



# DURAVAR<sup>®</sup>

## Physical Properties Table

*Ultra-High Molecular Weight Polyethylene*

TYPICAL PHYSICAL PROPERTIES	TEST METHOD	U/M	VALUE
PHYSICAL PROPERTIES			
Intrinsic Viscosity (IV)	ASTM D-4020	DL/GM	28 - 30
Density	ASTM D-792	GM/CM3	0.935 - 0.945
Hardness	ASTM D-2240	SHORE D	67
Water Absorption	ASTM D-570	%	Nil
MECHANICAL PROPERTIES			
Yield Strength	ASTM D-638	psi	> 3000
Tensile at Break	ASTM D-638	psi	> 5500
Elongation at Break	ASTM D-638	%	> 190
Tensile Modulus	ASTM D-638	psi	> 119,000
Flexural Modulus	ASTM D-790B	psi	> 109,000
Izod Impact	ASTM D-256A	---	No Break
Tensile Impact	ASTM D-1822	ft-lbs/in	> 700
Abrasion Index	SAND SLURRY	Steel = 100	10
Coefficient of Friction - Static (Polished Steel)	ASTM D-1894	---	.15 - .20
Coefficient of Friction - Dynamic (Polished Steel)	ASTM D-1894	---	.10 - .14
THERMAL PROPERTIES			
Coefficient of Linear Thermal Expansion	ASTM D-696	in/in/F°	$7.8 \times 10^{-5}$
Application Temperature - Maximum	ASTM D-648	°F	< 200°
Application Temperature - Minimum	ASTM D-648	°F	> -400°
Melting Range	DSC	°F	> 278°
ELECTRICAL PROPERTIES			
Dielectric Constant	ASTM D-150	---	2.30 - 2.35
Dissipation Factor	ASTM D-150	---	$< 5 \times 10^{-3}$
Static Decay Time	FTS-101C	Seconds	---
Volume Resistivity	ASTM D-257	ohms-cm	1017
Surface Resistivity	ASTM D-257	ohms	1017

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