

Orstech 45

Orstech 45 NT / Orstech 45 H

(TECH Slab 2.1)
Slab of mineral wool



PRODUCT DESCRIPTION

Orstech 45 is a light weight stone wool slab, which can be manufactured with the aluminium foil facing (Orstech 45 H), with the glass tissue facing (Orstech 45 NT) or with black glass woven cloth facing (Orstech 45 ST).



APPLICATION

Orstech 45 has universal usage in HVAC and industry for applications with lower service temperatures. The slab is suitable mainly for thermal and acoustic insulation of air ducts.

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.

Orstech 45 has a maximum service temperature of 400 °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.

BENEFITS

- Quality certificate according to VDI 2055 - annual audit testing by FIW Munich from year 2000.
- Insulation material designation code according to AGI Q 132: 10.07.01.10.05
- AS quality - suitable for use over stainless steel.

PACKAGING, TRANSPORT, WAREHOUSING

The product is supplied as free packages or palletized. Material has to be transported in covered vehicles under such conditions to avoid moistening or other degradation.

DIMENSIONS AND PACKAGING

Thickness [mm]	Dimensions [mm]	Per package [m ²]	Package/ Pallet [pcs]	m ² / Pallet [m ²]
40	1 000 × 500	6.0	10	60
50	1 000 × 500	5.0	10	50
60	1 000 × 500	4.0	10	40
80	1 000 × 500	3.0	10	30
100	1 000 × 500	2.5	10	25

Slab can be manufactured with the aluminium foil facing (Orstech 45 H) or with the glass tissue facing (Orstech 45 NT). Minimum order quantity (MOQ) of slabs with glass tissue facing Orstech 45 NT has to be consulted with a producer. Without MOQ only slabs Orstech 45 NT in thickness 50 mm. Other thicknesses and dimensions then stated can be produced at request when fulfilling minimum volume.

TECHNICAL PARAMETERS

Parameter	Unit	Value				Standard			
Thermal technical properties									
Declared value of the thermal conductivity coefficient λ_p according to EN ISO 13787	°C	50	100	150	200	250	300	400	
	W·m ⁻¹ ·K ⁻¹	0.042	0.053	0.066	0.082	0.100	0.124	0.170	
Measured value of the thermal conductivity coefficient according to EN 12667*	W·m ⁻¹ ·K ⁻¹	0.040	0.049	0.060	0.073	0.088	0.108	0.159	
Maximum service temperature ST(+)	°C	400 / max. 100				EN 14706			
Specific heat capacity c_p *	J·kg ⁻¹ ·K ⁻¹	800				-			

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TECHNICAL PARAMETERS

Parameter	Unit	Value	Standard						
Physical properties									
Density*	kg·m ⁻³	45	EN 13470						
Short-term water absorption (W_p) WS	kg·m ⁻²	<< 1	EN ISO 29767						
Equivalent diffusion thickness of the aluminium foil s_d *	m	> 100	EN 12086						
Longitudinal air-flow resistance Ξ *	kPa·s·m ⁻²	> 15	EN ISO 9053-1						
Fire safety properties									
Orstech 45, Orstech 45 H and Orstech 45 NT: Reaction to fire	-	A1	EN 13501-1						
Melting temperature t_f *	°C	≥ 1 000	DIN 4102 part 17						
Acoustic properties									
Acoustic absorption coefficient α_p for perpendicular impact of acoustic waves (-) according to EN ISO 354 and EN ISO 11654*	Frequency	Hz	125	250	500	1 000	2 000	4 000	
	Thickness	40	mm	0.15	0.40	0.85	0.95	0.95	0.95
		(45 NT) 50	mm	0.15	0.55	0.90	1.00	0.95	1.00
		60	mm	0.20	0.75	1.00	1.00	1.00	1.00
		80	mm	0.30	1.00	1.00	1.00	1.00	1.00
		100	mm	0.45	1.00	1.00	1.00	1.00	1.00
Definition of single numerical value according to EN ISO 11654*	Weighted sound absorption coefficient	-	a_w			Absorption class			
	Thickness	40	mm	0.70 (MH)			C		
		(45 NT) 50	mm	0.85 (H)			B		
		60	mm	1.00			A		
		80	mm	1.00			A		
		100	mm	1.00			A		
Classification according to AGI Q 132									
Insulation material designation code	-	10.07.01.10.05	AGI Q 132						

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

More about the product

www.isover.cz/en/products/orstech-45
www.isover.cz/en/products/orstech-45-nt
www.isover.cz/en/products/orstech-45-h



Orstech 45



Orstech 45 NT



Orstech 45 H

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