



Isover Flora

Hydrophilic mineral wool slabs

TECHNICAL SPECIFICATION

Hydrophilic mineral wool slabs are made of a mixture of igneous rocks (basalt, diabase, etc.), which melts at high temperatures, tears into fibres and the individual fibres are joined to one another by a binder. In contrast to building insulation, hydrophobizing oils are not added to this type of mineral wool. Therefore, the material holds water very well and creates a suitable environment for plant growth.



APPLICATION

Isover Flora are the basic substrate boards for Isover vegetation roof systems. They are mainly used for extensive and semi-intensive compositions of flat and counter roofs as a partial substrate replacement. They are light and airy, and in addition to greening new buildings, they are also suitable for renovations. Their balanced ratio of hydroaccumulation and drainage ensures the removal of excess water and, at the same time, sufficient accumulation of rainwater for periods without natural watering.

BENEFITS

- Significantly lower load on the roof.
- High draining capacity for rainwater.
- Good hydro-accumulative properties.
- High porosity – more air for roots.
- Good heat-insulating effect even when wet.
- Health, environmentally friendly and recyclable.

PACKAGING, TRANSPORT, WAREHOUSING

Isover Flora slabs are packed in PE foil. The slabs have to be transported in covered vehicles under conditions that prevent them from getting too wet or damaged. They should be stored flat in a covered, dry space, up to the maximum layer height of 2 m.

DIMENSIONS AND PACKAGING

Thickness [mm]	Length × width [mm]	Volume per package			Quantity per palett	
		[pcs]	[m ²]	[m ³]	[m ²]	[m ³]
30	1000 × 600	10	6.0	0.18	48.0	1.44
50	1000 × 600	8	4.8	0.24	28.8	1.44
50	1200 × 1000	-	-	-	28.8	1.44
100	1000 × 600	4	2.4	0.24	14.4	1.44
100	1200 × 1000	-	-	-	14.4	1.44

TECHNICAL PARAMETERS

Parameter	Unit	Methodology	Value
Thermal technical properties			
Thermal conductivity coefficient in dry state λ_D	[W·m ⁻¹ ·K ⁻¹]	EN 12667	0.0373
Thermal conductivity coefficient at max. humidity λ_{wmax} (78% vol.)	[W·m ⁻¹ ·K ⁻¹]	EN 12664	0.513
Specific heat capacity c_d	[J·kg ⁻¹ ·K ⁻¹]	ČSN 73 0540-3	800
Mechanical properties			
Compressive stress	[kPa]	EN 826	30
Fire safety properties			
Reaction to fire class	[-]	EN 13501-1+A1	A1
Maximum temperature for use	[°C]		200
Melting temperature t_f	[°C]	DIN 4102 part 17	≥ 1000

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Parameter	Unit	Methodology		Value	
Hydrothermal properties				thickness 30 mm	thickness 50 mm
Water permeability mod. K_f	[mm·min ⁻¹]	FLL		322	227
Maximum water capacity WK_{max}	[vol.%]	FLL		91.5	92.7
Water flow capacity on their plane at inclination at roof pitch $q_{s,g}$	[l·m ⁻¹ ·s ⁻¹]	EN ISO 12958	inclination 0°	0.72	1.48
			inclination 2°	0.75	1.53
			inclination 35°	0.85	1.79
Chemical properties					
pH	-	according to Act No. 156/1998 Coll.		6.5–8.5	
Decision on the registration of the substrate	-	according to Act No. 156/1998 Coll.		5511 ¹⁾	
Other properties					
Volume weight dry	[kg·m ⁻³]	EN 1602		76–100 ²⁾	
Volume weight at maximum water capacity	[kg·m ⁻³]	EN 1602		1003	

¹⁾ Protocol upon request.

²⁾ Bulk density varies with product thickness. Exact values on request.

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	
Total use of non-renewable primary energy resources	[MJ /FU]	EN 15804+A1, ČSN ISO 14025	51.4	PENRT
Global warming potential	[kg CO ₂ ekv. /FU]	EN 15804+A1, ČSN ISO 14025	4.69	GWP
Ozone depletion	[kg CFC 11 equiv. /FU]	EN 15804+A1, ČSN ISO 14025	2.28 E-07	ODP
Acidification potential	[kg SO ₂ equiv. /FU]	EN 15804+A1, ČSN ISO 14025	0.033	AP
Eutrophication potential	[kg PO ₄ ³⁻ equiv. /FU]	EN 15804+A1, ČSN ISO 14025	0.0031	EP
Photochemical ozone creation	[kg C ₂ H ₄ equiv. /FU]	EN 15804+A1, ČSN ISO 14025	0.00495	POPC
Abiotic depletion potential for non-fossil resources	[kg Sb equiv. /FU]	EN 15804+A1, ČSN ISO 14025	9.66 E-08	ADP-elements
Abiotic depletion potential for fossil resources	[MJ (calorific value) /FU]	EN 15804+A1, ČSN ISO 14025	47.3	ADP-fossil fuels

FU = functional unit (1 m² of insulation by 50 mm thick for live cycle phases A1–A3).

RELATED DOCUMENTS

- Certificate CO/C - 244 - 2021/P
- ISO 9001, ISO 14001, ISO 45001, ISO 50001
- Environmental product declaration Isover Flora 2019
- FINAL PROTOCOL – substrate registration according to Act No. 156/1998 Coll. on fertilizers, as amended.
Registration decision number: 5511

1/2/2023 Information valid as of date of publication. The manufacturer reserves the right to change the data.