



# GNP Graystar

Specialty Materials



## TECHNICAL DATA SHEET

### Bubble Zirconia

#### Typical Chemistry

Zirconium Oxide (ZrO <sub>2</sub> ) and Hafnium Dioxide (HfO <sub>2</sub> )	94.85 %
Calcium Oxide (CaO)	3.80 %
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	0.80 %
Silicon Dioxide (SiO <sub>2</sub> )	0.40 %
Titanium Dioxide (TiO <sub>2</sub> )	0.10 %
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	0.05 %

#### Physical Characteristics

Crystal Form:	Cubic & Monoclinic Mixture
True Density:	5.60-5.70 g/cm <sup>3</sup>
Hardness:	Knoop (100): 1160 Mohs: 6.5
Melting Point:	2550°C
Bulk Density (LPD):	1.27-1.30 g/cm <sup>3</sup>
Color:	Golden (Yellow)

#### Physical Characteristics

Chemistry:	ANSI B74.14
Bulk Density:	ANSI B74.4

#### Available Sizing

Various sizes available. Custom sizes are also available upon request.

#### Description:

GNP Graystar's Fused Calcia-Stabilized Bubble Zirconia is excellent for refractory applications due to its thermal shock resistance and chemical stability.

#### Applications:

GNP Graystar's Fused Calcia-Stabilized Bubble Zirconia is used in the production of lightweight refractory bricks and castables, as loose bulk backup insulation for high temperature induction and nitriding furnaces, and other applications that require high temperature usage, rapid heating and cooling, and chemical stability.

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