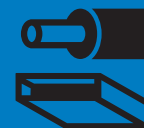


Orstech LSP H

(TECH Lamella Mat 2.2 Alu2)

Lamella mat



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

TECHNICAL SPECIFICATION

Lamella mats Orstech LSP H consist 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. 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

Lamella mats Orstech LSP H are suitable for piping, appliances and vessels (both ends and cylindrical parts), residential heating systems and air ducts. For outdoor application metal steel jacketing is required. When exposure to high temperatures and long-term dynamic loads (vibrations), wired mats Orstech DP are recommended instead of lamella mats.

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. Insulation material designation code according to AGI Q 132: 10.02.01.60.06.

DIMENSIONS AND PACKAGING

Product	Thickness (mm)	Dimensions (mm)	Per package (m ²)	Rolls / Package	Packages / Pallet	m ² / Pallet
Orstech LSP H	20	1000 x 8000	8.0	1	20	160.0
Orstech LSP H	30	1000 x 5000	5.0	1	20	100.0
Orstech LSP H	40	1000 x 4000	4.0	1	20	80.0
Orstech LSP H	50	1000 x 3000	3.0	1	20	60.0
Orstech LSP H	60	1000 x 3000	3.0	1	20	60.0
Orstech LSP H	80	1000 x 2000	2.0	1	20	40.0
Orstech LSP H	100	1000 x 2300	2.3	1	18	41.4

TECHNICAL PARAMETERS

Parameter	Unit	Value								Standard			
THERMAL INSULATING PROPERTIES													
Declared value of the thermal conductivity coefficient λ_0 according to EN ISO 13787	°C	10	40	50	100	150	200	250	300	400	500	600	
	Wm ⁻¹ K ⁻¹	0.040	0.044	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	Wm ⁻¹ K ⁻¹	0.039	0.042	0.043	0.052	0.064	0.077	0.093	0.113	0.160	0.222	0.300	
Maximum service temperature / on the aluminium side	°C	600 / max. 100								EN 14706			
Specific heat capacity c_p	J.kg ⁻¹ .K ⁻¹	800								-			
PHYSICAL PROPERTIES													
Density	kg.m ⁻³	55								EN 1602, EN 13470			
Short term water absorption W_p	kg.m ⁻²	<< 1								EN 1609			
FIRE SAFETY PROPERTIES													
Reaction to fire	-	A2-s1, d0								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	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 number value according to EN ISO 11654	Single number value	-	α_w				α_{str}				NRC		
	Thickness	20	mm	0.45 (MH)				0.55				0.55	
		50	mm	0.80 (H)				0.84				0.85	
		80	mm	1.00				0.99				1.00	
		100	mm	1.00				1.05				1.05	
CLASSIFICATION ACCORDING TO AGI Q 132													
Insulation material designation code	-	10.02.01.60.06								AGI Q 132			

16. 3. 2016 The information is valid up to date of publishing. The manufacturer reserves right to change the data.

PACKAGING, TRANSPORT, WAREHOUSING

Lamella mats Orstech LSP H are wrapped 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
- high temperature resistance (possibility of application up to a maximum surface temperature of 600 °C)
- very good sound attenuation (high absorption coefficient)
- environmental friendly and hygienic
- hydrophobicity – 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 CZ0002-004 (www.isover.cz/DOP)
- Quality certificate according to VDI 2055 - audit testing by FIW Munich