

## Zirconia Materials Data Sheet

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

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