

POWER-TEK FM 620/640/660 ALU



May 2023



with **ECOSE®** TECHNOLOGY

DESCRIPTION

Power-teK FM 620 / 640 / 660 is a non-combustible rock mineral wool mat, **bonded on one side to a tear-resistant, glass mesh reinforced aluminium foil which acts as a water vapour barrier.** As a universal solution for lining or multi-layer insulations, depending on the density, it is available for **high-temperature applications** with maximum service temperatures of up to 660 °C.

Knauf Insulation Power-teK FM 620 / 640 / 660 ALU are produced with **ECOSE® Technology**, a patented binder system, based entirely on renewable raw materials.

PERFORMANCE

Max. service temperature	620 – 680 °C depending on density (EN ISO 18097)
Service temperature aluminium facing:	≤ 80 °C
Reaction to fire	A1 (EN 13501-1)
Apparent density	ca. 70 to 100 kg/m ³ (EN ISO 29470)
Declaration of performance*	http://dopki.com/T4305DPCPR for FM 620 http://dopki.com/T4305EPCPR for FM 640 http://dopki.com/T4305FPCPR for FM 660

* for detailed information on DoP please check the product label

APPLICATION

Defined Power-teK applications:

- Pipe insulation
- Pipe insulation elbows
- Furnaces & other equipment
- Tank walls & heat storage
- Boilers
- Irregular shapes (filling the gaps)

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

- **in case of high-temperature applications**
- **when additional flexibility is required (also used as filling material)**
- **where protection against water vapour is required**
- **when a nice visual appearance is needed**

BENEFITS

- ✓ Protection against water vapour
- ✓ Nice visual appearance of final application
- ✓ Flexible, pressure resistant and dimensionally stable
- ✓ Adaptable for irregular shapes, fittings, flanges
- ✓ Easy to cut and form
- ✓ 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 (VALID FOR ALL):



VALID ONLY FOR FM 640, 660:



VALID ONLY FOR FM 660:



0575

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SPECIFICATIONS

Description	Sign	Description/data													Unit	Standard	
		Density (kg/m ³)	MST	50	100	200	300	400	500	600	620	640	660				
Thermal conductivity depending on temperature	λ	FM 620 ALU	ca. 70	620	0,040	0,049	0,069	0,095	0,132	0,200	0,250	-	-	-	°C	EN 12667	
		FM 640 ALU	ca. 80	640	0,040	0,046	0,064	0,088	0,122	0,163	0,212	-	0,239	-			W/(mK)
		FM 660 ALU	ca. 100	660	0,040	0,046	0,062	0,083	0,110	0,145	0,179	-	-	0,210			
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 resistance	μ	1													-	EN 14303	
Water vapour diffusion equivalent air layer thickness ALU	-	≥ 200													-	EN 12086	
Silicone free	-	No emissions of lacquering disturbing substances													-	-	
Melting point of fibres	g	≥ 1000													°C	DIN 4102-17	
Specific heat capacity	c _p	1030													J/(kgK)	EN ISO 10456	
Longitudinal air flow resistance	-	≥ 20 for WM 620													-	-	
		≥ 40 for WM 640															
		≥ 50 for WM 660															
Designation code	-	FM 620 ALU - MW-EN14303-T2-ST(+)-620-WS1-MW2-CL10 FM 640 ALU - MW-EN14303-T5-ST(+)-640-WS1-MW2-CL10 FM 660 ALU - MW-EN14303-T5-ST(+)-660-WS1-MW2-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.

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
Length	2000 - 6000 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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