

Product name: AEROXIDE® TiO2 P 25

SAFETY DATA SHEET

1. Identification

Product identifier: AEROXIDE® TiO2 P 25

Other means of identification

CAS Number: 13463-67-7

Recommended use of the chemical and restrictions on use

Recommended use: Catalyst support
Stabilizer

Restrictions on use: Not determined.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Operations GmbH
Rellinghauser Str. 1-11
45128 Essen
Germany

Telephone : +49 6181 59 4787

E-mail : sds-hu@evonik.com

Emergency telephone number:

24 Hour Emergency Telephone : +49 7623 919191

2. Hazard(s) identification

Classification according to GHS

Not classified

Label Elements

Hazard Symbol: No symbol

Signal Word: No signal word.

Hazard Statement: Not applicable

Precautionary Statements: Not applicable

Other hazards: No data available.

3. Composition/information on ingredients

Product name: AEROXIDE® TiO2 P 25
Substances

Chemical Identity	Common name and synonyms	CAS-No.	Content in percent (%)*
titanium dioxide		13463-67-7	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The exact concentration has been withheld as a trade secret.

4. First-aid measures
Description of first aid measures

Inhalation:	In case product dust is released: Possible discomfort: cough, sneezing Move to fresh air.
Skin Contact:	Wash off with plenty of water and soap.
Eye contact:	Possible discomfort is due to foreign substance effect. Rinse thoroughly with plenty of water keeping eyelid open. In case of persistent discomfort: Consult an ophthalmologist.
Ingestion:	Clean mouth with water and drink afterwards plenty of water. After absorbing large amounts of substance / In case of discomfort: Supply with medical care.
Personal Protection for First-aid Responders:	No data available.

Most important symptoms and effects, both acute and delayed

Symptoms:	None known.
Hazards:	None known.

Indication of immediate medical attention and special treatment needed

Treatment:	No hazards which require special first aid measures.
-------------------	--

5. Fire-fighting measures
Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Water spray, foam, CO2, dry powder. Adapt fire-extinguishing measures to surroundings
Unsuitable extinguishing media:	Do not use full-force water jet in order to avoid dispersal and spread of the fire.
Special hazards arising from the substance or mixture:	None known.
Special protective equipment and precautions for firefighters	

Product name: AEROXIDE® TiO2 P 25

Special fire fighting procedures:	Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters:	In the case of fire, wear respiratory protective equipment independent of surrounding air and chemical protective suit.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid dust formation.
Accidental release measures:	No data available.
Methods and material for containment and cleaning up:	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.
Environmental Precautions:	Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems.

7. Handling and storage

Handling

Technical measures:	If possible, use material transfer/filling, metering and blending plants that are closed, or provide for local suction devices. Observe occupational exposure limits and minimize the risk of inhalation of dust.
Local/Total ventilation:	Ensure suitable suction/aeration at the work place and with operational machinery.
Safe handling advice:	If necessary: Local ventilation. Handle in accordance with good industrial hygiene and safety practice. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used. For personal protection see section 8. Avoid dust formation. Take precautionary measures against static discharges.
Contact avoidance measures:	No data available.

Storage

Safe storage conditions:	Take precautionary measures against static discharges. When repairs of the production system are to be made (e.g. welding work), the section to be repaired must be essentially free of product. Keep in a dry place. Store in accordance with local/regional/national/international regulations.
---------------------------------	---

Product name: AEROXIDE® TiO2 P 25

Safe packaging materials:

No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Observe national threshold limit values.

Biological Limit Values

Observe national threshold limit values.

Appropriate Engineering Controls

If possible, use material transfer/filling, metering and blending plants that are closed, or provide for local suction devices. Observe occupational exposure limits and minimize the risk of inhalation of dust. Ensure suitable suction/aeration at the work place and with operational machinery.

Individual protection measures, such as personal protective equipment (PPE)

General information:

No data available.

