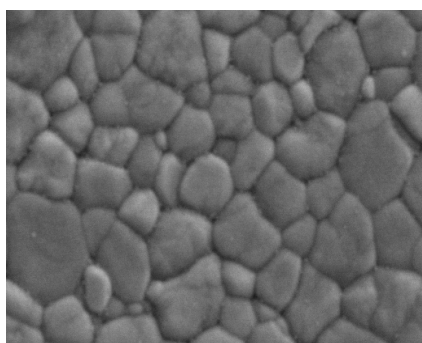




KZY-1000

Zirconia Y-TZP



Typical microstructure

Main properties

- High strength
- Ra <0.05 µm after mirror polishing
- High toughness
- Low friction coefficient against metals
- High wear resistance under sliding conditions

Applications

- Structural parts for machinery
- Welding pins
- Plungers for high pressure pumps
- Canning and metal packaging tooling
- Solids handling
- Nozzles for high pressure technologies

Physical properties

| Parameters | Units | Value |
|---|----------------------------------|-------------------|
| Density | g/cm ³ | 6.0 |
| Flexural Strength | MPa | 1000 |
| Fracture toughness | MPa·√m | 6.0 |
| Hardness | GPa | 13 |
| Young Modulus | GPa | 210 |
| Thermal conductivity | W/m·k | 3 |
| Thermal Expansion Coefficient (20-1000°C) | 10 ⁻⁶ K ⁻¹ | 11 |
| Maximum working temperature | °C | 900 |
| Electrical resistivity | Ω·cm | >10 ¹¹ |

* All properties measured at 20°C unless otherwise stated