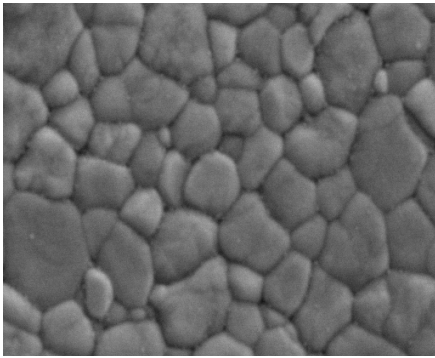


# KZY-1000

## Zirconia Y-TZP



### Key Benefits

- High mechanical strength
- Very dense and non-porous
- Excellent wear resistance
- Excellent corrosion resistance
- High impact resistance and toughness
- Low friction
- Biocompatibility

### Typical Applications

- Medicine (implants)
- Pump & compressor industry

### Main Properties

Parameters	Unit	KZY-1000
Density	g/cm <sup>3</sup>	6.02
Flexural strength @ 20°C	MPa	1000
Fracture Toughness	MPa x m <sup>1/2</sup>	6
Hardness @ 20°C	GPa	13
Young's Modulus @ 20°C	GPa	210
Thermal conductivity @ 20°C	W/m°K	3
Thermal expansion (20°C- 1000°C)	x10 <sup>-6/°C</sup>	11
Maximum working temp (No Load)	°C	1000
Electrical resistivity @ 20°C	Ω.cm	>10 <sup>7</sup>

### Chemical Composition (determined by XRF)

Analysis	% (Weight)
ZrO <sub>2</sub>	>94
Y <sub>2</sub> O <sub>3</sub>	5.19
SiO <sub>2</sub>	0.015
Fe <sub>2</sub> O <sub>3</sub>	0.007
Na <sub>2</sub> O	0.005
K <sub>2</sub> O	0.002