

	Property	ASTM Method	Units	Mullite
General	Crystal Size (Average)	Thin Section	Microns	7
	Color	--	--	Gray-Tan
	Water Absorption	C 20-97	%	0
Mechanical	Density	C 20-97	g/cc	3.00
	Hardness	Vickers 500 gm	GPa (kg/mm <sup>2</sup> )	10 (1000)
	Hardness	--	R45N	78
	Fracture Toughness	Notched Beam	MPam <sup>1/2</sup>	3
	Flexural Strength (MOR) (3 point) @ RT	F417-87	MPa (psi x 10 <sup>3</sup> )	206 (30)
	Tensile Strength @ RT	--	MPa (psi x 10 <sup>3</sup> )	138 (20)
	Compressive Strength @ RT	--	MPa (psi x 10 <sup>3</sup> )	1034 (150)
	Elastic Modulus	C848	GPa (psi x 10 <sup>6</sup> )	179 (26)
	Poisson's Ratio	C848	--	0.24
Thermal	C.T.E. 25 - 100° C	C 372-96	x 10 <sup>-6</sup> /C	3.6
	C.T.E. 25 - 300° C	C 372-96	x 10 <sup>-6</sup> /C	4.1
	C.T.E. 25 - 600° C	C 372-96	x 10 <sup>-6</sup> /C	4.8
	Thermal Conductivity @ RT	C 408	W/m K	4
	Max Use Temp	--	Fahrenheit (°F)	3100
		--	Celsius (°C)	1700
Electrical	Dielectric Strength (.125" Thick)	D 149-97A	V/mil	250
	Dielectric Constant @ 1 MHz	D 150-98	--	6.7
	Dielectric Constant @ Gigahertz	D 2520-95	--	6.7 11.4
	Dielectric Loss @ 1 MHz	D 150-98	--	0.003
	Dielectric Loss @ Gigahertz	D 2520-95	--	0.003 11.4
	Volume Resistivity, 25°C	D 257	ohms-cm	> 1 x 10 <sup>14</sup>
	Volume Resistivity, 300° C	D 1829	ohms-cm	4 x 10 <sup>10</sup>
	Volume Resistivity, 500° C	D 1829	ohms-cm	1 x 10 <sup>9</sup>

## CONTACT US

Superior Technical Ceramics | 600 Industrial Park Rd. | St. Albans, VT 05478 | [www.ceramics.net](http://www.ceramics.net)

Telephone: (802) 527-7726 | Fax: (802) 527-1181 | Email: [sales@ceramics.net](mailto:sales@ceramics.net)

Superior Technical Ceramics products and services are subject to the Company's standard terms and conditions, available on request or at [ceramics.net](http://ceramics.net). For more information contact an authorized Superior Technical Ceramics representative. Unless noted otherwise, trademarks and service marks herein are the property of Superior Technical Ceramics and may be registered in the United States and/or other countries. Superior Technical Ceramics products named herein may be protected by one or more U.S. and/or foreign patents. For more information, contact [sales@ceramics.net](mailto:sales@ceramics.net). Specifications are subject to change without notice. Superior Technical Ceramics sells its products and services in



A Unit of IDEX Corporation

---

Superior Technical Ceramics products and services are subject to the Company's standard terms and conditions, available on request or at [ceramics.net](http://ceramics.net). For more information contact an authorized Superior Technical Ceramics representative. Unless noted otherwise, trademarks and service marks herein are the property of Superior Technical Ceramics and may be registered in the United States and/or other countries. Superior Technical Ceramics products named herein may be protected by one or more U.S. and/or foreign patents. For more information, contact [sales@ceramics.net](mailto:sales@ceramics.net). Specifications are subject to change without notice. Superior Technical Ceramics sells its products and services in



A Unit of IDEX Corporation