

COMPOSITION 3001

DESCRIPTION AND TYPICAL PROPERTIES

Stabilizer Magnesia

Description A magnesia partially stabilized zirconia, coarse grain pressed body.

Application Containment vessels for induction melting of superalloys and precious metals in vacuum or oxidizing atmospheres.

Chemistry	<u>Oxide</u>	<u>Percent</u>
	SiO ₂	1.5
	CaO	0.2
	MgO	2.7
	Fe ₂ O ₃	0.1
	Al ₂ O ₃	0.8
	TiO ₂	0.1
	ZrO ₂	balance (includes 1 -2% HfO ₂)

Density (g/cm³) 4.6 g/cm³ (287 lbs./ft³)

Porosity (%) 18

Monoclinic (%) 85%

MOR psi at R.T. (3pt) 3500

Thermal Expansion

CTE R.T. to 600°C 6.6 x 10⁻⁶ in/in/°C

CTE R.T. to 1000°C 6.2 x 10⁻⁶ in/in/°C

CTE R.T. to 1300°C 2.3 x 10⁻⁶ in/in/°C

Thermal Conductivity at 800°C-Calc 1.4 W/m-°K

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