

Zirconia Materials Data Sheet

Property	Units	Yttria Stabilized
Description		
Nominal Composition		Y-TZP
Microstructure		
Density	[g/cm ³]	6.0
Water Absorption	[%]	0
Porosity	[vol%]	0
Colour		Pearl/ White
Mechanical Properties		
Compressive Strength	[MPa}	2500
Flexural (Bending) Strength	[MPa]	800
Young's Modulus E	[GPa]	-
Fracture Toughness	[MPa.m ^{1/2}]	> 10
Vickers Hardness	[kg/mm ²]	1200 ~ 1350
Thermal Properties		
Max Working Temperature	[°C]	2400
Thermal Conductivity @ RT	[W/mK]	3
Thermal Expansion Coefficient (20 ~ 400 °C)	[x 10 ⁻⁶ /K]	9.8
Thermal Shock Resistance (ΔT _C)	[°C]	350
Electrical Properties		
Specific Resistance (@20°C)	[Ωcm]	-

Note: The above data represent typical values of Rojan sintered Zirconia.