Specification code: MW – EN 14303 – T4 – ST(+)640 – WS1 – CL10

Orstech 80 / Orstech 80 H

(TECH Slab MT 4.1)
Slab of mineral wool

PRODUCT DESCRIPTION

Orstech 80 is stone wool slab, which can be manufactured with the aluminium foil facing (Orstech 80 H).

APPLICATION

The Orstech 80 slab is suitable for universal application in HVAC and industry. The slab is designed for thermal and acoustic insulation of technological equipment (square smoke extraction ducts, electrostatic precipitators, etc.) with high operating temperature.

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.

When exposure to high temperatures and long-term dynamic loads (vibrations), it is recommended to use a slab with higher density (min. 100 kg/m³) or a wired mat. Orstech 80 has a maximum service temperature of 640 °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

- Excellent thermal insulation properties.
- Easy to handle, easy to cut with a sharp knife.
- 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 [m²]	Package/ Pallet [pcs]	m² / Pallet [m²]
40	1 000 × 500	6.0	10	60
50	1 000 × 500	4.0	12	48
60	1 000 × 500	4.0	10	40
80	1 000 × 500	3.0	10	30
100	1 000 × 500	2.0	12	24

Slab can be manufactured with the aluminium foil facing (Orstech 80 H). 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_D according to EN ISO 13787	°C	50	100	150	200	250	300	400	500	600	640
	W·m⁻¹·K⁻¹	0.041	0.047	0.055	0.065	0.076	0.089	0.118	0.155	0.201	0.220
Measured value of the thermal conductivity coefficient according to EN 12667*	W·m⁻¹·K⁻¹	0.039	0.046	0.053	0.061	0.071	0.081	0.106	0.138	0.177	0.196
Maximum service temperature ST(+)	°C	640 / max. 100					EN 14706				
Specific heat capacity c_p*	J·kg⁻¹·K⁻¹	800					-				

Isover Division
Saint-Gobain Construction Products CZ a.s.
Smrčkova 2485/4, 180 00 Prague 8 – Libeň, Czech Republic
podpora@saint-gobain.com • www.isover.cz

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TECHNICAL PARAMETERS

Parameter			Unit	Value			Standard		
Physical properties									
Density*			kg·m^{-3}	80			EN 1602, 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}	> 45			EN ISO 9053-1		
Fire safety properties									
Orstech 80: Reaction to fire			-	A1			EN 13501-1		
Orstech 80H: Reaction to fire			-	A2-s1, d0			EN 13501-1		
Melting temperature t_t*			°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	0.60	1.00	1.00	0.95	0.95
		60	mm	0.35	1.00	1.00	1.00	1.00	1.00
		80	mm	0.50	1.00	1.00	1.00	1.00	1.00
		100	mm	0.60	1.00	1.00	1.00	1.00	1.00
Definition of single numerical value according to EN ISO 11654*	Weighted sound absorption coefficient		-	α_w			Absorption class		
	Thickness	**40**	mm	0.90			A		
		60	mm	1.00			A		
		80	mm	1.00			A		
		100	mm	1.00			A		

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

1/8/2023 The information provided herein is valid at the time of publication. The manufacturer reserves the right to change the data.

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