



**DURAVAR® “VN” UHMW-PE**  
**Virgin Natural Ultra-High Molecular Weight Polyethylene**  
*Produced Utilizing Advanced Ram Extrusion Technology*

**PROPERTIES TABLE**

*Information Provided Below is a Collection of Multiple Sourcing and Believed to be Accurate*

TYPICAL	TEST	U/M	DURAVAR® “VN”
PHYSICAL PROPERTIES			Virgin
<b>PHYSICAL</b>			
Intrinsic Viscosity (IV)	ASTM D-4020	dl/gm	28 – 30
Density	ASTM D- 792	gm/cm <sup>3</sup>	0.935 – 0.945
Hardness	ASTM D-2240	Shore - D	> 67
Water Absorption	ASTM D- 570	%	Nil
<b>MECHANICAL</b>			
Yield Point	ASTM D- 638	Psi	> 3000
Tensile Break	ASTM D- 638	Psi	> 5500
Elongation at Break	ASTM D- 638	%	> 225
Tensile Modulus	ASTM D- 638	Psi	120000
Flexural Modulus	ASTM D- 790	Psi	110000
Izod Impact	ASTM D- 256	(ft-lb/in of notch)	No Break
Tensile Impact	ASTM D-1822	ft-lbs/in <sup>2</sup>	> 900
Coefficient of Friction – Static (Polished Steel)	ASTM D-1894	---	.15 – .20
Coefficient of Friction – Dynamic (Polished Steel)	ASTM D-1894	---	.10 – .14
<b>THERMAL</b>			
Coefficient of Linear Thermal Expansion	ASTM D- 696	in/in/°F	7.8 x 10 <sup>-5</sup>
Compressive Modulus	ASTM D- 621	% @ 1000 psi	77750
Compressive Deformation	ASTM D- 621	% @ 1000 psi	6 – 8
Application Temperature – Maximum	ASTM D- 648	°F	< 200
Melting Range	DSC	°F	> 278
<b>ELECTRICAL</b>			
Dielectric Strength (Short time, 1/8 inch thick)	ASTM D- 149	kv/cm	900
Dielectric Constant (@ 1 kHz)	ASTM D- 150	kHz	2.30 – 2.35
Dissipation Factor (@ 1 kHz)	ASTM D- 150	kHz	0.0002
Static Decay Time	FTS - 101C	Seconds	---
Volume Resistivity	ASTM D- 257	ohm-cm	10 <sup>15</sup>
Surface Resistivity	ASTM D- 257	Ohms	10 <sup>15</sup>

*This Chart Represents Typical Values for Virgin Natural UHMW-PE Based on ASTM Testing Standards.*

*Tech Data-VN 121106*

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