

UHMW

Physical Properties			(UHMW-PE)			
Property	Units	ASTM Test	Natural	XL Cross linked	MPG Glass filled	Reprocessed
Density	gm/cm ³	D792	.930	.932	.96	.935
Tensile strength at yield 73°F	psi	D638	3100	2900	2700	3000
Elongation 73°F	%	D638	350	330	265	290
* Relative volumetric abrasion loss	*	*	100	85	75	90
Coefficient of friction 73°F on steel	-	-	Static .15-.20 Dynamic .10-.20	.15-.20 .08-.18	.15-.20 .10-.20	.17-.20 .10-.20
IZOD impact strength 73°F	KJ/m ²	D4020-96	125	120	110	96
Hardness 73°F	-	D785	Shore D 62-66	D 62-66	D 63-67	D 63-69
Melting point	°F	D789	275°-280°	275°-280°	275°-280°	275°-280°
Coefficient of linear thermal expansion	1/K	D696	2.0 x 10 ⁻⁴	1.0 x 10 ⁻⁴	1.0 x 10 ⁻⁴	1.9 x 10 ⁻⁴
Continuous service temperature in air (max)	°F	-	180	180	180	180
Volume resistivity	Ohm/cm	D257	>10 ¹⁵	>10 ¹⁵	>10 ¹⁵	>10 ¹⁵
Dielectric constant (10 ³ Hz)	-	D150	2.3	2.3	2.3	-
Dielectric strength	KV/mm	D149	900	900	900	900