1602	21					
Acoustic properties								
The practical sound absorption coefficient α_p	[-]	Declaration according to EN 13162+A1		Declared 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
Thickness		60 mm	0.40	0.90	0.95	0.95	1.00	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	[-]	Declaration according to EN ISO 11654 (for NRC according ASTM C423)		Declared level of weighted sound absorption coefficient			AW	
		Single number value	α_w	α_{eff}	NCR			
Sound Absorption Average α_{eff}	Thickness	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	Thickness	60 mm	1.00	0.96	1.00			
		80 mm	1.00	1.00	1.00			
Specific air flow resistivity <i>r</i>	[kPa·s·m ⁻²]	Declaration according to EN 13162+A1		Level of air flow resistivity			AFr	
		Measurement according to EN 29053		≥ 5				

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 006-WSI-DoP-14-w2

1. 6. 2018 The information is valid up to date of publishing. The manufacturer reserves right to change the data.