



CERIA STABILIZED ZIRCONIA SPECIFICATIONS

	Property	ASTM Method	Units	CSZ
General	Crystal Size (Average)	Thin Section	Microns	3
	Color	--	--	Yellow
	Gas Permeability	--	atms-cc/sec	gas tight <10 ⁻¹⁰
	Water Absorption	C 20-97	%	0
Mechanical	Density	C 20-97	g/cc	6.20
	Hardness	Vickers 500 gm	GPa (kg/mm ²)	11.7 (1200)
	Hardness	--	R45N	78
	Fracture Toughness	Notched Beam	MPam ^{1/2}	12
	Flexural Strength (MOR) (3 point) @ RT	F417-87	MPa (psi x 10 ³)	551 (80)
	Tensile Strength @ RT	--	MPa (psi x 10 ³)	337 (49)
	Compressive Strength @ RT	--	MPa (psi x 10 ³)	2000 (290)
	Elastic Modulus	C848	GPa (psi x 10 ⁶)	200 (29)
Poisson's Ratio	C848	--	0.25	
Thermal	C.T.E. 25 - 100° C	C 372-96	x 10 ⁻⁶ /C	6.9
	C.T.E. 25 - 300° C	C 372-96	x 10 ⁻⁶ /C	8.1
	C.T.E. 25 - 600° C	C 372-96	x 10 ⁻⁶ /C	10.5
	Thermal Conductivity @ RT	C 408	W/m K	3.5
	Max Use Temp	--	Fahrenheit (°F)	1000
		--	Celcius (°C)	537
Electrical	Dielectric Strength (.125" Thick)	D 149-97A	V/mil	250
	Dielectric Constant @ 1 MHz	D 150-98	--	30.0
	Dielectric Loss @ 1 MHz	D 150-98	--	0.0010
	Volume Resistivity, 25°C	D 257	ohms-cm	> 1 x 10 ¹³
	Volume Resistivity, 300° C	D 1829	ohms-cm	1 x 10 ¹⁰
	Volume Resistivity, 500° C	D 1829	ohms-cm	1 x 10 ⁶
	Volume Resistivity, 700° C	D 1829	ohms-cm	5 x 10 ³

CONTACT US

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