

ITEM			MATERIAL		Alumina	
Main Component				Al ₂ O ₃ 99.7%	Al ₂ O ₃ 96.0%	
Density			g/cm³	3.90	3.70	
MECHANICAL	Vickers Hardness Load 500g		GPa	17.2	13.7	
	Flexural Strength		MPa	370	350	
	Compressive Strength		MPa	2600	2070	
	Young's Modulus		GPa	370	300	
	Fracture Toughness		Mpa M ^{1/2}	4.5	4.5	
THERMAL	Coefficient of Thermal expansion	40 ~ 400℃	× 10 ⁻⁶ / °C	7.20	7.20	
		40 ~ 800℃		8.00	7.90	
	Thermal Conductivity (20℃)		W/(m·k)	30	25	
	Specific Heater		J/(kg·K)	0.78X10³	0.78X10³	
	Thermal Shock Resistance (ΔT)		°C	200	250	
ELECTRICAL	Dielectric Strength		V/m	15X10 ⁶	15X10 ⁶	
	Volume Resistivity	20℃	Ω ·cm	>10 ¹⁴	>10 ¹⁴	
		300℃	Ω ·cm	10 ¹³	10 ¹⁰	
		500℃	Ω ·cm	10 ¹⁰	10 ¹⁰	
CHEMICAL	Nitric Acid (60%, 90℃)		Weight Loss mg/cm²/day	0.05	—	
	Sulphuric Acid (95%, 95℃)			0.22	—	
	Caustic Soda (30%, 80℃)			0.04	—	