Particular Materials SRL
via Umberto I°, 134 Int.4
35020 Casalserugo (PD) – Italy
Last review: 09/2026

# Technical Data Sheet

## PRODUCT INFORMATION

| | |
|---|---|
| **Product Name** | Titanium (IV) oxide, anatase nanoparticles |
| **Synonym** | Titanium dioxide nanoparticles<br>Titania nanoparticles |
| **CAS Number** | 1317-70-0 |
| **Formula** | $TiO_2$ |
| **Molecular Weight** | 79.87 g/mol |

## PRODUCT PROPERTIES

| | |
|---|---|
| **Purity** (XRF analysis) | > 99.5% |
| **Particle size** (TEM analysis) | 17 ± 3 nm |

### Supply form 1

| | |
|---|---|
| **Appearance** (form) | Powder |
| **Appearance** (color) | White |

### Supply form 2

| | |
|---|---|
| **Appearance** (form) | Dispersion |
| **Appearance** (color) | White to off-white |
| **Solvent** | Water |
| **Concentration** | 1% to 15% wt |

*For concentration > 15% wt or for dispersions in different solvents please contact Technical Support*

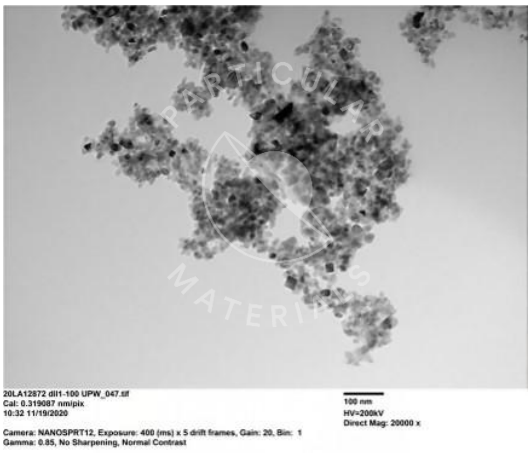
**Particular Material** warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current specification sheet may be available at www.particularmaterials.com. For further inquiries, please contact **Technical Support** at we.are@particularmaterials.com.

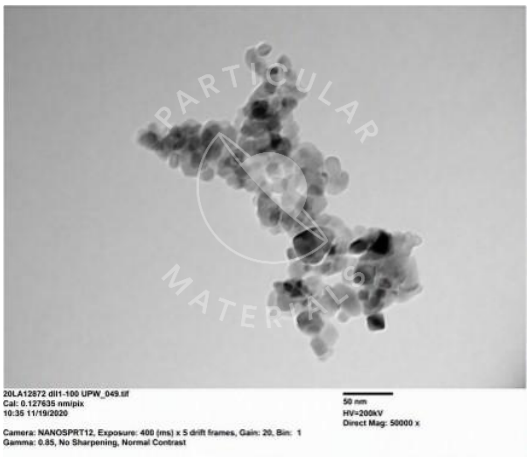
Particular Materials SRL
via Umberto I°, 134 Int.4
35020 Casalserugo (PD) – Italy
Last review: 09/2026

## ANALYSIS

### TEM

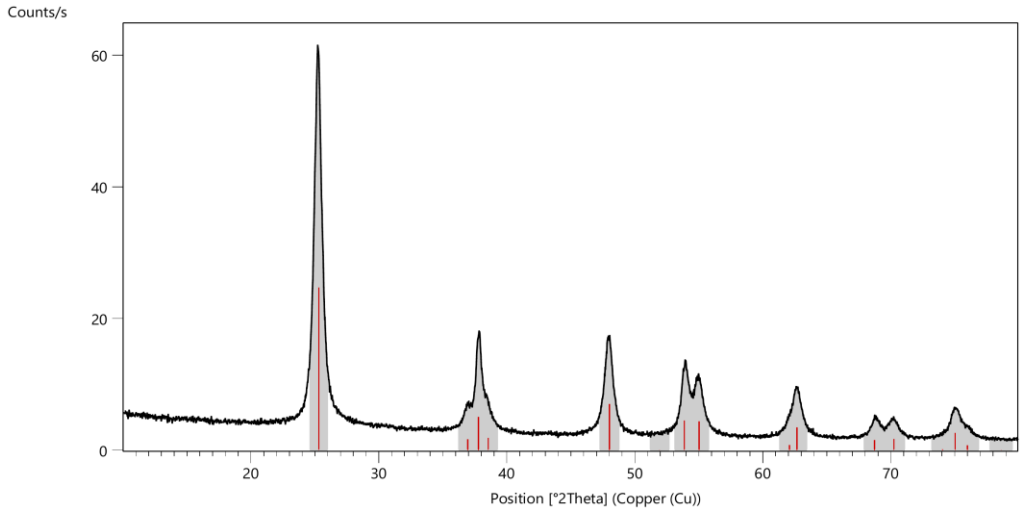
NPs dimensions: 17 ± 3 nm




### XRD

ICSD: 98-009-6946
Anatase




**Particular Material** warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current specification sheet may be available at www.particularmaterials.com. For further inquiries, please contact **Technical Support** at we.are@particularmaterials.com.

Particular Materials SRL
via Umberto I°, 134 Int.4
35020 Casalserugo (PD) – Italy
Last review: 09/2026

## QUALITY CONTROL

When stored as recommended, most nanoparticles are stable for 6 months to > 1 year. Be sure to visually inspect your materials before each use. If there are any visible particulates floating in the solution, if the color of the solution has changed, or if the color intensity has decreased, the nanoparticles may have aggregated. These materials should be analyzed via UV-Visible spectroscopy, DLS, or TEM for quality verification.

## HANDLING NANOPARTICLE COLLOIDS

Shake prior to use. During storage the nanoparticles may settle to the bottom. Resuspend the settled nanoparticles by vigorously shaking the bottle until the solution is homogenous.

## HANDLING DRY NANOPOWDERS

Storage away from excess moisture and humidity is recommended until the materials are ready for use or redispersion.

## QUESTIONS & SUPPORT

If you have any questions, please don't hesitate to contact us by email at we.are@particularmaterials.com.

**Particular Material** warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current specification sheet may be available at www.particularmaterials.com. For further inquiries, please contact **Technical Support** at we.are@particularmaterials.com.