

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-Calcd 1.4 W/m-°K

NOTICE: Recommendations, property values, and application information we publish are based on various sources including measurements by us and others, and estimates of experience. We intend this to be a reliable guide, but we do not guarantee the applicability, completeness, or accuracy of the information. Users should make their own test to determine the suitability of any product for their applications