



**POLESTAR POLYMERS**

An ISO 9001 : 2015 Certified Company

# POLESTAR® UHMWPE

## Technical Data Sheet - Sheets

Properties	Method	Unit	Value
Density	DIN EN ISO 1183-1	g / cm <sup>3</sup>	0,93
Water absorption	DIN EN ISO 62	%	<0,01
Flammability (Thickness 3mm /6mm)	UL 94		HB
Molecular Weight	-	10 <sup>6</sup> g/mol	~9
Yield stress	DIN EN ISO 527	MPa	20
Elongation at break	DIN EN ISO 527	%	> 200
Tensile modulus of elasticity	DIN EN ISO 527	MPa	680
Notched impact strength	DIN EN ISO 179	kJ / m <sup>2</sup>	No break
Shore hardness	DIN EN ISO 868	Scale D	63
Melting temperature	ISO 11357-3	°C	135
Thermal conductivity	DIN 52612-1	W / (m * K)	0,40
Thermal capacity	DIN 52612	kJ / (kg * K)	1,90
Coefficient of linear thermal expansion	DIN 53752	10 <sup>-6</sup> / K	150 - 230
Services temperature, long term	Average	°C	-250...80
Service temperature, short term (max)	Average	°C	130
Vicat softening temperature	DIN EN ISO 306, Vicat B	°C	80
Dielectric constant	IEC 60250		2,3
Dielectric dissipation factor (10 <sup>6</sup> Hz)	IEC 60250		0,0001
Volume resistivity	DIN EN 62631-3-1	Ω * cm	>10 <sup>14</sup>
Surface resistivity	DIN EN 62631-3-2	Ω	>10 <sup>14</sup>
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	45

**Note:** The information contained herein are typical values intended for reference and comparison purposes only. They should not be used as a basis for design specifications or quality control. POLESTAR POLYMERS will not provide any legally binding guarantee of certain properties or any suitability.

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