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UHMWPE SHEET DATA SHEET

Material Properties	**Standard**	**Unit**	**Value**
Average molecular weight		g /mol	Approx $9*10^6$
Density	ISO1183	Kg/m^3	>934
Water absorption at 23℃until saturation	ISO62	%	<0.01
Material Properties	**Standard**	**Unit**	**Value**
Tensile stress at yeild (tensile strength)	ISO527	MPa	≥17
Enlongation at break	ISO527	%	≥250
Tensile modulus	ISO527	MPa	790
Impact strength (Charpy)at 23℃	ISO179	Kj/m^2	No break
Notched impact strength (Charpy)at 23℃	**ISO11542-2**	Kj/m^2	≥120
Ball indentation hardness	ISO2039-1	N/mm^2	30-35
Shore-Hardness D,15 s value	ISO868		60-65
Coefficient of friction			Approx.0.5
Abrasion(Sand-Slurry)			80
Themal properties	**Standard**	**Unit**	**Value**
Melting point DSC ,10k/min	ISO3146	℃	135-138
Vicat softening point	ISO306	℃	80
Coefficient of linear themal expansion Between 23 and 80℃	ISO11359	K^{-1}	approx $2*10^{-4}$
Themal conductivity	ISO52612	W/[m*k]	approx 0.4
Use Temperature (max.)		℃	80
Use Temperature (briefly)		℃	90
Use Temperature (min.)		℃	-200
Electrical properties	**Standard**	**Unit**	**Value**
Relative permitivity at 100 Hz	IEC 60250	-	2.1
Dissipation factor at 100 Hz	IEC60250	-	Approx $3.9*10^{-4}$
Volume resistivity	IEC60093	Ohm*m	$>10^{12}$
Surface resistivity	IEC60093	Ohm	$>10^{12}$
Dielectric strength	IEC60243	KV/mm	45

Notice to users:

The information contained in this technical date sheet can not be constructed as a promise or guarantee of specific properties of our products.Any determination of suitability of a particular material and part design for any use contemplated by the user is the sole responsibility of the user .The information contained in this technical date sheet is based on present knowledge and may be subject to change without further notice.