Technical data sheet

KOTERM PE9000MS (UHMWPE)

Key benefits
Very low friction with superior sliding
Superior abrasion and wear resistance
Chemical and corrosion resistance

General application
Mechanical engineering
Conveyor elements and chain guides
Bottling and bearing industry

	Test method	Unit	Value
General properties			
Density	DIN 53479	g/cm^3	0,94
Molecular weight		10^6 g/mol	9
Mechanical Properties			
Tensile modulus	ISO 527	MPa	750
Yield stress	ISO 527	MPa	> 17
Tensile strength at break	ISO 527	MPa	> 30
Elongation at break	ISO 527	%	> 250
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	64
Wear resistance	Sand-Slurry		80
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 3 mm)	UL94		HB

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.