

# GY3Z-R60

## TECHNICAL DATA SHEET

- 3% molar Y<sub>2</sub>O<sub>3</sub> stabilized zirconia with enhanced reactivity.
- Ready-To-Press granules for uniaxial and isostatic pressing.
- High density YTZ ceramics with outstanding mechanical properties.

### CHEMICAL ANALYSIS (ppm)

ZrO <sub>2</sub> +HfO <sub>2</sub> *	Y <sub>2</sub> O <sub>3</sub>	Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Na <sub>2</sub> O	TiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	LOI
94.3%	5.4%	0.25%	≤200	≤200	≤50	≤50	3%

\* by difference

### PHYSICAL PROPERTIES

	GY3Z-R60
Specific surface area (m <sup>2</sup> /g)	7
Granule d50 (μm)*	60

\*Analytical method: laser diffraction

### APPLICATION PROPERTIES

#### - Ceramic sintering

	GY3Z-R60
Green density (g.cm <sup>-3</sup> )*	3.0
Sintered density (g.cm <sup>-3</sup> )*	≥ 6.05
Sintering temperature (°C)	1450 - 2 hours

\* uniaxial pressing 100MPa

Refer to our recommendations for thermal processing

#### - Mechanical properties of final ceramics

Hardness (HV03)*	Flexural strength (MPa)**	Fracture toughness K <sub>1C</sub> (MPa.m <sup>1/2</sup> )***
1250	>1000	5.5

\* Vickers indentation

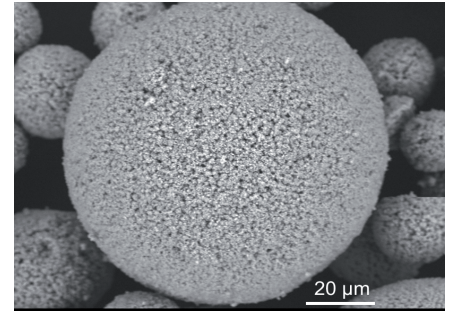
\*\* 3 points bending (6.5mm x 3.3mm x 25mm)

\*\*\* ISB (ASTM C1421)

### SAFETY DATA SHEET AVAILABLE

### PACKAGING

20 kg plastic drums.



### MAIN APPLICATIONS

- Structural ceramics
- Dental ceramics

### CERAMIC PROPERTIES

- High mechanical strength
- Wear & scratch resistance
- Biocompatible

Saint-Gobain ZirPro is the expert in zirconia-based materials for industrial applications. From our global network of manufacturing, commercial and research facilities, we serve leading customers through long-term and trust-based relationships.

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