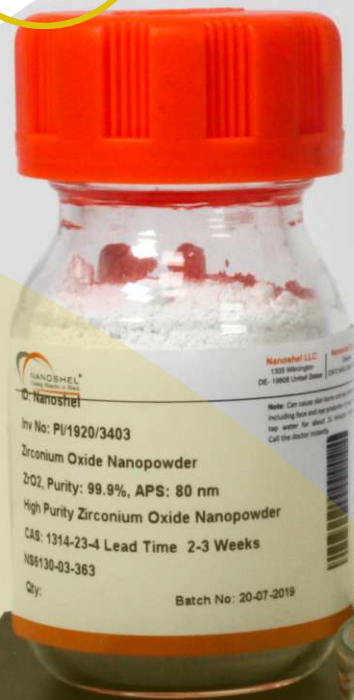


ZIRCONIUM OXIDE NANOPOWDER



Purity
99.9%

ZrO₂

NS6130-03-368

NEXT



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ZIRCONIUM OXIDE NANOPOWDER

ZrO₂ (zirconia) is a material of excellent technological significance and it is a white crystalline oxide of zirconium. It has various properties such as fine natural color, high stability, high toughness, high chemical strength, desirable corrosion, chemical, and microbial resistance. ZrO₂ manifests plenty of oxygen vacancies on its surface with wideband gap and it is called as P-type semiconductor. Due to the high ion exchange ability and redox movement make it useful in many catalytic processes as a catalyst. For the future nanoelectronic devices, ZrO₂ has been examined for potential use as an insulator in transistors, which is an important dielectric material and polymorphic compound. The crystal morphology of zirconia is monoclinic, tetragonal, and cubic.

To synthesize ultrafine ceramic powders, various approaches have been followed such as sol-gel, hydrothermal, spray pyrolysis, salt-assisted aerosol decompositions, carbon nanotube template technique and reflux and emulsion precipitation. Zirconia powders utilized in the production of certain forms of artificial jewelry. The material has optical properties so it is also used more broadly in stereo television glasses, light control devices, and other light-sensitive devices. It is used in many different electronic devices, for instance, in high-capacity capacitors, electrodes, piezoelectric elements, ion exchangers, solid dielectrics, and more.

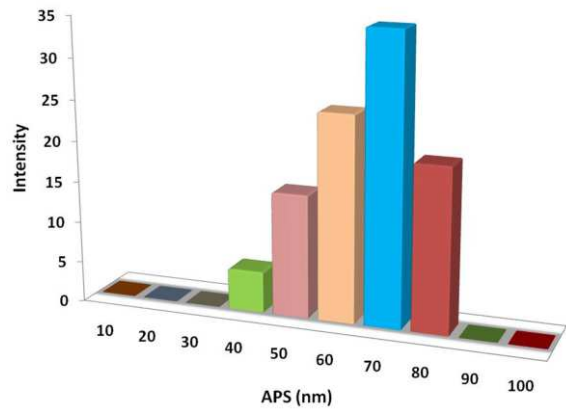
QuickFACTS

Product	:	Zirconium Oxide Nanopowder
Stock No	:	NS6130-03-368
CAS	:	1314-23-4
Color	:	White
Form	:	Powder
Symbol	:	ZrO ₂
Group	:	Zirconium 4/Oxygen 16

Electronic Configuration:

Zirconium [Kr] 4d² 5s²

Oxygen [He] 2s² 2p⁴



ADDITIONAL POWDER CHARACTERISTICS

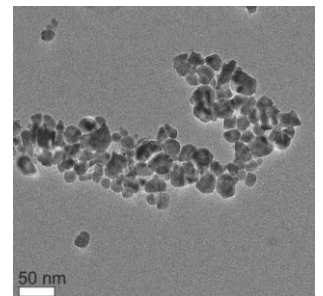
Stock No.	Purity	APS
NS6130-03-368	99.9%	40nm

TECHNICAL SPECIFICATION

Molecular Formula	Molecular Weight	Density	Melting Point
ZrO ₂	123.218 g/mol	5.68 g/cm ³	2700 °C

CHEMICAL COMPOSITION

Product	Weight Percent (nominal)	
	ZrO ₂	Other Metal
Zirconium Oxide Nanopowder	99.9%	1000ppm



APPLICATIONS

- > Used in ceramics Industry
- > In making artificial jewelery.
- > In making abrasive, insulating and fire-retarding materials.
- > Used for optical storage
- > Utilized in light shutters, and stereo television glasses.
- > Used energy storage such as in Fuel, battery
- > Utilized for high-temperature and corrosion resisting components



ISO 9001:2015
CERTIFIED COMPANY

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