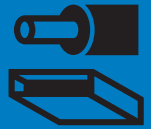


# Orstech 45

## (TECH Slab 2.1)

### Slab



Specification code: MW – EN 14303 – T4 – ST(+)-400 – WS1 – CL10

## 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.

## 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.

## 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

## DIMENSIONS AND PACKAGING

Product	Thickness (mm)	Dimensions (mm)	Per package (m <sup>2</sup> )	Packages / Pallet	m <sup>2</sup> / Pallet
Orstech 45	40	1000 × 500	6.0	10	60
Orstech 45	50	1000 × 500	5.0	10	50
Orstech 45	60	1000 × 500	4.0	10	40
Orstech 45	80	1000 × 500	3.0	10	30
Orstech 45	100	1000 × 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 the slabs with the facing Orstech 45 H or NT has to be consulted with a producer. Without MOQ only slabs Orstech 45 H thickness 40 and 60 mm and slabs Orstech 45 NT thickness 50 mm. Other thicknesses and dimensions then stated can be produced at request when fulfilling minimum volume.

## TECHNICAL PARAMETERS

Parameter	Unit	Value							Standard		
<b>THERMAL INSULATING PROPERTIES</b>											
Declared value of the thermal conductivity coefficient $\lambda_D$ according to EN ISO 13787	°C	50	100	150	200	250	300	400			
	W·m <sup>-1</sup> ·K <sup>-1</sup>	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 <sup>-1</sup> ·K <sup>-1</sup>	0.040	0.049	0.060	0.073	0.088	0.108	0.159			
Maximum service temperature ST(+) / on the aluminium side	°C	400 / max. 100				EN 14706					
Specific heat capacity $c_p$ *	J·kg <sup>-1</sup> ·K <sup>-1</sup>	800				-					
<b>PHYSICAL PROPERTIES</b>											
Density*	kg·m <sup>-3</sup>	45				EN 1602, EN 13470					
Short term water absorption ( $W_p$ ) WS	kg·m <sup>-2</sup>	<< 1				EN 1609					
Equivalent diffusion thickness of the aluminium foil $s_d$ *	m	> 100				EN 12086					
Longitudinal air-flow resistance $\Xi$ *	kPa·s·m <sup>-2</sup>	> 15				EN ISO 9053-1					
<b>FIRE SAFETY PROPERTIES</b>											
Orstech 45, Orstech 45 NT and Orstech 45 ST: Reaction to fire	-	A1				EN 13501-1					
Orstech 45 H: Reaction to fire	-	A2-s1, d0				EN 13501-1					
Melting temperature $t_f$ *	°C	≥ 1000				DIN 4102 part 17					
<b>ACOUSTIC PROPERTIES</b>											
The practical sound absorption coefficient $\alpha_p$ according to EN ISO 354 and EN ISO 11654*	Frequency	Thickness	Hz	125	250	500	1000	2000	4000		
			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*	Thickness	Weighted sound absorption coefficient		-	$\alpha_w$		Absorption class				
		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					
<b>CLASSIFICATION ACCORDING TO AGI Q 132</b>											
Insulation material designation code	-	10.07.01.10.05				AGI Q 132					

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

28. 8. 2019 The information is valid up to date of publishing. The manufacturer reserves right to change the data.