

3Y-TZP

EE-ZR2



The properties of zirconia(3Y-TZP) ceramics:

High strength, high hardness, impact resistance, wear resistance, corrosion resistance, smooth surface, low thermal conductivity, and non-magnetic properties.

Specific applications of zirconia(3Y-TZP) ceramics:

Plungers, ceramic shafts, fiber optic sleeves, inserts, ceramic cutting tools, ceramic guide rails, mechanical plunger dispensing valves, mobile phone cases, watch cases, hair clipper blades, etc.

MATERIAL PROPERTIES:

Physical Property	Unit	Value
Colour	-	White
Density	g/cm^3	6.0
Zirconia Content	%	94.4
Gas Permeability	-	0
Water Absorption	%	0
Crystal Size	μm	0.5
Mechanical Property	Unit	Value
Rockwell Hardness	R45N	78
Vickers Hardness	Kgf/mm^2	1175
Flexural Strength @20°C	Mpa	800
Compressive Strength@20°C	Mpa	2000
Modulus of Elasticity@20°C	Gpa	>200
Fracture Toughness@20°C	$MPam^{1/2}$	9.0
Thermal Property	Unit	Value
Thermal Conductivity	20°C $W/(m \cdot K)$	2.5
Coefficient of Thermal Expansion	$10^{-6}/^{\circ}C$	9.6
Thermal Shock Resistance	$\Delta T^{\circ}C$	250