

GADOLINIUM OXIDE NANOPOWDER



Purity
99.9%



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NS6130-03-313

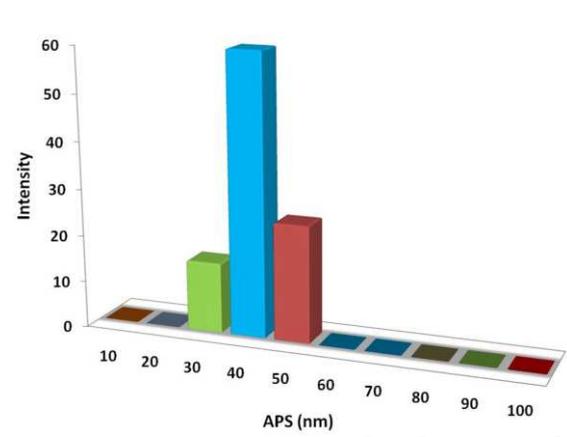
GADOLINIUM OXIDE NANOPOWDER

Lanthanide oxides have gained a lot of attention due to their diverse use for applications such as in the nuclear industry, electronics, lasers, and optical material. A great deal of interest in gadolinium oxide exists because of its physicochemical properties, such as the crystallographic stability up to temperatures of 2325°C, high mechanical strength, excellent thermal conductivity, and a wide band optical gap. Gadolinium oxide is an inorganic compound with the formula Gd₂O₃. This compound is one of the most commonly available forms of the rare-earth element Gadolinium. Gadolinium oxide (Gd₂O₃), also known as Gadolinia is a white powder that is insoluble in water and somewhat soluble in acids. It has a tendency to absorb moisture and carbon dioxide from the air. It has some optical applications utilize or could utilize gadolinium oxide nanopowders, including CTRs, optical glasses, display panels, and others.

QuickFACTS

Product	:	Gadolinium Oxide Nanopowder
Stock No	:	NS6130-03-313
CAS	:	12064-62-9
Color	:	White
Form	:	Powder
Symbol	:	Gd ₂ O ₃
Group	:	Gadolinium 3/Oxygen 16

Electronic Configuration:
Gadolinium [Xe] 4f⁷ 5d¹ 6s²/Oxygen [He] 2s² 2p⁴



ADDITIONAL POWDER CHARACTERISTICS

Stock No.	Purity	APS
NS6130-03-313	99.9%	<100nm
NS6130-03-314	99.9%	80nm
NS6130-03-315	99.9%	40nm(Cubic)
NS6130-03-316	99.9%	10nm

TECHNICAL SPECIFICATION

Molecular Formula	Molecular Weight	Density	Melting Point
Gd ₂ O ₃	362.50 g/mol	7.07 g/cm ³	2420 °C

CHEMICAL COMPOSITION

Product	Weight Percent (nominal)	
		Other Metal
Gadolinium Oxide Nanopowder	99.9%	1000ppm

APPLICATIONS

- > Fluorescent materials, luminescence, and electroluminescent devices
- > Special optical glass and plasma display panels
- > In the electric industry
- > As additives, catalysts, and dopants
- > In cathode-ray tubes, ferroelectric memory, and field emission displays
- > High-resolution x-ray medical imaging
- > Neutron converter
- > Scintillators and sintering aids
- > Solid oxide fuel cell
- > UV detectors



ISO 9001:2015
CERTIFIED COMPANY

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