

Isover HARDSIL

Mineral insulation from stone wool



Specification code: MW - EN 13162 - T4 - DS(T+) - MU1

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 (outer sheathing, alternatively diffusion foil).

APPLICATION

Isover FASSIL slabs are suitable for insulation of the outer walls (ventilated facade systems and are to be inserted into the grid under the cladding, or into the multi-layer masonry, especially in the buildings with more than 2 storeys). The slabs can be mechanically bond using the clamps for soft MW insulations. The slabs are not glued. To harden the surface it is possible to manufacture these slabs coated with black or white mineral non-woven fabric (minimum volume to be consulted with the manufacturer). The material is suitable for fire protection system constructions where the density $\geq 60 \text{ kg.m}^3$ is required. Especially the energy saving insulation type $\lambda_D = 0.035 \text{ W.m}^{-1}\text{.K}^{-1}$.

DIMENSIONS AND PACKAGING

Product	Thickness (mm)	Dimensions (mm)	Per package (m ²)	Declared thermal resistance R _D (m ² .K.W ⁻¹)
Isover HARDSIL 5	50	1200 x 600	7.20	1.45
Isover HARDSIL 6	60	1200 x 600	5.76	1.75
Isover HARDSIL 8	80	1200 x 600	4.32	2.35
Isover HARDSIL 10	100	1200 x 600	3.60	2.95
Isover HARDSIL 12	120	1200 x 600	2.88	3.55
Isover HARDSIL 14	140	1200 x 600	2.16	4.15

Thickness tolerance classification T4 complies with allowed tolerance according to EN 13162: -3% or - 3 mm, while the higher numerical value prevails and + 5% or + 5 mm where the lower tolerance numerical value is predominant.

TECHNICAL PARAMETERS

Parameter	Unit	Value	Norm
THERMAL INSULATING PROPERTIES			
Condition set for declared values $l(10^\circ\text{C})$ and (u_{dm})	-	-	EN ISO 10456
Declared value of the thermal conductivity coefficient λ_D (based on the set of measured values according to EN 12667)	Wm ⁻¹ .K ⁻¹	0.035	EN 13162
Specific heat capacity c_d	Jkg ⁻¹ .K ⁻¹	800	ČSN 73 0540-3
MECHANICAL PROPERTIES			
Specific load value	kNm ⁻³	0.60	EN 1991-1-1, EN 1990
FIRE SAFETY PROPERTIES			
Reaction to fire class	-	A1	EN 13501-1
Dimensional stability at temperature $(70 \pm 2)^\circ\text{C}$ DS (T+)	%	≤ 1	EN 1604
Maximum temperature for use	°C	200	-
Melting temperature t_f	°C	≥ 1000	DIN 4102 part 17
ACOUSTIC PROPERTIES			
Acoustic absorption coefficient α for perpendicular impact of acoustic waves (-) according to ISO 10534 - 1	Frequency	Hz	125 250 500 1000 2000 4000
	Thickness	60 mm	0.18 0.41 0.81 0.90 0.93 0.96
		80 mm	0.27 0.55 0.89 0.89 0.95 0.96
		100 mm	0.41 0.61 0.87 0.86 0.95 0.96
Mean acoustic absorption coefficient in the band of 250 - 4000 Hz α_{str}	Thickness	40 mm	0.82
		60 mm	0.86
		80 mm	0.86
		100 mm	0.95
ISO 10534-1			
OTHER PROPERTIES			
Specific resistance against air flow AF _r	kPa.s.m ⁻²	21	EN 29053
Moisture resistance factor (μ) MU	-	1	EN 12086

RELATED DOCUMENTS

- EC compliance certificate 1390-CPR-0305/11/P
- Declaration of Performance CZ0001-007 (www.isover.cz/DOP)

1. 7. 2014 The information is valid up to date of publishing. The manufacturer reserves right to change the data.

PACKAGING, TRANSPORT, WAREHOUSING

Isover HARDSIL 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. They should be stored flat in sheltered space to maximum layer height of 2 m.

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