

Technical data sheet

KOTERM PE1000FR (UHMWPE)

Key benefits

Self-extinguishing
Meets requirements UL94-V0
High abrasion and wear resistance

General application

Lining
Mechanical engineering
Mining

	Test method	Unit	Value
General properties			
Density	DIN 53479	g/cm ³	1,01
Molecular weight (average molar mass)		10 ⁶ g/mol	~ 4,0
Mechanical Properties			
Tensile modulus	ISO 527	MPa	750
Yield stress	ISO 527	MPa	> 20
Tensile strength at break	ISO 527	MPa	
Elongation at break	ISO 527	%	> 50
Charpy notched impact strength at 23°C	ISO 179	kJ/m ²	nb
Charpy unnotched impact strength at 23°C	ISO 179	kJ/m ²	nb
Charpy impact strength with 15° V-notch	ISO 179	kJ/m ²	
Hardness	ISO 868	Shore D	65
Wear resistance	Sand-Slurry		100
Thermal properties			
Melting temperature	DIN 53736	°C	130-135
Thermal conductivity	DIN 52612	W/(m·K)	0,4
Coefficient of linear thermal expansion (CLTE)	DIN 53752	K ⁻¹	1,5-2,0×10 ⁻⁴
Vicat softening temperature - A50	ISO 306/A50	°C	
Vicat softening temperature - B50	ISO 306/B50	°C	80
Service temperature (intermittent)		°C	120
Service temperature (long term)		°C	-200...80
Electrical properties			
Volume resistivity	DIN IEC 60093	Ω·cm	> 10 ¹²
Surface resistivity	DIN IEC 60093	Ω	> 10 ¹²
Dielectric strength	DIN 53481	kV/mm	
Other properties			
Dynamic coefficient of friction			0,09-0,17
Flammability (thickness 10 mm)	UL94		V-0

The information data contained herein is believed to be reliable to the best of our knowledge but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom, and it is the end user responsibility to make its own determination of the product suitability for the intended applications.