TECHINSTRO®
Vision Beyond Technology

Titanium Dioxide Nanoparticles

Product Catalogue

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WorKing

Titanium dioxide is a molecule comprising one titanium atom and two oxygen atoms. It is famous for ultrafine titanium dioxide (TiO_2) particles, nano-crystalline titanium dioxide, or microcrystalline titanium dioxide. It has a diameter smaller than 100 nm and is white. It is a photocatalyst, implying it can use light energy to catalyze reactions with other atoms at low temperatures. We manufacture Titanium Dioxide nanoparticles (TiO_2) by sol-gel method in bulk quantity with multi-point of quality checks to get accurate Titanium Dioxide Nanoparticles.

Product Code: TiO2-Nano

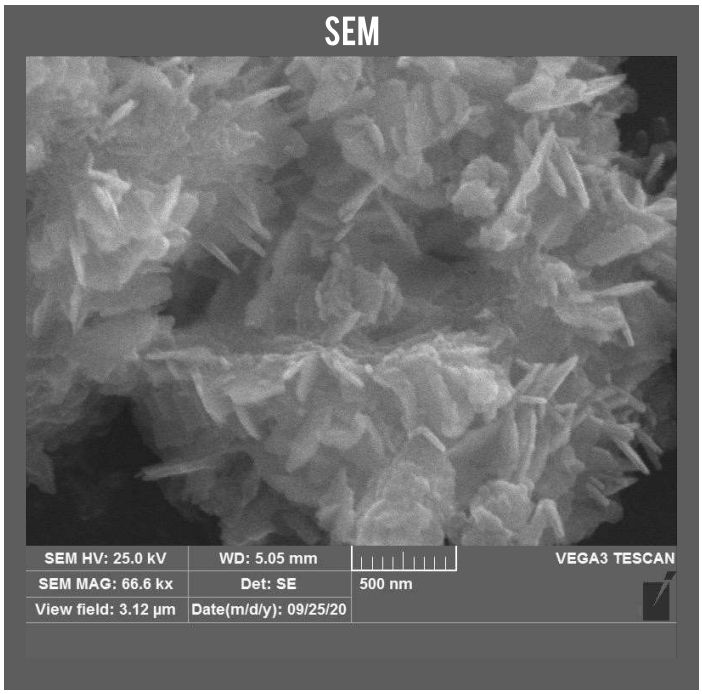
Technical Properties

SPECIFICATIONS	VALUES
Molecular Formula	TiO_2
CAS Number	13463-67-7
Bulk Density	0.35 g/cm^3
Average Particle Size	30 - 80 nm
Molecular Weight	79.86 g/mol
Melting Point	1843 °C
Purity	>99.9%
Form Factor	Powder
Morphology	Spherical
Surface Area	150 m^2/g
Colour	White

Applications

- Anti-Corrosion, Scratch, and Wear Resistance
- Coatings & also display High Thermal Barrier properties.
- Automotive, Filtration, Military, Energy, Cosmetics, Coatings, Oil & Gas, and Electronics
- Anti-wear Coatings in Oil & Gas Pipelines
- Fillers in Polymers & Tyres
- Electronics, Windows, Flooring & other Surfaces, and Coatings.
- Technical Ceramics with enhanced Hardness & Thermal Conductivity
- Magnetic Tape Additives & Polishing Abrasives of Metal
- Transparent Conductive Coatings
- Transparent Optical Coatings
- Sintering Additives
- Propellants
- Cosmetics Additive/filler
- Packaging Materials, Cutting Tools, High Purity Crucible,
- Winding Axle & Furnace Tubes, Semiconductor Materials, Plastic, Tape, and Grinding Belts
- Paint, Rubber, Plastic Wear-resistant Reinforcement, & Advanced Waterproof Materials
- Catalyst, Catalyst Carrier, and Analytical Reagents
- Aerospace Aircraft Wing Leading Edges, Vapor Deposition Materials, Special Glass, Fluorescent Materials, Composite Materials, and Resins
- To Improve Ceramics Density, Smoothness, Fracture Toughness, Creep Resistance, Thermal Fatigue Resistance, and Ideal Material for Far-infrared Emission.

Characterization Analysis



Features

- TiO_2 has Good Photo Catalytic Properties
- It has good UV Resistance properties
- It has good Anti-microbial Properties
- UV resistance properties help in making Cosmetic products
- High Oxidation Efficiency & Non-toxic
- High Chemical inertness
- Eco-friendly in nature

Safety Instructions

- Protective gloves should be worn at the time of operation.
- Safety goggle is a must during handling.
- Do not touch any part of the skin or eyes while using.
- Store in a moisture-proof dry place.

Packaging

It is supplied in a highly-protective moisture-proof bottle with a seal. It is finally packed in a shockproof sheet with a corrugated box.

Handling

When handling, the researcher should use powder-free non-latex gloves, which should be held carefully. While experimenting, if the operator uses a nanopowder with bare hands, the chances of contamination due to finger oil are very high. Therefore, it is advised to use nylon or polyester gloves.

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