

99.5-99.7% alumina properties

properties	Condition	Units	99.5-99.7% Al <sub>2</sub> O <sub>3</sub>
Density		gm/cc	≥3.8
Water absorption		%	0
Color			Ivory
Flexual strength(MOR)	20°C	MPa	379(55)
Elastic modulus	20°C	GPa	303(54)
Poisson's ratio	20°C		0.22
Compressive strength	20°C	MPa	2600(377)
Hardness		GPa(kg/m m <sup>2</sup> )	14.1(1440)
		R45N	83
Tensile strength	25°C	MPa	262(38)
Fracture toughness	K(Ic)	MPam <sup>1/2</sup>	4~5
Coefficient of thermal expansion	25-1000°C	1×10 <sup>-6</sup> /°C	8.2
Specific heat	100°C	J/kg*K	880
Thermal shock resistance	ΔTc	°C	200
Maximum use temperature		°C	1500
Dielectric strength		ac-Ky/mm	8.7(220)
Dielectric loss	1MHz	25°C	0.0001
Volume resistivity	25°C	ohm-cm	>10 <sup>14</sup>