ISOVER SAINT-GOBAIN
Assurance in insulation

CERTIFIED
ISO 9001 · ISO 14001
ISO 45001 · ISO 50001

EPD VERIFIED

ISOVER Intense

Slabs of hydrophilic mineral wool

TECHNICAL SPECIFICATION

Slabs of hydrophilic mineral wool are made of a mixture of igneous rocks (basalt, diabase, etc.), which melts at high temperatures, tears to fibres and the individual fibres are bonded to one another by a binder. Unlike in the hydrophobised wools, production of the mineral wool involves no hydrophobic agent that would repel water, so that the slabs are able to hold water and allow it to move freely in the slab.

APPLICATION

ISOVER Intense is a reinforced slab used as a stiffening layer above the Flora panels in places with a more frequent traffic. Thanks to its excellent hydro-accumulation and high compressive strength, it can be easily used as a bottom layer for green strata with a substrate. In such a case it is advisable to supplement the vegetation strata with a surface draining element according to the calculation for an individual project.

PACKAGING, TRANSPORT, WAREHOUSING

ISOVER Intense slabs are packed in PE foil. The slabs have to be transported in covered vehicles under conditions preventing their excessive wetting or other degradation. They should be stored flat in sheltered dry premises, up to the maximum layer height of 2 m.

BENEFITS

- increased strength allowing more frequent foot traffic
- excellent hydro-accumulative properties
- heat-insulating effect even if wet
- health, environmentally friendly and recyclable

DIMENSIONS AND PACKAGING

Thickness	[mm]	50
Length × width	[mm]	1000 × 600
Volume per package	[m²]	30

TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value	
Thermal technical properties				
Thermal conductivity coefficient at dry state λ_D	[W·m^{-1}·K^{-1}]	EN 12667	0.0350	
Thermal conductivity coefficient at max. humidity λ_{wmax} (78 % obj.)	[W·m^{-1}·K^{-1}]	EN 12664	0.355	
Specific heat capacity c_d	[J·kg^{-1}·K^{-1}]	ČSN 73 0540-3	800	
Fire safety properties				
Reaction to fire class	[-]	EN 13501-1+A1	A1	
Maximum temperature for use	[°C]		200	
Melting temperature t_t	[°C]	DIN 4102 part 17	≥ 1000	
Hydrothermal properties				
Water permeability mod. K_f	[mm·min^{-1}]	FLL 2008	140	
Maximum water capacity WK_{max}	[vol.%]	FLL 2008	90.7	
Water flow capacity in their plane at inclination at roof pitch $q_{s,g}$	[l·m^{-1}·s^{-1}]	EN ISO 12958	inclination 0°	1.12
			inclination 2°	1.19
			inclination 35°	1.38
Other properties				
Density	[kg·m^{-3}]	EN 1602	120	

RELATED DOCUMENTS

- Certificate CO/CV - 0121b - 2016/P, CSI Praha
- 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	[%]	ČSN ISO 14021	55	
Volume of Post-consumer recycled content for production	[%]	ČSN ISO 14021	0	
Non-hazardous waste disposed[1)]	[kg /FU[2)]]	EN 15804+A1, ČSN ISO 14025	1.36	NHWD
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025	73.1	PENRT
Global Warming Potential	[kg CO_2 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	7.13	GWP
Ozone Depletion	[kg CFC 11 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	3.42 E-07	ODP
Acidification potential	[kg SO_2 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0507	AP
Eutrophication potential	[kg PO_4^{3-} ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00456	EP
Photochemical ozone creation	[kg C_2H_4 ekv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00724	POPC
Abiotic depletion potential for non-fossil resources	[kg Sb ekv. /FU]	EN 15804+A1, ČSN ISO 14025	1.27 E-07	ADP-elements
Abiotic depletion potential for fossil resources	[MJ (Calorific value) /FU]	EN 15804+A1, ČSN ISO 14025	67.8	ADP-fossil fuels

[1)] In this case it is standard mixed waste.
[2)] FU = functional unit (1 m² of insulation by 50 mm thick for live cycle phases A1–A3).

Example of product application ISOVER Intense

A detailed description of the product and its application can be found in the Green roof catalog ISOVER

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