Orstech LSP H

(TECH Lamella Mat MT 2.2 Alu2)
Lamella mat

CERTIFIED
ISO 9001 · ISO 14001
ISO 45001 · ISO 50001

Specification code: MW – EN 14303 – T4 – ST(+)600 – WS1 – CL10

PRODUCT DESCRIPTION

Lamella mat Orstech LSP H consists of mineral wool lamellas which have been glued to aluminium foil reinforced with a glass fibre grid, and these fibres are predominantly perpendicular to the surface of the mat. Compressive strength, but thermal conductivity too, are increased compared to mats with a fibre orientation parallel to the surface.

APPLICATION

Lamella mat Orstech LSP H is suitable for piping, appliances and vessels (both ends and cylindrical parts) and residential heating systems.

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

Orstech LSP H has a maximum service temperature of 600 °C according to EN 14706. Surface temperature on the aluminium side must not exceed 100 °C; 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 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: 10.02.01.99.06
- AS quality – suitable for use over stainless steel

DIMENSIONS AND PACKAGING

Product	Thickness (mm)	Dimensions (mm)	Per package (m²)	Rolls / Package	Packages / Pallet	m² / Pallet
Orstech LSP H	20	1000 × 8000	8.0	1	20	160.0
Orstech LSP H	30	1000 × 5000	5.0	1	20	100.0
Orstech LSP H	40	1000 × 4000	4.0	1	20	80.0
Orstech LSP H	50	1000 × 3000	3.0	1	20	60.0
Orstech LSP H	60	1000 × 3000	3.0	1	21	63.0
Orstech LSP H	80	1000 × 2000	2.0	1	20	40.0
Orstech LSP H	100	1000 × 2300	2.3	1	18	41.4

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
			$W \cdot m^{-1} \cdot K^{-1}$	0.046	0.056	0.069	0.084	0.103	0.125	0.180	0.251	0.340
Measured value of the thermal conductivity coefficient according to EN 12667*			$W \cdot m^{-1} \cdot K^{-1}$	0.043	0.052	0.064	0.077	0.093	0.113	0.160	0.222	0.300
Maximum service temperature ST(+) / on the aluminium side			°C	600 / max. 100					EN 14706			
Specific heat capacity c_p*			$J \cdot kg^{-1} \cdot K^{-1}$	800					-			
PHYSICAL PROPERTIES												
Density*			$kg \cdot m^{-3}$	55					EN 1602, EN 13470			
Short term water absorption (W_p) WS			$kg \cdot m^{-2}$	<< 1					EN 1609			
FIRE SAFETY PROPERTIES												
Reaction to fire			-	A2-s1, d0					EN 13501-1			
Melting temperature t_t*			°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	20	mm	0,05	0,15	0,45	0,75	0,90	0,95			
		50	mm	0,15	0,50	0,90	0,95	0,95	1,00			
		80	mm	0,30	0,85	1,00	1,00	1,00	1,00			
		100	mm	0,40	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	20	mm	0.45 (MH)			D					
		50	mm	0.80 (H)			B					
		80	mm	1.00			A					
		100	mm	1.00			A					
CLASSIFICATION ACCORDING TO AGI Q 132												
Insulation material designation code			-	10.02.01.99.06					AGI Q 132			

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

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