

PE-UHMW / PE 1000

Ultra High Molecular Weight Polyethylene UHMW-PE products have a well-balanced property profile with a unique combination of wear and corrosion resistance, a low friction surface, and excellent impact strength. The properties make UHMW-PE a universally usable material for a wide range of industries and applications.

Technical Data Sheet

Physical properties	Test Standard	Value	Unit
Density	ASTM D792	0.93	g/cm ³
Water Absorption	ASTM D570	<0.10	%
Mechanical properties	Test Standard	Value	Unit
Hardness	ASTM D2240	62-66	Shore D
Wear Resistance	Sand-slurry	100	-
Tensile Strength at yield 23°C	ASTM D638	3100	psi
Tensile Modulus	ASTM D638	100000	psi
Elongation at Break	ASTM D638	>350	%
Flexural Strength	ASTM D790	3500	psi
Compressive Strength	ASTM D695	3000	psi
Coefficient of Friction, Dynamic	-	0.10-0.22	-
Coefficient of Friction, Static	-	0.15-0.20	-
Izod Impact, Notched	ASTM D256	No Break	ft-lb/in
Izod Impact Strength	ASTM D4020	125	KJ/m ²
Thermal properties	Test Standard	Value	Unit
Service Temperature	-	-200 to 90	°C
Melting Point	ASTM D3418	130 to 135	°C
Vicat Softening Point	ISO 306	80	°C
Heat Deflection Temperature	ASTM D648	43	°C
Flammability, UL94	-	HB	-
Electrical Properties	Test Standard	Value	Unit
Surface Resistivity	ASTM D257	>10 ¹²	Ω/cm
Volume Resistivity	ASTM D257	>10 ¹⁵	Ωcm

Note:

*The data stated above are typical values intended for reference and comparison purposes only.

*The data should not be used as a basis for design specifications or quality control.

*The information is provided as a guide to the best of our knowledge and given without obligation or liability.

*Testing under individual application circumstances is recommended.