



Advanced Ceramic Technologies

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# 99.8% ALUMINA

TYPE C799 TO IEC 60672

## Composition

Alumina	Al <sub>2</sub> O <sub>3</sub>	99.82%
Silica	SiO <sub>2</sub>	0.06%
Calcia	CaO	0.04%
Magnesia	MgO	0.035%
Iron Oxide	Fe <sub>2</sub> O <sub>3</sub>	0.025%
Sodium Oxide	Na <sub>2</sub> O	0.008%
Titania	TiO <sub>2</sub>	0.004%
Chromic Oxide	Cr <sub>2</sub> O <sub>3</sub>	0.003%
Potassium Oxide	K <sub>2</sub> O	0.001%
Boron Oxide	B <sub>2</sub> O <sub>3</sub>	0.001%

## Physical Properties

Bulk Density	Open Porosity	Flexural Strength		Compressive Strength
		20°C	1000°C	20°C
3.91 g/cm <sup>3</sup>	0%	380 Mpa	165 Mpa	2650 Mpa
244 lbs/ft <sup>3</sup>	0%	55 ksi	24 ksi	384 ksi

## Thermal Properties

Conductivity		Expansion Coefficient	Max Use Temperature (no load)
20°C	800°C		
30 W/m <sup>°K</sup>	8.2 W/m <sup>°K</sup>	8.4 x 10 <sup>-6</sup> /C°	1750°C
208 BTU.in/ft <sup>2</sup> .hr°F	57 BTU.in/ft <sup>2</sup> .hr°F	4.7 x 10 <sup>-6</sup> /F°	3182°F

These values represent typical properties of standard materials.

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