GNPGraystar
Specialty Materials
AN ISO 9001 CERTIFIED COMPANY

TECHNICAL DATA SHEET
Chemical Grade Magnesia-Stabilized Zirconia

GNPMgPSZ

Typical Properties		Test Method
% ZrO_2 + HfO_2	96.4 ± 0.2	XRF
% MgO	3.5 ± 0.1	ICP
%Al_2O_3 max.	0.05	ICP
% SiO_2 max.	0.02	ICP
% Fe_2O_3 max.	0.0025	ICP
% TiO_2 max.	0.0025	ICP
L.O.I.	1.5 - 3.0	Resistance Furnace
Bulk Density (g/cm³)	1.25 - 1.45	Hall Meter
SSA (m^2/g)	5-20 m^2/g	BET

RTP Powder is available in either White or Yellow

GNPMSZ-DM-8.0

Typical Properties		Test Method
% ZrO_2 + HfO_2	94.8 ± 0.2	Bitter Almond Acid Gravimetric Method
% MgO	2.7 ± 0.2	Spectrophotometry
%Al_2O_3 max.	0.001	Spectrophotometry
% SiO_2 max.	0.007	Spectrophotometry
% Fe_2O_3 max.	0.003	Spectrophotometry
% TiO_2 max.	0.001	Spectrophotometry
L.O.I.	0.17	Resistance Furnace
% H_2O	0.07	Resistance Furnace
Bulk Density (g/cm³)	1.13	MS2000 Size Analyzer
SSA (m^2/g)	4	SSA-3600 BET

RTP Powder is available in White

Description:
By adding Magnesia to Zirconia, the cubic and tetragonal phases are partially stabilized. This MgPSZ material is white and has excellent durability in cyclic-fatigue environments and is used in applications that require high-strength and resistance to thermal shock.

Applications:
GNPGraystar's Chemical Grade Magnesia-Stabilized Zirconia is an ideal material for valve and pump components, bushings and wear sleeves, industrial tool applications, as well as oil and gas down-hole tools.

info@GNPGraystar.com

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Northern Office
37 John Glenn Dr.
Amherst, NY 14228
716.759.6600

www.GNPGraystar.com

Southern Office
9 Simmonsville Rd.
Bluffton, SC 29910
843.815.5600