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## Product Data Sheet

### Yttria stabilized zirconia GY3Z-N60

#### Description

- 3% molar Y<sub>2</sub>O<sub>3</sub> stabilized zirconia with high chemical purity
- "Ready to Press" granules for YTZ ceramic processing
- YTZ ceramics with outstanding mechanical properties

#### Main applications

- structural ceramics

#### Ceramic properties

- high strength
- wear & scratch resistant
- smooth finish

#### Typical chemical analysis

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>	CaO	LOI
94,3 %	5,4 %	0,25 %	100 ppm	100 ppm	10 ppm	20 ppm	20 ppm	3 %

\* by difference

#### Physical properties

specific surface area (m <sup>2</sup> /g)	7
bulk density (g/cm <sup>3</sup> )	1,2
D <sub>50</sub> (μm)*	60

\* analytical method: laser diffraction

#### Application properties

- ceramic sintering

ceramic density(g/cm <sup>3</sup> )	≥ 6,03
sintering temperature (°C)	1450

refer to producer's recommendations for thermal processing

- mechanical properties of final ceramics

hardness (HV05)*	flexural strength (MPa)**	fracture toughness K <sub>1C</sub> (MPa.m <sup>1/2</sup> )*
1250	1000	6

\* Vickers indentation

\*\* 3 points bending

#### Packaging

20 kg plastic drums

All of the above data represent typical values which may vary for each shipment. Final users must practice their own tests to determine if product fits into requirements of the aim it is going to be used for.