

Polyethylene 1000 – Stock Shapes

Chemical designation

PE-UHMW

Colour

Natural/Black/Green

Density

0.93 g/cm³

Fillers

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)		680	MPa	DIN EN ISO 527	
Tensile strength at yield		19	MPa	DIN EN ISO 527	
Elongation at break		>200	%	DIN EN ISO 527	
Notched impact strength (Charpy)		No break	kJ/m ²	DIN EN ISO 179	
Ball indentation hardness		30	MPa	DIN EN ISO 2039-1	
Thermal properties	parameter	value	unit	norm	comment
Melting temperature		135	°C	ISO 11357-3	
Service temperature	short term	130	°C	Average	
Service temperature	long term	80	°C	Average	
Thermal expansion (CLTE)	23-60°C, long.	18	10 ⁻⁵ *K ⁻¹	ISO 11359-2	
Thermal conductivity		0.40	W/(K*m)	DIN 52612-1	
Electrical properties	parameter	value	unit	norm	comment
Surface resistance		>10 ¹⁴	Ω	IEC 60093	
Specific volume resistance		>10 ¹⁴	Ω*cm	IEC 60093	
Dielectric strength		44	kV/mm	IEC 60243-1	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	<0.01	%	DIN EN ISO 62	
Flammability		HB		UL94	