

# **TITANIUM** O X I D E NANOPOWDER

Coated with Silicon



99.9%

TiO<sub>2</sub>















### TITANIUM OXIDE NANOPOWDER

Nanoscale TiO2 that is manufactured for specific applications is by approximately a factor of 100 finer than the TiO2 pigments and has other physical properties. Currently, they are mainly found in high-factor sun protection creams, textile fibers or wood preservatives. For a long time, sun creams have been manufactured adding titanium oxide micro particles that gave the products a pasty, sticky consistency.

TiO2 is a highly insoluble thermally stable. They are typically insoluble in aqueous solutions (water) and extremely stable making them useful in ceramic structures as simple as producing clay bowls to advanced electronics in light weight structural components in aerospace and electrochemical applications such as fuel cells in which they exhibit ionic conductivity. Metal oxide compounds are basic anhydrides and can therefore react with acids as well as with strong reducing agents in redox reactions. TiO2 is mostly used as white pigment because of its high diffraction index, strong light scattering, incident-light reflection capability and a high UV resistance that make TiO2 the standard pigment found in white dispersion paints with high hiding power

## Quickfacts

Product Titanium Oxide Nanopowder

Stock No NS6130-03-353

CAS 13463-67-7

Color White

Powder Form

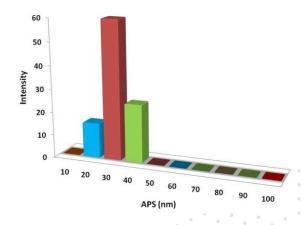
Symbol TiO<sub>2</sub>

Titanium 4/Oxygen 16 Group

**Electronic Configuration:** 

Titanium [Ar] 3d2 4s2

Oxygen [He] 2s2 2p4



#### ADDITIONAL POWDER CHARACTERISTICS

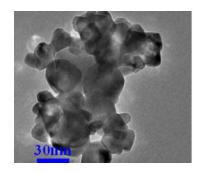
Stock No.	Purity	APS
NS6130-03-353	99.9%	30nm

#### TECHNICAL SPECIFICATION

Molecular Formula	Molecular Weight	Density	Melting Point
TiO₂	79.866 g/mol	4.23 g/cm <sup>3</sup>	1843 °C

#### CHEMICAL COMPOSITION

Product	Weight Percent (nominal)	
	TiO <sub>2</sub>	Other Metal
Titanium Oxide Nanopowder	99.9%	1000ppm



#### **APPLICATIONS**

- Utilized as UV-resistant material, Photocatalyst, antibacterial material
- Employed in chemical fiber, plastics, printing ink, coating
- In the self-cleaning glass, self-cleaning ceramics, air purification, sewage treatment
- In the chemical industry
- utilized in Cosmetics,
- used in foods packing material
- utilized in coating for paper-making industry:
- Astronautics industry.







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