

99.5% Alumina Ceramic Material Properties - SU0320

Properties		Unit	Value	
Purity		%	99.5	
Appearance		-	Ivory, compact	
Crystal Size (average)		μm	3~5	
Density		g/cm ³	3.93	
Physical	Flexural Strength(20°C)	3-Point Bend	MPa	400
	Hardness	load 4.9	GPa	≥13
	Fracture Toughness		MPa·m ^{1/2}	4~5
	Reflectivity		%	-
	Water Absorption		%	0
Thermal	Thermal Conductivity	25°C	W/(m*k)	30
	Coefficient Thermal Expansion	25-500°C	1×10 ⁶ mm/C	6.6~7.8
		25-800°C		6.6~8.0
	Thermal Shock Resistance(OT)'C	850-880°C	Degree	≥5
Specific Heat		J/(kg*K)	800	
Electricity	Dielectric Constant	1MHz/25°C		9.6±0.3
	Dielectric Loss	1MHz/25°C	×10 ⁻⁴	≤1
	Volume Resistivity	25°C		>10 ¹⁴
		300°C	Ω*cm	>10 ¹⁰
		500°C		>10 ⁸
Dielectric Strength		KV/mm	>12	

Remark: The value is just for review. Different working conditions may cause some difference.