

# TITANIUM DIOXIDE Zinc Oxide CORE Shell

**99.9%**

(Purity)



Nanomaterials have been developed for the food industry for uses such as food storage, preventing microbial growth, and as a nutritional ingredient. Titanium dioxide (TiO<sub>2</sub>) and zinc oxide (ZnO) have unique physicochemical properties including a bright white color, ability to block UV light, and antimicrobial activity. TiO<sub>2</sub> nanoparticles naturally exist in three different crystalline structures (anatase, rutile and brookite) and have a high refractive index. The bright white color of micron-sized TiO<sub>2</sub> might be more useful for some applications than nanosized TiO<sub>2</sub> because TiO<sub>2</sub> becomes more transparent as its particle size decreases. However, smaller TiO<sub>2</sub> particles have higher UV-blocking properties, which can be advantageous for food storage. In addition, nanosized TiO<sub>2</sub> prevents microbial growth. Because of these properties, nanosized TiO<sub>2</sub> might be popular in the food industry with further technological developments. ZnO is another commonly used particle with similar utility to TiO<sub>2</sub>.

## Applications

- ✓ TiO<sub>2</sub> is widely used as a pigment (paint, plastics, and paper), in personal care products (sunscreen and toothpastes), and in food (cream).
- ✓ In addition, ZnO is used for its antimicrobial properties and in nutritional supplements such as multivitamins. Compared with micron-sized ZnO, nanosized ZnO might have better UV-blocking and anti-microbial properties and higher bioavailability.

Stock no:

**NS6130-12-001663**

## Chemical Identifiers

Purity	:	99.9%
Chemical name	:	TiO <sub>2</sub> /ZnO
APS	:	<50nm



Follow us:



| [www.nanoshel.com](http://www.nanoshel.com) | [sales@nanoshel.com](mailto:sales@nanoshel.com)

ISO 9001:2015  
CERTIFIED COMPANY



20ZICE4589C



19ZAZGO1274G



20ZICE4588M

**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 (0) 74 105 488, +44 203 137 5187

**NANOSHEL LLC**

3422 Old Capitol Suit  
1305 Wilmington DE - 19808  
United States

+1 646 470 4911