

powermat[®]

High temperature glass needle mat

PRODUCT CHARACTERISTICS

Good **acoustic absorption** and **thermal insulation** in the area of the **automotive**, **ship** and **building construction**, **industrial furnaces** as well as **technical insulation** and **industrial construction** in a **high temperature range**

TECHNICAL CHARACTERISTICS

Material	textile glass fiber	Combustibility (DIN 4102)	non combustible
Transformation temperature (DIN 51007)	≥ 750 °C	Binder	binder-free
Filament diameter (ISO 1888)	13 – 19 µm	Acid resistance (16% HCl, 240h, RT)	≤ 2,0 % *
Ignition loss (on the basis of ISO 1887)	≤ 2 % *	Alkali resistance (20% NaOH, 24h, 50 °C)	≤ 10,0 % *
Volume shrinkage (700 °C, 2 h)	≤ 1 % *		

CHEMICAL COMPOSITION	SiO ₂	Al ₂ O ₃	CaO	MgO	TiO ₂	K ₂ O + Na ₂ O
In weight - %	56 - 62	11 – 16	20 – 25	≤ 4,5	≤ 3,5	≤ 4

THERMAL CONDUCTIVITY λ (DIN 52612-2)	[°C]	50	100	200	300	400	500	600	700	750
density 110 kg/m ³ , fiber ø 14 µm	[W/mK]	0,05	0,06	0,08	0,11	0,16	0,21	0,28	0,37	0,43
density 114 kg/m ³ , fiber ø 18 µm	[W/mK]	0,03	0,04	0,07	0,10	0,15	0,22	0,31	0,42	0,48
density 150 kg/m ³ , fiber ø 14 µm	[W/mK]	0,04	0,04	0,06	0,08	0,11	0,16	0,21	0,27	0,31

* Inhouse DBW test specification.

* The maximum application temperature is 750 °C.

* The technical information does not constitute a quality warranty. The suitability purpose must be examined. Subject to change without notice.