

DATA SHEET

UHMW

Ultra High Molecular Weight Polyethylene

PROPERTY	UNITS	VALUE
MECHANICAL		
Specific Gravity	-	0.93
Tensile Strength	psi	3,050
Tensile Modulus	psi	120,000
Elongation (at break)	%	200
Flexural Strength	psi	2,500
Flexural Modulus	psi	110,000
Compressive Strength	psi	--
Hardness, Shore D	-	68
Coefficient of Friction (Dry vs. Steel)	-	.15
Limiting PV (with 4:1 safety factor)	psi x fpm	2,000
THERMAL		
Coefficient of Linear Thermal Expansion	in/in/F	7.80×10^{-5}
Heat Deflection Temperature (264 psi)	F	118
Glass Transition Temperature	F	115
Continuous Service Temperature	F	180
Thermal Conductivity	BTU/in/hr.ft.F	2.92
ELECTRICAL		
Dielectric Strength	volts/mil	525
Volume Resistivity	ohm-cm	10^{17}
OTHER		
Water Absorption, Immersion, 24 hrs.	% by wt.	.01
Water Absorption, Immersion, Saturation	% by wt.	.01

ENGINEERING NOTES:

- * FDA, USDA compliant
- * Excellent abrasion resistance (SSI - 10)
- * Chemically inert
- * Wear resistance diminishes at speeds over 20 fpm