

ZIRCONIA

Composition

Zirconia	ZrO ₂ /HfO ₂	89.0%
Yttria	Y ₂ O ₃	10.5%
Silica	SiO ₂	0.15%
Alumina	Al ₂ O ₃	0.20%
Titania	TiO ₂	0.05%
Calcia	CaO	0.05%
Iron Oxide	Fe ₂ O ₃	0.04%
Magnesia	MgO	0.001%
Sodium Oxide	Na ₂ O	0.01%
Potassium Oxide	K ₂ O	0.001%

Physical Properties

		Flexural Strength	Compressive Strength
Bulk Density	Open Porosity	20°C	20°C
5.92 g/cm ³	0%	276 Mpa	1772 Mpa
370 lbs/ft ³	0%	40 ksi	250 ksi

Thermal Properties

Conductivity		Expansion Coefficient	Max Use Temperature
20°C	800°C	20-1000°C	(no load)
2 W/m ² K	2 W/m ² K	11.3 x 10 ⁻⁶ /C°	2200°C
14 BTU.in/ft ² .hr°F	14 BTU.in/ft ² .hr°F	6.3 x 10 ⁻⁶ /F°	4000°F

These values represent typical properties of standard materials.

Values should be used only for comparison and should not be used as a warranty.