Zirconia Ce-TZP

**CHEMICAL COMPOSITION**

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight Fraction</th>
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</thead>
<tbody>
<tr>
<td>ZrO₂ + HfO₂</td>
<td>83.75%wt</td>
</tr>
<tr>
<td>CeO₂</td>
<td>16%wt</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>0.25%wt</td>
</tr>
</tbody>
</table>

* by difference

**PHYSICAL PROPERTIES**

- Mean grain size: 1±0.5 µm
- Sintered density: 6.2 g/cm³
- Bending strength at 20° C: 600 MPa
- Hardness Hᵥ₀.₅: 800 Hv

**THERMAL PROPERTIES**

- Thermal conductivity at 20°C: 3.5 W.m⁻¹.k⁻¹

**ELECTRICAL PROPERTIES**

- Dielectric constant at 25°C-1MHz: 30 (1MHz)
- tan δ: 1.10⁻³ (1MHz)
- DC Volume resistivity at 25°C: 1.10¹³ Ω.cm
- Dielectric strength at 3mm: 25 kV/mm⁻¹

**MICROSTRUCTURE**

**KEY FEATURES**

No hydrothermal aging

**TYPICAL APPLICATIONS**

Instrumentation, sensors, flow control, insulators. Especially suited for applications were hydrothermal aging is critical.