

ISOVER FireProtect® 150

(ISOVER Tank Roof Slab 20 kPa)
Slab

PRODUCT DESCRIPTION

ISOVER FireProtect® 150 is very strong and rigid slab.

APPLICATION

ISOVER FireProtect® 150 is very strong and rigid stone wool slab for the thermal and acoustic insulation of constructions where higher demands are made on the temperature resistance and mechanical loads of the insulation. The slab fulfils the requirements of SSG 7591 for a bottom layer of storage tank roof insulation (compressive strength 20 kPa) under trademark ISOVER Tank Roof Slab 20 kPa. ISOVER FireProtect® 150 slab is the main part of the ISOVER FireProtect® system which provides efficient fire protection of structural steelwork according to EN 13381-4:2013 and fire protection of corrugated metal sheets according to EN 1365-2:2015. It is also used as a semi-product for additional processing. Exceptional thickness tolerance ± 1 mm at a production of the slab is ideal for a production of fire doors. Slabs are also used for fire-stopping solutions (Hilti, Intumex, etc.) when pipes, cables, etc. penetrate fire separation walls. Despite the fact that hydrophobing additives in the insulation impede the ingress of water, it is necessary to protect the slab in the construction against moisture and possible mechanical damage by a proper manner. ISOVER FireProtect® 150 has a maximum service temperature of 700 °C according to EN 14706. If the slab is with a facing then the surface temperature must not exceed 100 °C on the facing; proper thickness of insulation must be designed to fulfil that. Binders and greasing agents in

mineral wool products dissolve and evaporate in areas with temperatures > 150 °C. In the outer, colder areas, no dissolution and evaporation take place.

PACKAGING, TRANSPORT, WAREHOUSING

The product is supplied as free slabs 1000 × 1200 mm stored on a wooden pallet, piled on top of each other or as packages 600 × 1200 on a pallet. Slabs must be stored in covered places under such conditions to avoid moistening or other degradation.



BENEFITS

- exceptional thickness tolerance ± 1 mm at a production of the slabs is ideal for a production of fire doors
- system certificate for fire protection of steel members according to EN 13381-4:2013
- system certificate for fire protection of corrugated metal sheets according to EN 1365-2:2015.
- the slab fulfils the requirements of SSG 7591 for a bottom layer of storage tank roof insulation under trademark ISOVER Tank Roof Slab 20 kPa (minimum compressive strength resistance 20 kPa)
- due to the lower binder content, the slabs are suitable for insulation of storage heaters
- excellent insulation performance
- extremely high temperature operation (up to 700 °C MST)
- easy to handle, easy to cut with a sharp knife
- AS quality - suitable for use over stainless steel

DIMENSIONS AND PACKAGING

Product	Thickness (mm)	Free slabs on a pallet		Packages on a pallet				
		Dimensions (mm)	m ² / Pallet	Dimensions (mm)	m ² / Pallet	m ² / Package	Package/ Pallet	Slabs / Package
ISOVER FireProtect® 150	20	1000 × 1200	72.00	600 × 1200*	86.40	8.64	10	12
ISOVER FireProtect® 150	25	1000 × 1200	57.60	-	-	-	-	-
ISOVER FireProtect® 150	30	1000 × 1200	48.00	600 × 1200*	60.48	5.04	12	7
ISOVER FireProtect® 150	35*	1000 × 1200	39.60	-	-	-	-	-
ISOVER FireProtect® 150	40	1000 × 1200	36.00	600 × 1200*	43.20	4.32	10	6
ISOVER FireProtect® 150	50	1000 × 1200	28.80	600 × 1200*	34.56	2.88	12	4
ISOVER FireProtect® 150	60*	1000 × 1200	24.00	600 × 1200*	28.80	2.88	10	4
ISOVER FireProtect® 150	80*	1000 × 1200	19.20	600 × 1200	21.60	2.16	10	3
ISOVER FireProtect® 150	100*	1000 × 1200	14.40	600 × 1200	17.28	1.44	12	2

Slabs can be manufactured with white glass tissue facing (ISOVER FireProtect® 150F). Other thicknesses and dimensions then stated can be produced at request when fulfilling minimum volume. Thickness tolerance: ± 1 mm. * Minimal volume need to be consulted with a producer.

TECHNICAL PARAMETERS

Parameter	Unit	Value										Standard
THERMAL INSULATING PROPERTIES												
Declared value of the thermal conductivity coefficient λ_b according to EN ISO 13787	°C	50	100	150	200	250	300	400	500	600	700	
	W·m ⁻¹ ·K ⁻¹	0.041	0.047	0.053	0.060	0.068	0.077	0.098	0.123	0.154	0.192	
Measured value of the thermal conductivity coefficient according to EN 12667*	W·m ⁻¹ ·K ⁻¹	0.039	0.045	0.052	0.057	0.064	0.072	0.090	0.113	0.141	0.174	
Declared value of the thermal conductivity coefficient λ_b for 10 °C (determined from series of measured values according to EN 12667)	W·m ⁻¹ ·K ⁻¹	0.036										EN 13162
Maximum service temperature ST(+)	°C	700										EN 14706
Specific heat capacity c_p *	J·kg ⁻¹ ·K ⁻¹	800										-
PHYSICAL PROPERTIES												
Density (thickness 20 and 25 mm)*	kg·m ⁻³	165										EN 1602, EN 13470
Density (thickness ≥ 30 mm)*	kg·m ⁻³	150										EN 1602, EN 13470
Short term water absorption (W_s) WS	kg·m ⁻²	<< 1										EN 1609
Water vapour diffusion resistance factor (μ) MU*	-	1,0										EN 12086
Longitudinal air-flow resistance Ξ *	kPa·s·m ²	> 90										EN ISO 9053-1
MECHANICAL PROPERTIES												
Compressive stress at 10 % deformation (σ_{10}) CS(10)	kPa	≥ 20										EN 826
FIRE SAFETY PROPERTIES												
Reaction to fire	-	A1										EN 13501-1
Melting temperature t_f *	°C	≥ 1000										DIN 4102 part 17
ACOUSTIC PROPERTIES												
Acoustic absorption coefficient α for perpendicular impact of acoustic waves (-) according to EN ISO 354 and EN ISO 11654*	Frequency	Thickness	20	mm	0.05	0.20	0.55	0.85	0.95	0.95	1.00	
			40	mm	0.20	0.65	0.90	0.90	0.95	0.95		
			60	mm	0.25	0.65	0.80	0.85	0.90	0.95		
			100	mm	0.40	0.70	0.85	0.95	0.95	0.95		
Definition of single numerical value according to EN ISO 11654*	Thickness	Weighted sound absorption coefficient		-	α_w			Absorption class				
		20	mm	0.50 (M. H)			D					
		40	mm	0.90			A					
		60	mm	0.85			B					
		100	mm	0.90			A					

* Informative non-declared value beyond scope of CPR, obtained by concrete tests.

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