

Safety Data Sheet



Product: TITANSORB®

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:	Titansorb®
<u>Company</u>	<u>Emergency Response Information (8-17 CET)</u>
WATCH WATER GMBH	Watch Water GmbH: +49 621 879510 50
Fahrlachstrasse.14	
68165 Mannheim, Germany	

* 2. COMPOSITION / INFORMATION ON INGREDIENTS

• Composition

Material	CAS No.	Concentration (weight %)
Titanium oxohydrate	12026-28-7	85 – 99,5 %

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non hazardous and/or present at amounts below reportable limits.

* 3. HAZARD IDENTIFICATIONS

Emergency overview:

Contact Product possess little hazard if spilled. May cause irritation through mechanical abrasion. May cause lung damage.

Potential health effects:

Primary route of entry: inhalation, skin contact, eye contact, ingestion
Aggravation of pre-existing conditions: respiratory disorder

Inhalation: No adverse effects are anticipated from single exposure to dust.

Ingestion: Not expected to be a health hazard via ingestion. Harmful effects not anticipated from swallowing small amounts.

Skin Contact: Not expected to be irritating.

Eye Contact: May cause irritation of eyes. Abrasive action of dust particulate may damage eye.

* 4. FIRST-AID MEASURES

• General Information:

Take off contaminated clothes immediately. Wash immediately with plenty of water. Continue rinsing for at least 10 minutes. If any symptom persists, seek medical attention.

- **Eye contact:** Rinse immediately with plenty of running water. Continue for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek medical advice.
- **Skin contact:** Wash immediately with plenty of soap and water. Continue for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Obtain medical advice if there are persistent symptoms.
- **Inhalation:** Remove patient to fresh air, allow to rest and keep warm. Obtain medical advice if there are persistent symptoms such as coughing or breathing difficulty.
- **Ingestion:** First rinse mouth with water. Immediately give 1-2 glasses of water, if victim is fully conscious. Seek medical attention.

* 5. FIRE-FIGHTING MEASURES

- Not considered to be a fire hazard. The material is not combustible or explosive.
- **Extinguishing media:** Any means suitable for extinguishing surrounding fire.
- **Unsuitable extinguishing media:** None known
- **Exposure hazards:** None known
- **Combustion products:** very low amounts of carbon oxides.
- **Protective equipment:** Firefighters and other exposed, wear protective suit and self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

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* 6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Wear protective clothing.
- **Environmental precautions:** No special environmental precautions are required
- **Methods for cleaning up:** Vacuum or sweep up material and placed in a designated waste container.

* 7. HANDLING AND STORAGE

- **Handling:** Normal chemical handling. Wash hands after handling.
- **Storage:** Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Store in a cool, dry area. Keep container closed when not in use. Containers of this material may retain product residues (dust, solids); observe all warnings and precautions listed for the product.

* 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Limits:

- OSHA Permissible Exposure Limit (PEL) - 15 mg/m³ (TWA)
- ACGIH Threshold Limit Value (TLV) - 10 mg/m³ (TWA)

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using lavatory and at the end of the working program.

9. PHYSICAL AND CHEMICAL PROPERTIES

• General Information:	
Physical State:	solid
Appearance	white granules
Odor:	odorless
• Change in condition:	
Melting point/Melting range:	ca. 1855 °C
• Flash point:	n.a.
• Solubility in water 20 °C:	not soluble
• pH-value (10 g/l):	5.8 - 7
• Bulk weight (kg/m³):	ca. 540 - 600 kg/m ³

* 10. STABILITY AND REACTIVITY

- **Stability:** Stable under ordinary conditions of use and storage.
- **Materials to avoid:** For Titanium Dioxide (see Note 1) - a violent reaction with lithium occurs around 200 °C (392 °F) with a flash of light; the temperature can reach 900 °C (1650 °F). Violent or incandescent reaction may also occur with other metals such as aluminum, calcium, magnesium, potassium, sodium and zinc..

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- **Conditions to Avoid:** Dusting and incompatibles.
- **Hazardous decomposition products:** If stored and handled properly – none known.

* 11. TOXICOLOGICAL INFORMATIONS

Titanium dioxide

Acute Toxicity: No LD₅₀/LC₅₀ information found relating to normal routes of occupational exposure

Repeated Dose Toxicity: for the component(s) tested: In animals, effects have been reported on the following organs: Lung. Repeated exposures to dusts of this material are not anticipated to result in systemic toxicity or permanent lung injury; however, excessive exposures may cause less severe respiratory effects.

Chronic Toxicity and Carcinogenicity: Lung fibrosis and tumors have been observed in rats exposed to titanium dioxide in two lifetime inhalation studies. Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Workers exposed to titanium dioxide in the workplace have not shown an unusual incidence of chronic respiratory disease or lung cancer. Titanium dioxide was not carcinogenic in laboratory animals in lifetime feeding studies.

Listed carcinogenic:

IARC: Yes, Possible human carcinogen (2B)

ACGIH: No

Developmental Toxicity

For the component(s) tested: Did not cause birth defects or any other fetal effects in laboratory animals.

Genotoxicity: not genotoxic under the conditions of the Ames test and Comet assay

Animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

LC0 (acute and prolonged, Leuciscus Idus)	> 1000 mg/l
EC50 (acute, Daphnia Magna, 48h)	> 1000 mg/l (OECD 202)
NOEC (Pseudomonas Putida)	> 1000 mg/l

Environmental Fate: Not biodegradable because it is an inorganic product, No known significant effects or critical hazards.

* 13. DISPOSAL CONSIDERATIONS

RCRA: This product as manufactured, is not a RCRA, listed hazardous waste and does not exhibit any characteristics of a hazardous waste, including toxicity

Disposal method: This product is generally suitable for landfill disposal. Follow all applicable Federal, State, and local laws, rules, and regulations regarding the proper disposal of this material. If this product has been altered or contaminated with other hazardous materials, appropriate waste analysis may be necessary to determine proper method for disposal. A qualified environmental professional should determine waste characterization, disposal, and treatment methods for this material in accordance with applicable Federal, State and local regulations and requirements. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

* 14. TRANSPORT INFORMATIONS

- **Land transport ADR/RID and GGVS/GGVE:**

Not regulated for transport.

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- **Sea transport IMDG:**

Not regulated for transport.

- **Air transport IATA/ICAO:**

Not regulated for transport.

Titansorb® is not classified as a hazardous material by US DOT and is not regulated by the Transportation of Dangerous Goods (TDG) when shipped by any mode of transport.

* **15. REGULATORY INFORMATIONS**

Components listed in federal regulations:

Component	CAS No.	TSCA	RCRA	CERCLA	SARA 311/312	SARA 313	SARA 302
Titanium dioxide	13463-67-7	YES	No	No	Yes	No	No

Components listed in international regulations

Component	CAS No.	AICS	DSL	ECL	EINECS	ENCS	Philippines
Titanium dioxide	13463-67-7	Yes	Yes	Yes	Yes	Yes	Yes

Not listed or not regulated by the following inventories: CDTA, Chemical Weapon Convention

NFPA Ratings

Component	CAS No.	Health	Flammability	Reactivity	Others
Titanium dioxide	13463-67-7	1	0	0	-

WHMIS Hazard class: D2A

* **16. OTHER INFORMATIONS**

- This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product feature and shall not establish a legally valid contractual relationship.
- *** Data compared to the previous version altered.**
- **Reason for revision:** General update.

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