

AEROXIDE® TiO₂ P 25

Hydrophilic fumed titanium dioxide

Characteristic physico-chemical data

| Properties and test methods | Unit | Value |
|---|-------------------|-----------|
| Specific surface area (BET) | m ² /g | 35 - 65 |
| pH value in 4% dispersion | | 3.5 - 4.5 |
| Loss on drying* 2 hours at 105 °C | % | ≤ 1.5 |
| Tamped density* | g/l | 100 - 180 |
| Titanium dioxide based on ignited material | % | ≥ 99.50 |
| Al ₂ O ₃ content based on ignited material | % | ≤ 0.300 |
| SiO ₂ content based on ignited material | % | ≤ 0.200 |
| Fe ₂ O ₃ content based on ignited material | % | ≤ 0.010 |
| HCl content based on ignited material | % | ≤ 0.300 |
| Sieve residue (by Mocker, 45µm) | % | ≤ 0.050 |
| * ex plant The data represents typical values (no product specification) | | |

Registrations (substance or product components)

AEROXIDE® TiO₂ P 25

| | |
|---|------------|
| CAS-No. | 13463-67-7 |
| REACH (Europe) | registered |
| TSCA (USA) DSL (Canada) | registered |
| ENCS (Japan) IECSC (China) KECI (Korea) | registered |
| AICS (Australia) | registered |

AEROXIDE® TiO₂ P 25 is a fine-particulate, pure titanium dioxide (TiO₂) with high specific surface area and marked aggregate and agglomerate structure. Because of its high purity, high specific surface area, and unique combination of anatase and rutile crystal structure, the product is suitable for many catalytic and photocatalytic applications. Its structure also makes it suitable for use as an effective UV filter.

Applications and properties

Properties

- High specific surface area and high purity
- Crystalline TiO₂ with predominantly anatase structure
- Very good thermal and chemical stability
- Outstanding catalytic and photocatalytic efficiency
- Photoactive under UV-B radiation
- Heat-stabilizing effect in silicone elastomers through the influence of titanium dioxide on redox processes
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Applications

- Raw material for catalyst substrates with high thermal and hydrothermal stability
- Efficient catalyst substrate with good thermal and hydrothermal stability
- Efficient photocatalyst for formulation of self-cleaning construction materials, such as concrete or mineral plasters
- Suitable for the construction of efficient dye-sensitized solar cells
- Efficient and overdyable heat stabilizer for silicone vulcanizates at process temperatures to more than 200 °C
- Improvement of the flammability protection of silicone vulcanizates
- Additive and raw material for ceramic and metal materials as bonding agent, sintering additive, or structural component
- Dry coating of cathode materials in Li-ion batteries to increase performance and life-time

Packaging and storage

AEROXIDE® TiO₂ P 25 is supplied in multiple layer 10 kg bags. We recommend to store the product in closed containers under dry conditions and to protect the material from volatile substances. AEROXIDE® TiO₂ P 25 should be used within 2 years after production.

Safety and handling

A safety data sheet will be provided with your first delivery and with subsequent revisions. Additionally, the Product Safety Department of Evonik Resource Efficiency GmbH can be contacted via mail at sds-hu@evonik.com for specific questions. We recommend to read the safety data sheet carefully prior to use of the product.

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