

ITEM			MATERIAL	Zirconia		
Main Component				ZrO ₂ + Y ₂ O ₃	ZrO ₂ + Y ₂ O ₃	ZrO ₂ + MgO
Density			g/cm³	6.00	6.00	5.70
MECHANICAL	Vickers Hardness Load 500g		GPa	13.2	12.7	10.7
	Flexural Strength		MPa	1000	1400	750
	Compressive Strength		MPa	5500	0	0
	Young's Modulus		GPa	200	220	
	Fracture Toughness		Mpa M ^{1/2}	6.0	6.0	9.0
THERMAL	Coefficient of Thermal expansion	40 ~ 400℃	× 10 ⁻⁶ / °C	10.50	10.80	10.00
		40 ~ 800℃		11.00	11.30	10.50
	Thermal Conductivity (20℃)		W/(m·k)	3	3	3
	Specific Heater		J/(kg·K)	0.46X10³	0.46X10³	0.46X10³
	Thermal Shock Resistance (ΔT)		°C	300	350	450
ELECTRICAL	Dielectric Strength		V/m	11X10 ⁶	–	13X10 ⁶
	Volume Resistivity	20℃	Ω ·cm	10 ¹³	–	>10 ¹⁴
		300℃	Ω ·cm	10 ⁶	–	10 ⁶
		500℃	Ω ·cm	10 ³	–	10 ⁴
CHEMICAL	Nitric Acid (60%, 90℃)		Weight Loss mg/cm²/day	0	0	–
	Sulphuric Acid (95%, 95℃)			0.04	0.04	–
	Caustic Soda (30%, 80℃)			0.08	0.08	–