

# MgZ02A

- A spray dried powder ideally suited for production of structural ceramic.
- Zirconia stabilization occurs during sintering.

## TYPICAL CHEMICAL ANALYSIS

ZrO <sub>2</sub> +HfO <sub>2</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	MgO	H <sub>2</sub> O (105°C)	L.O.I. (105°C - 1000°C)
95.80%	0.08%	0.08%	0.20%	0.08%	0.02%	0.05%	<b>3.20%</b>	0.52%	6.50%

\* by difference on calcined product

## PARTICLE SIZE DISTRIBUTION

Distribution for granulates:

< 1 µm	5 %
40-80 µm	25 %
80-106 µm	30 %
106-205 µm	40 %

D50 of the powder\* 0.8 µm

\* Analytical method: Sedigraph 5100

CRYSTAL STRUCTURE \_\_\_\_\_ Monoclinic

## PHYSICAL PROPERTIES

Fired density	5.6 g/cm <sup>3</sup>
Green density	3.5 g/cm <sup>3</sup>
Hardness	1275 MPa
Toughness (K <sub>1C</sub> ) - indentation strength	6.8 MPa x m <sup>1/2</sup>
Shrinkage	18 %

*This data has been measured on small parts (<100 cm<sup>3</sup>). These parts have been shaped under an unidirectional pressure at 200 MPa and sintered at 1680°C.*

## PACKAGING

25 kg multiwalled moisture proof paper bags.



## MAIN APPLICATIONS

- Structural ceramics
- Mechanical parts
- Wire drawing
- Pumps
- Valves

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