

# ZIRCONIA

ROHS & REACH COMPLIANT

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## Physical properties

<b>DENSITY</b>	6.05 g/cm <sup>3</sup>
<b>COMPOSITION</b>	ZrO <sub>2</sub> 95% + Y <sub>2</sub> O <sub>3</sub> 5%
<b>COLOUR</b>	white pearl

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## Thermal properties

<b>SPECIFIC HEAT</b>	400 j/kg . K (at 100°C)
<b>CONDUCTIVITY</b>	2.5 W/m <sup>-1</sup> . K <sup>-1</sup> (at 20°C)
<b>EXPANSION</b>	10 10 <sup>-6</sup> /K <sup>-1</sup>
<b>MAX WORKING TEMPERATURE</b>	1000°C

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## Mechanical properties

<b>HARDNESS (DURETÉ)</b>	1250 HV10
<b>MODULUS OF RUPTURE</b>	1600 MPa
<b>POISSON'S RATIO</b>	0.30
<b>YOUNG'S MODULUS, ÉLASTICITÉ</b>	210 GPa
<b>FRACTURE TOUGHNESS</b>	5 MPa . m <sup>1/2</sup>
<b>COMPRESSIVE STRENGTH</b>	2200 MPa
<b>BENDING STRENGTH</b>	1200 MPa

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## Chemical properties

<b>ACID &amp; ALKALI</b>	good resistance
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## Electrical properties

<b>DIELECTRIC CONSTANT</b>	19 kV.mm-1
<b>RESISTIVITY</b>	1.10 <sup>12</sup> Ohm .cm (at 20°C)