

DYSPROSIUM III OXIDE NANOPOWDER



Purity
99.9%



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NS6130-12-000789

DYSPROSIUM OXIDE NANOPOWDER III

Dysprosium Oxide is a sesquioxide compound, basic, highly insoluble and thermally stable rare earth metal. Dysprosium Oxide is also known as Dysprosia with the chemical composition Dy_2O_3 and its properties are influenced by the synthesis conditions. It is a white, slightly hygroscopic powder. Dysprosia has applications in ceramics, glass, phosphors, lasers and dysprosium metal halide lamps.

There are distinct methods for the preparation of Dysprosia Nanoparticles such as homogenous precipitation and wet chemical methods. Moreover, it exhibits high resistivity, large energy band, as well as high dielectric constant. Dy_2O_3 sesquioxide shows the face-centered cubic (fcc) arrangement. Dy_2O_3 shows unique properties and these properties are originating from their 4f electron. This compound shows various applications with other functional materials. For instance, Dy_2O_3 is also utilized as a photoluminescent and thermoluminescent material.

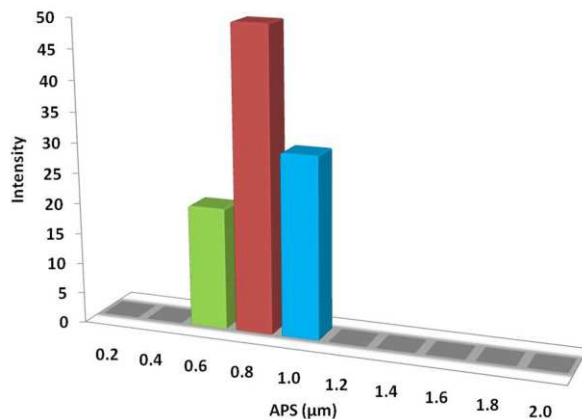
QuickFACTS

Product	:	Dysprosium III Oxide Nanopowder
Stock No	:	NS6130-12-000789
CAS	:	1308-87-8
Color	:	White
Form	:	Powder
Symbol	:	Gd_2O_3
Group	:	Dysprosium 3/Oxygen 16

Electronic Configuration:

Dysprosium [Xe] 4f10 6s2

Oxygen [He] 2s2 2p4



ADDITIONAL POWDER CHARACTERISTICS

Stock No.	Purity	APS
NS6130-12-000789	99.9%	0.5-1μm

TECHNICAL SPECIFICATION

Molecular Formula	Molecular Weight	Density	Melting Point
Dy_2O_3	373 g/mol	7.81 g/cm ³	2408 °C

CHEMICAL COMPOSITION

Product	Weight Percent (nominal)	
	Dy_2O_3	Other Metal
Dysprosium Oxide Nanopowder	99.9%	1000ppm

APPLICATIONS

- > Data storage
- > Luminescence
- > Neutron-based applications
- > Material additive
- > Used as glass material in laser-based
- > Optical devices



20ZICE4589C



19ZAZGO1274G



20ZICE4588M

ISO 9001:2015
CERTIFIED COMPANY

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