

PRODUCT DESCRIPTION

Orstech DP 100 is a lightly bonded stone wool mat stitched on galvanised wire mesh using galvanised wire. On request for temperatures higher than 400 °C and/or for stainless steel pipes/surfaces it is possible to produce mats with stainless steel wire and galvanised mesh (Orstech DP 100 X) or with stainless steel wire and stainless steel mesh (Orstech DP 100 X-X); all combinations according to AGI Q 132 and EN 10223-2.

APPLICATION

The wired mat is suitable for thermal and acoustic insulation of industrial applications reaching very high temperatures, such as industrial pipe work, boiler walls, furnaces, smoke ducts, appliances and vessels (both ends and cylindrical parts).

Despite the fact that hydrophobing additives in the insulation impede the ingress of water, it is necessary to protect wired mat in the construction against moisture and possible mechanical damage by a proper manner.

Orstech DP 100 has a maximum service temperature of 660 °C according to EN 14706. 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 rolls 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: 10.01.03.60.10
- excellent insulation performance
- very high temperature operation (up to 660 °C MST)
- AS quality - suitable for use over stainless steel

DIMENSIONS AND PACKAGING

Product	Thickness (mm) ¹⁾	Dimensions (mm)	Per package (m ²)	Rolls / Package	Packages / Pallet	m ² / Pallet
Orstech DP 100	30*	2 × 500 × 6000	6.0	2	21	126.0
Orstech DP 100	40*	2 × 500 × 5000	5.0	2	21	105.0
Orstech DP 100	50	2 × 500 × 4000	4.0	2	21	84.0
Orstech DP 100	60	2 × 500 × 3000	3.0	2	21	63.0
Orstech DP 100	70	2 × 500 × 3000	3.0	2	18	54.0
Orstech DP 100	80	2 × 500 × 2500	2.5	2	21	52.5
Orstech DP 100	90	2 × 500 × 2000	2.0	2	21	42.0
Orstech DP 100	100	2 × 500 × 2000	2.0	2	21	42.0
Orstech DP 100	120*	2 × 500 × 2000	2.0	2	18	36.0

On request it is possible to insert the aluminium foil between insulation and wire mesh (ALU facing). Wired mat with width 1000 mm on request (not possible in case of wired mats with stainless steel mesh). ¹⁾ Thickness has been measured under the load of 1000 Pa. When mounting wired mats, the thickness can therefore be higher than the nominal mounted thickness. This has to be taken into account if metal steel jacketing is pre-ordered. *Minimal volume need to be consulted with a customer service.

TECHNICAL PARAMETERS

Parameter	Unit	Value								Standard	
THERMAL INSULATING 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	660
	W·m ⁻¹ ·K ⁻¹	0.041	0.047	0.054	0.063	0.073	0.084	0.110	0.143	0.182	0.209
Measured value of the thermal conductivity coefficient according to EN 12667*	W·m ⁻¹ ·K ⁻¹	0.039	0.045	0.052	0.060	0.069	0.079	0.101	0.130	0.166	0.190
Maximum service temperature ST(+)/ on the facing	°C	660 / max. 100						EN 14706			
Specific heat capacity c_p *	J·kg ⁻¹ ·K ⁻¹	800						-			
PHYSICAL PROPERTIES											
Density*	kg·m ⁻³	100						EN 1602, EN 13470			
Short term water absorption (W_{a2}) WS	kg·m ⁻²	<< 1						EN 1609			
Longitudinal air-flow resistance Ξ^*	kPa·s·m ⁻²	> 65						EN ISO 9053-1			
FIRE SAFETY PROPERTIES											
Reaction to fire	-	A1						EN 13501-1			
Melting temperature t_f *	°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	0.65	1.00	1.00	0.95	0.95		
		60	mm	0.35	0.95	1.00	1.00	0.95	0.95		
		80	mm	0.45	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	-	a_w			Absorption class					
	Thickness	40	mm	0.95			A				
		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	-	10.01.03.60.10						AGI Q 132			

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

1. 1. 2022 The information is valid up to date of publishing. The manufacturer reserves right to change the data.