

Zirconia Material Data Sheet

Designation		TZP-A
Components		ZrO ₂ /Y ₂ O ₃ /Al ₂ O ₃
Composition	%	95/5/0.25
Density	g/cm ³	6.05
Open porosity	%	0
Grainsize (mli)	µm	0.35
Hardness Vickers	Hv	1200
Hardness Mohs		8
Compressive strength	MPa	2000
Flexural strength	MPa	1200
Young's modulus	GPa	210
Fracture toughness K1c	MN/m ^{3/2}	8
Poisson ratio	-	0.31
Max. operating temperature	°C	1000
Thermal expansion(20-1000°C)	10 ⁻⁶ /K	10
Thermal conductivity	W/mK	2.5
Specific heat	J/kgK	500
Dielectric strength	kV/mm	-
Electrical resistivity (20°C/1000°C)	Ωcm	-
Dielectric constant (100MHz)	?	-
Dielectric loss factor	tan?	-
Shaping procedures:		
Isostatic pressing	-	X
Iron Oxide (WTZ)	Nil	-
Iron Oxide (CZ)	Infiltrated	-

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