Eye/face protection:

Safety glasses with side shields If dust occurs: basket-shaped glasses

Hand Protection:

Additional Information: Wear protective gloves made of the following materials: nitrile rubber (NBR), butyl rubber, PVC. Additional Information: The data about break through time/strength of material is not valid for undissolved solids/dust., Selection of protective gloves to meet the requirements of specific workplaces., The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Other:

No special protective equipment required. Preventive skin protection Cleanse and apply cream to skin after work.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. If dust occurs: Dust mask with P2 particle filter

Hygiene measures:

When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. Avoid clothing from being contaminated with the product. Wash contaminated clothing after use.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical state:

solid

Form:

Powder Contains no titanium dioxide in powder form containing 1 % or more of particles with aerodynamic diameter

Product name: AEROXIDE® TiO2 P 25

	<= 10µm.
Color:	White
Odor:	Odorless
Odor Threshold:	Not applicable
Melting Point:	Approximate 1.850 °C/3.362 °F
Boiling Point:	No data available.
Flammability:	not flammable
Upper/lower limit on flammability or explosive limits	
Explosive limit - upper:	Not explosive
Explosive limit - lower:	Not explosive
Flash Point:	Not applicable (solid)
Auto-ignition temperature:	not flammable
Decomposition Temperature:	> 2.000 °C/> 3.632 °F
pH:	3,5 - 4,5 (20 °C/68 °F) Concentration: 40 g/l
Viscosity	
Dynamic viscosity:	Not applicable (solid)
Kinematic viscosity:	Not applicable (solid)
Flow Time:	No data available.
Solubility(ies)	
Solubility in Water:	hardly soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable
Vapor pressure:	Not applicable
Relative density:	No data available.
Density:	Approximate 4,1 g/cm ³ (20 °C/68 °F)
Bulk density:	No data available.
Vapor density (air=1):	No data available.
Particle characteristics:	No data available.
Other information	
Explosive properties:	Not to be expected in view of the structure
Oxidizing properties:	Not to be expected in view of the structure
Self-ignition:	not auto-flammable
Peroxides:	Not applicable
Dust explosion properties:	Not dust explosive
Evaporation Rate:	Not applicable
Minimum ignition energy:	Not applicable

Product name: AEROXIDE® TiO2 P 25

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	None if processed as per stipulations
Conditions to avoid:	None known.
Incompatible Materials:	None known.
Hazardous Decomposition Products:	None known. Stable under normal conditions. Product will not undergo hazardous polymerization.

11. Toxicological information

General information: Epidemiological studies to date have not revealed any evidence of a relation between exposure to titanium dioxide and diseases of the respiratory tract beyond general effects of dust.

Information on likely routes of exposure

Inhalation:	Information on effects are given below.
Skin Contact:	Information on effects are given below.
Eye contact:	Information on effects are given below.
Ingestion:	Information on effects are given below.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Acute toxicity (list all possible routes of exposure)

Oral

Product:	LD 50, Rat, > 5.000 mg/kg, OECD 425, Based on available data, the classification criteria are not met.
Components: titanium dioxide	LD 50, Rat, > 5.000 mg/kg, OECD 425

Dermal

Product:	LD 50, Rabbit, > 5.000 mg/kg, Based on available data, the classification criteria are not met.
Components: titanium dioxide	LD 50, Rabbit, > 5.000 mg/kg

Inhalation

Product name: AEROXIDE® TiO2 P 25

Product: LC 50, Rat, 4 h, > 6,82 mg/l, Dust and mist, Based on available data, the classification criteria are not met.

Components:
titanium dioxide Dust and mist, Not toxic after single exposure, Not applicable
Vapour, Not toxic after single exposure, Not applicable

Repeated dose toxicity

No data available.

Skin Corrosion/Irritation

Product: OECD 404, (Rabbit), Not irritating, Based on available data, the classification criteria are not met.

Components:
titanium dioxide Not irritating, OECD 404, Rabbit

Serious Eye Damage/Eye Irritation

Product: OECD 405, Rabbit, Not irritating, Based on available data, the classification criteria are not met.

Components:
titanium dioxide Not irritating, OECD 405, Rabbit

Respiratory or Skin Sensitization

Product: Local Lymph Node Assay (LLNA), OECD 429, Mouse, Not a skin sensitizer.

Components:
titanium dioxide Local Lymph Node Assay (LLNA), OECD 429, Mouse, Not a skin sensitizer.

Carcinogenicity

Product: An Expert Judgment stated that no classification is necessary based on present knowledge.

