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UHMW-PE

Ultra-high-molecular-weight-polyethylene is defined as polyethylene with a molecular weight greater than 3,100,000. UHMW-PE has outstanding abrasion resistance with a low coefficient of friction making it a natural for wear pads or sliding parts. Impact strength is high, and it has low temperature toughness (liquid nitrogen). UHMW-PE has self lubricating characteristics with excellent chemical resistance.

TYPICAL PHYSICAL PROPERTIES

PROPERTY	UNITS	ASTM	VALUE
Density	g/cc	D-792	.928 - .940
Yield	psi	D-638	2900 - 3400
Tensile	psi	D-638	4600 - 6800
Elongation	%	D-638	250 - 400
Single Notch Izod	ft lb/in(2)	D-256	No Break
Double Notch Izod	ft lb/in(2)	-	25 - 50
Tensile Impact	ft lb/in(2)	D-1822	600 - 1200
Flexural Modulus	psi	D-695	100 - 150K
Tensile Modulus	ft lb/in(2)	D-638	100 - 150K
Static Friction on Polish Steel	ft lb/in	D-1894	.20 - .25
Dynamic Friction	in/in/F.	D-696	.14 - .17
Heat Deflection Temp. @ 264 psi	Deg. F.	D-648	118
Melting Point	Deg. F.	D-789	266
Continuous Service Temp., Air, Max.	Deg. F.	-	160 - 180
Dielectric Strength	V/mil	D-149	710
Volume Resistivity	ohm-cm	D-257	10(13)
Dielectric Constant, 60Hz	-	D-150	2.3
Water Absorption, Immersion - 24 hrs.	%	D-570	<0.01
Water Absorption, Saturation	%	D-570	-

This information is only to assist and advise you on current technical knowledge and is given without obligation or liability.