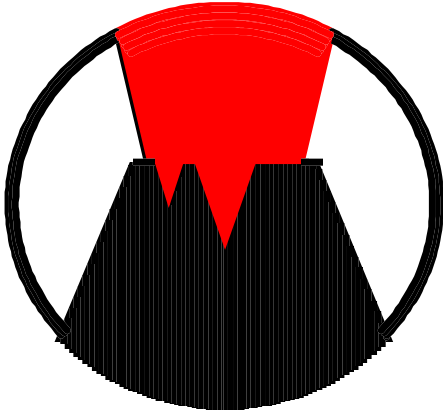


# ZIRCONIA



## Composition

Zirconia	ZrO <sub>2</sub>	88.84%
Yttria	Y <sub>2</sub> O <sub>3</sub>	10.5%
Silica	SiO <sub>2</sub>	0.2%
Alumina	Al <sub>2</sub> O <sub>3</sub>	0.17%
Titania	TiO <sub>2</sub>	0.14%
Calcia	CaO	0.1%
Iron Oxide	FeO <sub>3</sub>	0.03%
Magnesia	MgO	0.01%
Sodium Oxide	Na <sub>2</sub> O	0.006%
Potassium Oxide	K <sub>2</sub> O	0.002%

## Physical Properties

Bulk Density	Open Porosity	Flextural Strength 20 °C	Compressive Strength 20°C
5.72 g/cm <sup>3</sup>	0%	276 Mpa	>1772 Mpa
358 #/ft <sup>3</sup>	0%	40 ksi	>250 ksi

## Thermal Properties

Conductivity		Expansion Coefficient 20-1000°C	Max Use Temperature (no load)
20°C	800°C		
2 W/m K	2 W/m K	11.3x10 <sup>-6</sup> /°C	2200° C
14 BTU.in/ft <sup>2</sup> .hr.°F	14 BTU.in/ft <sup>2</sup> .hr.°F	6.3x10 <sup>-6</sup> /°F	4000° F

These values represent typical properties of standard materials. They should be used only for comparison and should not be used as a warranty.