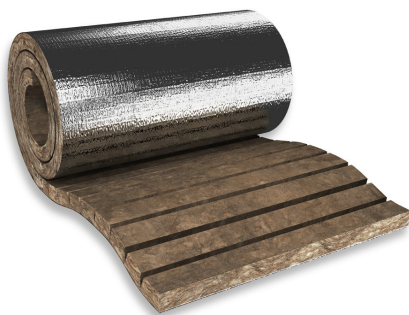


POWER-TEK LM 550 ALU



January 2023

with **ECOSE®** TECHNOLOGY



DESCRIPTION

Power-teK LM 550 ALU is a rock mineral wool mat, consisting of individual mineral wool strips (lamella) that are **bonded on one side to a tear-resistant, glass mesh reinforced aluminium foil with maximum service temperature of 550°C.**

The fibres, which are primarily oriented vertically to the contact surface, provide high compressive strength; consequently, a sub-construction structure is not required for round objects. Vertical orientation of the fibres also assures a pressure-resistant surface for flat-sloped tank roofs. At the same time, the mineral wool mat offers sufficient flexibility for easy handling and fast installation.

Knauf Insulation Power-teK LM 550 ALU is produced with **ECOSE® Technology**, a patented binder system, based entirely on renewable raw materials.

PERFORMANCE

Maximum service temperature	550 °C (EN ISO 18097)
Service temperature aluminium facing	≤ 80 °C
Reaction to fire	A1 (EN 13501-1)
Apparent density	ca. 60 kg/m³ (EN ISO 29470)
Declaration of performance*	http://dopki.com/T4207NPCPR

* for detailed information on DoP please check the product label

APPLICATION

Defined Power-teK applications:

- Tank roofs
- Pipe insulation
- Furnaces & other equipment
- Tank walls & heat storage
- Boilers

The product is recommended for thermal, fire and sound insulation of the defined applications within technical insulation:

- **to avoid the need for a sub-construction structure for round objects**
- **where a 60 kg/m³ solution with high compressive strength is needed (up to 10 kPa – according to EN 826)**
- **where a maximum service temperature of 550 °C is required**

BENEFITS

- ✓ Keymark certificate
- ✓ Very high compressive strength
- ✓ Pressure-resistant surface
- ✓ Protection against water vapour
- ✓ Very good thermal conductivity
- ✓ One product for different sizes (universal solution)
- ✓ Optimal visual appearance after installation
- ✓ Flexibility for easy handling guaranteed
- ✓ Easy to cut
- ✓ ECOSE® Technology



STANDARDS

Knauf Insulation products are produced according to four of the most important International Management Standards for sustainability ISO 9001 (Quality Management), ISO 14001 (Environmental Management), ISO 50001 (Energy Management) and ISO 45001 (Health and Safety Management), all certified by Tüv Nord.

CERTIFICATES:



challenge.
create.
care.

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SPECIFICATIONS

Description	Sign	Description/data								Unit	Standard
Thermal conductivity depending on temperature	λ	50	100	200	300	400	500	550		°C	EN 12667
		0,043	0,052	0,076	0,109	0,154	0,211	0,256		W/(mK)	
Water soluble chloride ions (AS quality)	-	≤ 10								ppm	EN ISO 12624
Water absorption	W_p	≤ 1,0								kg/m ²	EN ISO 29767
Water vapour diffusion equivalent air layer thickness ALU	S_d	≥ 200								m	EN 12086
Silicone free	-	No emissions of lacquering disturbing substances								-	-
Melting point of fibres	θ	≥ 1000								°C	DIN 4102-17
Specific heat capacity	c_p	1030								J/(kgK)	EN ISO 10456
Compressive strength	σ_{10}	≥ 10								(kPa)	EN ISO 29469
Insulation material code	-	10.03.02.99.06								AGI Q 132	
Designation code	-	MW-EN14303-T4-ST(+)/550-CS(10)10-WS1-MV2-CL10								-	EN 14303

Declared material properties are obtained in the production process and ensured by the factory production control in accordance with the European Standard at the time of manufacture. Observing storage and handling guidelines will maintain performance within published tolerances.

RECOMMENDATION FOR THE USE OF POWER-TEK LM 550 ALU ON THE DIFFERENT WIDTHS OF PIPE LINES

Pipe diameters (mm)		Recommended maximum insulation thickness - one layer (mm)						
DN	oD	30	40	50	60	70	80	≥ 90
150	168,3	✓	✗					
200	219,1	✓	✓	✗				
250	273,0	✓	✓	✓	✗			
300	323,9	✓	✓	✓		✗		
350	355,6	✓	✓	✓	✓	✓	✗	
400-2000	406,4-2019	✓	✓	✓	✓	✓	✓	
≥ 2000		✓	✓	✓	✓	✓	✓	✓

✓ - possible ✗ - possible with strength

HANDLING

Knauf Insulation products are easy to handle and easy to install. They are supplied in suitable packaging materials to balance necessary transport protection with sustainable recycling options. Packaging is not designed for long-term storage or exposure to harsh weather conditions. Further product information is mentioned on every pack.

STORAGE

For longer-term protection on site we recommend storing the product either indoors or alternatively under a roof cover and off the ground. If covered storage is not available, products can be stored outside (open-air-storage) if placed off the ground (keep palletized) and covered with plastic hood (foil), for a maximum of up to 6 months from the date of delivery. Outdoor storage is not recommended during particularly humid months with large fluctuations in temperature.

STANDARD FORMATS*

Thickness	30 - 120 mm
Width	500 / 1000 mm

*Other dimensions on request.



Knauf Insulation mineral wool products made with ECOSE® Technology benefit from a formaldehyde-free binder made from rapidly renewable bio-based materials instead of petroleum-based chemicals. The technology has been developed for Knauf Insulation's mineral wool products, enhancing their environmental credentials without affecting the thermal, acoustic or fire performance. Insulation products made with ECOSE® Technology contain no dye or artificial colours – the colour is completely natural.

Knauf Insulation d.o.o.

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