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ISOKON
INNOVATIVE PLASTICS SOLUTIONS
KOTERM

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/m2	nb
Charpy unnotched impact strength at 23°C	ISO 179	kJ/m2	nb
Charpy impact strength with 15° V-notch	ISO 179	kJ/m2	
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}	$1,5\text{-}2,0\times10^{-4}$
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