Components:
titanium dioxide An Expert Judgment stated that no classification is necessary based on present knowledge.

Germ Cell Mutagenicity**In vitro**

No data available.

In vivo

No data available.

Reproductive toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration Hazard

Product: Not applicable

Components:
titanium dioxide Not applicable

Information on health hazards**Other hazards**

Product name: AEROXIDE® TiO2 P 25

Product: An Expert Judgment stated that no classification is necessary based on present knowledge.

12. Ecological information

Ecotoxicity:

Toxicity to Aquatic Plants

Product: EC 50, Lemna minor (duckweed), 7 d, > 100 mg/l, OECD 221, (analogy)
 The reported toxic effects relate to the nominal concentration.
 NOEC, Lemna minor (duckweed), 7 d, >= 100 mg/l, OECD 221,
 (analogy) The reported toxic effects relate to the nominal concentration.

Components:

titanium dioxide EC 50, Raphidocelis subcapitata (freshwater green alga), 72 h, > 100 mg/l, OECD 201
 NOEC, Raphidocelis subcapitata (freshwater green alga), 72 h, >= 100 mg/l, OECD 201

Toxicity to microorganisms

Product: EC 50, activated sludge, 3 h, > 1.000 mg/l, OECD 209, comparable product Nominal concentration

Components:

titanium dioxide NOEC, Bacteria, 28 d, 100.000 mg/l
 NOEC, Bacteria, 10 d, 14.989 mg/l

Acute hazards to the aquatic environment:

Fish

Product: Oncorhynchus mykiss, 96 h, > 100 mg/l OECD 203, Nominal concentration comparable product

Components:

titanium dioxide Oncorhynchus mykiss, 96 h, > 100 mg/l OECD 203
 LC 50, Pimephales promelas, 96 h, > 1.000 mg/l see user defined free text
 LC 50, Oncorhynchus mykiss, > 100 mg/l OECD 203
 LC 50, Cyprinodon variegatus (sheepshead minnow), > 10.000 mg/l OECD 203

Aquatic Invertebrates

Product: Daphnia magna, 48 h, > 100 mg/l OECD 202, comparable product

Chronic hazards to the aquatic environment:

Fish

No data available.

Aquatic Invertebrates

No data available.

Persistence and Degradability

Biodegradation

Product: The methods for determining biodegradability are not applicable to inorganic substances.

Components:

titanium dioxide Inorganic The product is not biodegradable.

BOD/COD Ratio

Product name: AEROXIDE® TiO2 P 25

No data available.

Bioaccumulative potential**Bioconcentration Factor (BCF)****Product:** Not to be expected.**Components:**
titanium dioxide Not to be expected.**Partition Coefficient n-octanol / water (log Kow)****Product:** Not applicable**Components:**
titanium dioxide Not applicable**Mobility in soil:****Product:** No remarkable mobility in soil is to be expected.**Components:**
titanium dioxide No remarkable mobility in soil is to be expected.**Other adverse effects:****Additional ecological information****Product:** The data we have at our disposal do not necessitate identification concerning environmental hazard.**13. Disposal considerations****Disposal methods:** Review all local, state and federal regulations concerning health and pollution for appropriate disposal procedures.**Contaminated Packaging:** Do not reuse empty containers and dispose of in accordance with the regulations issued by the appropriate local authorities. Incorrect disposal or reuse of this container is illegal and can be dangerous. Observe national regulations.**14. Transport information****International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information**International regulations**

Product name: AEROXIDE® TiO2 P 25

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

Inventory Status:

Australia Industrial Chem. Act (AIC):	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory Pre-registration is requested for specific importer.
US TSCA Inventory:	On or in compliance with the inventory Commercial Status: Active
Switzerland New Subs Notified/Registered:	On or in compliance with the inventory
Vietnam National Chemical Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory EU-REACH compliant for Evonik Operations GmbH and its affiliates as EU manufacturer/EU importer.

16. Other information, including date of preparation or last revision

Version #: 1.18

Revision Date: 27.05.2025

Abbreviations and acronyms:

AIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China;

Product name: AEROXIDE® TiO2 P 25

IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further Information: No data available.

Revision Information: Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

Disclaimer: This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.