

## High Wear Zirconia

Typical Properties – 8 mole% magnesium oxide sintering aid

	(Units)	(Typical)
Density	(g/cc)	5.75
Color		cream
Grain Size, average	(um)	30 - 40
Thermal Conductivity	(W/m-K)	2 - 3
Thermal Expansion	(10exp-6/C)	10
Thermal Down-shock	(C)	500
Volume Resistivity (RT)	(Ohm-cm)	>10E13
Dielectric Loss	(RT, 1Mhz)	.001 - .002
Dielectric Constant	(RT, 100Khz)	28 – 30
Compressive Strength	(MPa)	1700
Bending Strength	(MPa)	600 – 620
Young's Modulus	(GPa)	200 - 205
Hardness	(GPa)	11 - 12
Fracture Toughness	(MPa-m <sup>1/2</sup> )	10 - 11
As-Fired Surface Finish	(micro-meters)	0.5 – 0.4
Maximum use temperature	(C)	1000