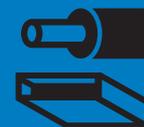


Orstech 45

(TECH Slab 2.1)
Slab



Specification code: MW – EN 14303 – T4 – ST(+)-300 – WS1 – CL10

TECHNICAL SPECIFICATION

Mineral wool slabs Orstech 45 are bonded plane form pieces of rectangular cross-sections, the thickness of which is notably smaller than the other dimensions. The production is based on the defibering of molten raw materials consisting of minerals and different amounts of artificial resins as binders, mineral oils for dust suppression and hydrophobic means dependent on the application.

Behaviour with stainless austenitic steels – AS quality for this application according to AGI Q 132, EN 13468 and ASTM C 795. Fibres are hydrophobic according to EN 1609.

APPLICATION

Slabs Orstech 45 are suitable mainly for air ducts. In the construction they have to be protected against moisture and possible mechanical damage by a proper manner. For outdoor application metal steel jacketing is required. Slabs can be manufactured without a facing, with aluminium foil facing (Orstech 45 H) or with glass tissue facing (Orstech 45 NT). When exposure to high temperatures and long-term dynamic loads (vibrations), wired mats Orstech DP are recommended instead of slabs.

Orstech 45 has a maximum service temperature of 300 °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. Insulation material designation code according to AGI Q 132: 10.08.01.30.05.

PACKAGING, TRANSPORT, WAREHOUSING

Slabs Orstech 45 are packed into PE foil. They must be transported in covered vehicles under such conditions to avoid moistening or other degradation. They must be stored in covered places, horizontally, piled on top of each other.

BENEFITS

- very good thermal insulation performance (low thermal conductivity)
- fire resistance – non-combustible material
- very good sound attenuation (high absorption coefficient)
- environmental friendly and hygienic
- hydrophobic – Isover insulation materials are made water repellent
- long life span (material is not aging)
- resistant to wood-destroying pests, rodents, and insect
- easy to handle, easy to cut with a sharp knife
- AS quality – suitable for use over stainless steel

RELATED DOCUMENTS

- Certificate of Constancy of Performance 1390-CPR-0313/11/P
- Declaration of Performance CZ0002-001 (www.isover.cz/DOP)
- Quality certificate according to VDI 2055 - audit testing by FIW Munich

DIMENSIONS AND PACKAGING

Product	Thickness (mm)	Dimensions (mm)	Per package (m ²)
Orstech 45	40	1000 x 500	6.0
Orstech 45	50	1000 x 500	5.0
Orstech 45	60	1000 x 500	4.0
Orstech 45	80	1000 x 500	3.0
Orstech 45	100	1000 x 500	2.5

Additional marking of the facing: NT – glass tissue (non-woven glass fibre fabric facing), H – aluminium foil facing reinforced with a glass fibre grid. Thickness tolerance according to EN 823: -3 mm, +5 mm. Other thicknesses and dimensions then stated can be produced at request when fulfilling minimum volume.

TECHNICAL PARAMETERS

Parameter	Unit	Value				Standard			
THERMAL INSULATING PROPERTIES									
Declared value of the thermal conductivity coefficient λ_p according to EN ISO 13787	°C	10	40	50	100	150	200	250	300
	Wm ⁻¹ K ⁻¹	0.036	0.040	0.042	0.053	0.066	0.082	0.100	0.124
Measured value of the thermal conductivity coefficient according to EN 12667	Wm ⁻¹ K ⁻¹	0.035	0.039	0.040	0.049	0.060	0.073	0.088	0.108
Maximum service temperature / on the aluminium side	°C	300 / max. 100				EN 14706			
Specific heat capacity c_p	J.kg ⁻¹ .K ⁻¹	800				-			
PHYSICAL PROPERTIES									
Density	kg m ⁻³	45				EN 1602, EN 13470			
Short term water absorption W_p	kg m ⁻²	<< 1				EN 1609			
Equivalent diffusion thickness of the aluminium foil s_d	m	> 100				EN 12086			
Flow resistance Ξ	kPa.s.m ⁻²	19				EN 29053			
FIRE SAFETY PROPERTIES									
Orstech 45, Orstech 45NT: Reaction to fire	-	A1				EN 13501-1			
Orstech 45H: Reaction to fire	-	A2-s1, d0				EN 13501-1			
Melting temperature t_m	°C	≥ 1000				DIN 4102 part 17			
ACOUSTIC PROPERTIES									
The practical sound absorption coefficient α_p according to EN ISO 354 and EN ISO 11654	Frequency		Hz	125	250	500	1000	2000	4000
	Thickness	40	mm	0.15	0.40	0.85	0.95	0.95	0.95
		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 number value according to EN ISO 11654	Single number value		-	α_w			α_{str}		NCR
	Thickness	40	mm	0.70 (MH)			0.79		0.80
		60	mm	1.00			0.93		0.95
		80	mm	1.00			1.02		1.00
		100	mm	1.00			1.04		1.05
CLASSIFICATION ACCORDING TO AGI Q 132									
Insulation material designation code	-	10.08.01.30.05				AGI Q 132			

11. 11. 2014 The information is valid up to date of publishing. The manufacturer reserves right to change the data.