



UHMW PE Technical Data Sheet

PROPERTIES	Test Method	Unit	Value
I . Physical Properties			
Density	ISO 1183	g/cm ³	0.93-0.95
Water absorption 24hrs	ISO 62	%	0.01
II .Thermal Properties			
Heat deflection temperature - HDT/A	ISO 75-2	°C	85
Min. service temperature		°C	-269
Max. service temperature-Long Term		°C	90
Thermal conductivity at 23 °C	DIN 11359	W/(K*m)	0.42
Coefficient of linear thermal expansion	ISO 11359	10 ⁻⁴ K ⁻¹	2
Flammability Rating(6mm thickness)	UL 94	-	HB
III.Mechanical Properties at 23°C			
Tensile strength at yield	ISO 527-2	MPa	23
Tensile strength at break	ISO 527-2	Mpa	40
Elongation at break	ISO 527-2	%	>50
Modulus of elasticity after tensile test	ISO 527-2	MPa	650
Modulus of elasticity after flexural test	ISO 178	MPa	800
Hardness - Shore D	DIN 53505		61
Charpy impact strength	ISO 179	kJ/m ²	N. B.
Friction coefficient	DIN 53375		0.15
IV. Electrical Properties at 23°C			
Dielectric constant at 1 MHz	IEC 60250	10 ⁶ Hz	3.1
Dielectric loss factor at 1 MHz	IEC 60250	10 ⁶ Hz	0.0001
Volume resistivity	IEC 60093	Ohm (Ω) * cm	>10 ¹⁴
Surface resistivity	IEC 60093	Ohm (Ω)	>10 ¹¹
Dielectric strength	IEC 60243-1	kV/mm	45
NOTE: 1 g/cm³ = 1,000 kg/m³, 1 Mpa = 1 N/mm², 1kV/mm = 1 MV/m			

Statement:

Property data contained herein are typical values of resin for your reference and comparison purposes only. PRIOR will not provide any legally binding guarantee of certain properties, or any suitability.