

**ZO701N**

2023.04.03

SPECIFICATIONS

- ▶ Chemical formula: ZrO₂
- ▶ Chemical name: Zirconia
- ▶ Apperance: 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: Ash black

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	12.7
Flexural strength 3 P.B.		[MPa]	JIS R 1601	1,470
Compressive strength		[MPa]	JIS R 1608	-
Young's modulus of elasticity		[GPa]	JIS R 1602	220
Poisson's ratio		[ν]	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	[$\times 10^{-6}$ /K]	JIS R 1618	10.8
	40 - 800 °C	[$\times 10^{-6}$ /K]		11.3
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	350
Dielectric strength		[kV/mm]	JIS C 2141	-
Volume resistivity	20 °C	[Ω^* cm]	JIS C 2141	-
	300 °C	[Ω^* cm]		-
	500 °C	[Ω^* cm]		-
Dielectric constant		-	JIS C 2141	-
Dielectric loss angle		[$\times 10^{-4}$]	JIS C 2141	-
Loss factor		[$\times 10^{-4}$]	JIS C 2141	-

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.

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