

SPECIFICATIONS

- ▶ Chemical formula: ZrO_2
- ▶ Chemical name: Zirconia
- ▶ Appearance: Dense sintered zirconia
- ▶ Main characteristics: High mechanical strength, excellent wear resistance, good surface finish, high fracture toughness
- ▶ Main applications: Pump parts, dies, knives, cutting blades, spikes, club faces, scissors
- ▶ Colour: Ivory

MECHANICAL & PHYSICAL CHARACTERISTICS (TYP.)

Density		[g/cm ³]	JIS R 1634	6.0
Water absorption		[%]	JIS C 2141	0
Vickers hardness HV9.807N		[GPa]	JIS R 1610	12.3
Flexural strength 3 P.B.		[MPa]	JIS R 1601	1,000
Compressive strength		[MPa]	JIS R 1608	-
Young's modulus of elasticity		[GPa]	JIS R 1602	200
Poisson's ratio		[-]	JIS R 1602	0.31
Fracture toughness (SEPB)		[MPa*m ^{0.5}]	JIS R 1607	4 ~ 5
Coefficient of linear thermal expansion	40 - 400 °C	[*10 ⁻⁶ /K]	JIS R 1618	10.5
	40 - 800 °C			11
Thermal conductivity		[W/(m*K)]	JIS R 1611	3
Specific heat capacity		[J/(g*K)]	JIS R 1611	0.46
Thermal shock temperature difference		[°C]	JIS R 1648	450
Dielectric strength		[kV/mm]	JIS C 2141	11
Volume resistivity	20 °C	[Ω*cm]	JIS C 2141	10 ¹³
	300 °C			10 ⁶
	500 °C			10 ³
Dielectric constant		-	JIS C 2141	33
Dielectric loss angle		[*10 ⁻⁴]	JIS C 2141	16
Loss factor		[*10 ⁻⁴]	JIS C 2141	520

The values are typical material properties and may vary according to products configuration and manufacturing process. For more details, please feel free to contact us.