



## UHMW Ceram P

### Physical Properties

Property	Method	SI Unit	SI Value	English Unit	English Value
Density	ASTM D-792	kg/m <sup>3</sup>	964	lbs/ft <sup>3</sup>	60.2
Yield Point	ASTM D-638	MPa	19.3	psi	2800
Elongation at Yield	ASTM D-638	%	12	%	12
Ten sile Break	ASTM D-638	MPa	26.2	psi	3800
Elongation at Break	ASTM D-638	%	300	%	300
Ten sile Modulus	ASTM D-638	MPa	903	psi	130970
Flexural Modulus	ASTM D-790	MPa	689	psi	99933
Izod Impact	ASTM D-4020	kJ/m <sup>2</sup>	105	ft-lbs/in <sup>2</sup>	50
Ten sile Impact	DIN 53448	kJ/m <sup>2</sup>	1574	ft-lbs/in <sup>2</sup>	750
Sand Wheel Wear	ASTM G-65,	T-1000=100	85	T-1000=100	85
Hardness	ASTM D-2240	Shore D	70	Shore D	70
Static Friction	ASTM D-1894	Unitless	0.18	Unitless	0.18
Dynamic Friction	ASTM D-1894	Unitless	0.12	Unitless	0.12
Coefficient of Thermal Exp.	ASTM D-696	<sup>o</sup> C <sup>-1</sup>	0.00018	<sup>o</sup> F <sup>-1</sup>	0.00011
Melt Point	ASTM D-3417	<sup>o</sup> C	137-143	<sup>o</sup> F	278-289
Compressive Modulus	ASTM D-695	MPa	582	psi	94390
Compressive Deformation	ASTM D-621	% at 454.5 kg	4.0	% at 1000 psi	4.0
Volume Resistivity	ASTM D-257	Ohm-cm	>10 <sup>15</sup>	Ohm-cm	>10 <sup>15</sup>
Surface Resistivity	ASTM D-257	Ohm	>10 <sup>15</sup>	Ohm	>10 <sup>15</sup>
Water Absorption	ASTM D-570	%	nil	%	nil

\* Values are averages and are not specifications.

\*\* ASTM test methods are under current procedures.

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