

# Technical Properties for UHMWPE

	Norm	Unit i.e.	Value
<b><u>Physical Properties</u></b>			
Specific Gravity	ISO 1183	g/cm <sup>3</sup>	0.93
Water Absorption	DIN 53495	%	0.1
Chemical resistance	-	-	DIN 8075
Maximum service temp	-	degrees C	90
Minimum service temp	-	degrees C	-150
<b><u>Mechanical Properties</u></b>			
Tensile strength at yeild	ISO 527	MPa	22
Elongation at yeild	ISO 527	%	11
Tensile strength at break	ISO 527	MPa	31
Elongation at break	ISO 527	%	>600
Impact strength	ISO 179	kJ/m <sup>2</sup>	0.B.
Notch impact strength	ISO 179	kJ/m <sup>2</sup>	20
Ball indentation (Rockwell)	ISO 2039	MPa	40
Shore D	DIN 53505	-	62
Flexural strength	ISO 178	MPa	30
Modulus elasticity	ISO 527	MPa	900
<b><u>Thermal Properties</u></b>			
Vicat softening temp	ISO 306	degrees C	74
Heat deflection Temp	ISO 75	degrees C	70
Coefficient of expansion	DIN 53752	K-1 x 10-4	1.55
Thermal conduct at 20	DIN 52612	W/(mxK)	0.43
<b><u>Electrical Properties</u></b>			
Volume resistivity	VDE 0303	x cm	>10 15
Surface resistivity	VDE 0303	-	>10 16
Dielectric constant @ 1MHz	DIN 53483	-	2.3
Diel. loss factor @ 1 MHz	DIN 53483	-	0.0002
Dielectric strength	VDE 0303	kV/mm	17
Tracking resistance	DIN 53480	-	KB> 600
<b><u>Additional Data</u></b>			
Bondability	-	-	-
Friction Coeficient	DIN 53375	-	0.25
Flamability	UL 94	-	HB
<b><u>Chemical properties</u></b>			
Acid resistance			+
Hydroxid resistance (dilute)			+
Hydrocarbonat resistance			+
CKW resistance			-
Aromatic resistance			0
Ketone resistance			+
Resistance to hot water			0