

# TANTALUM PENTOXIDE NANOPOWDER



Purity  
**99.9%**

**Ta<sub>2</sub>O<sub>5</sub>**



Follow us:

[f](#) [@](#) [t](#) [in](#) | [www.nanoshel.com](http://www.nanoshel.com) | [sales@nanoshel.com](mailto:sales@nanoshel.com)

NS6130-03-381

## TANTALUM PENTOXIDE NANOPOWDER

Tantalum pentaoxide is an inorganic compound and its chemical formula is  $Ta_2O_5$ . This compound has high refractive index, high dielectric constant and low absorption property. Due to this property it is useful in coatings. Mostly it is insoluble in all solvents. It is used in capacitors because of its dielectric constant. Tantalum pentaoxide has various applications in microelectronics and also in advanced catalyst. Moreover, it's used for storage energy. These nanoparticles are also employed in biomaterials in filled resins owing to its low toxicity, biocompatibility and chemical inertness. These are also anti-corrosive compound. Tantalite and columbite are minerals of tantalum pentaoxide. These are utilized in electronic circuitry, thin film components, cell phones and also in automotive electronics. This compound has also applications in resistive switching memories

## QuickFACTS

Product	:	Tantalum Pentoxide Nanopowder
Stock No	:	NS6130-03-381
CAS	:	1314-61-0
Color	:	White
Form	:	Powder
Symbol	:	$Ta_2O_5$
Group	:	Tantalum 4/Oxygen 16

### Electronic Configuration:

Tantalum [Xe] 4f14 5d3 6s2

Oxygen [He] 2s2 2p4



20ZICE4589C

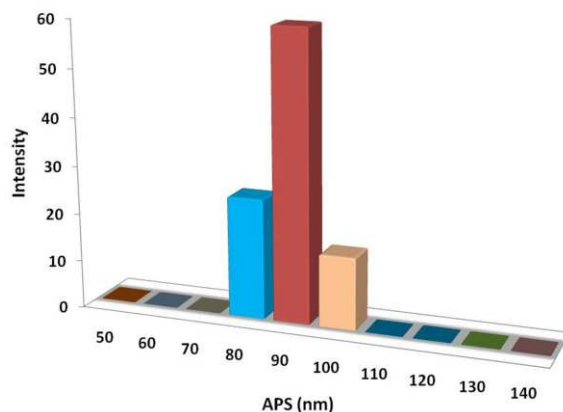


19ZAZGO1274G



20ZICE4588M

ISO 9001:2015  
CERTIFIED COMPANY



### ADDITIONAL POWDER CHARACTERISTICS

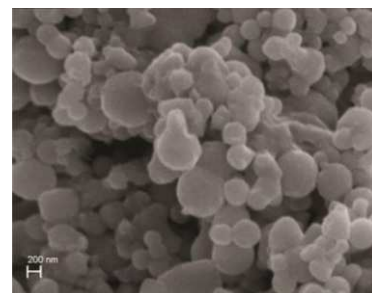
Stock No.	Purity	APS
NS6130-03-381	99.9%	70-90nm

### TECHNICAL SPECIFICATION

Molecular Formula	Molecular Weight	Density	Melting Point
$Ta_2O_5$	441.893 g/mol	8.18 g/cm <sup>3</sup>	1872 °C

### CHEMICAL COMPOSITION

Product	Weight Percent (nominal)	
	$Ta_2O_5$	Other Metal
Tantalum Pentoxide Nanopowder	99.9%	1000ppm



### APPLICATIONS

- > Dental imaging, CT Scans and X-rays
- > Coatings and plastics
- > Nanowires
- > Textiles and nanofibers
- > Alloys and catalyst applications

**INTELLIGENT MATERIALS PVT LTD**  
Derabassi  
Punjab (140507)  
INDIA

+91 9779 550077, 9779238252

**NANOSHEL UK LIMITED**  
Chapel House,  
Chapel St Cheshire,  
CW12 4AB United Kingdom

+44 1782 454 144, +44 74 105 48802

**NANOSHEL LLC**  
3422 Old Capitol Suit  
1305 Wilmington DE - 19808  
United States

+1 646 470 4911