Printing date 01/08/2018

Reviewed on 01/08/2018

1 Identification

- · Product identifier
- · Trade name: <u>Titanium Dioxide</u>, Technical Grade Powder
- Article number: T5975
- CAS Number: 13463-67-7
- *EC number:* 236-675-5
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Aqua Solutions, Inc.
 6913 Highway 225 DEER PARK, TX 77536 USA
 800-256-2586
- Information department: Technical Coordinator
 Sherman Nelson sherman@aquasolutions.org
 Emergency telephone number:
- *Chemtrec:* 800-424-9300 *Canutec:* 613-996-6666

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

- · Label elements
- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms

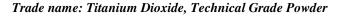


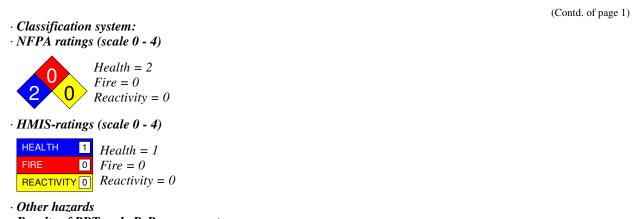
Signal word Warning
Hazard statements
Suspected of causing cancer.
Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 13463-67-7 Titanium Dioxide
- · Identification number(s)
- EC number: 236-675-5

4 First-aid measures

- · Description of first aid measures
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

5 *Fire-fighting measures*

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: No special measures required.
- *Methods and material for containment and cleaning up:* Dispose contaminated material as waste according to item 13.

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- Reference to other sections
- See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** 30 mg/m³
- · PAC-2: 330 mg/m³
- · PAC-3: 2,000 mg/m³

7 Handling and storage

- · Handling:
- · Precautions for safe handling Open and handle receptacle with care.
- · Information about protection against explosions and fires: Keep respiratory protective device available.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

· Components with limit values that require monitoring at the workplace:

CAS: 13463-67-7 Titanium Dioxide

- PEL Long-term value: 15* mg/m³ *total dust
- REL See Pocket Guide App. A
- TLV Long-term value: 10 mg/m³
- withdrawn from NIC
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Store protective clothing separately.
- · Breathing equipment: Not required.
- · Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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Trade name: Titanium Dioxide, Technical Grade Powder

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

• **Penetration time of glove material** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• *Eye protection:* Not required.

· Body protection: Protective work clothing

9 Physical and chemical properties

· Information on basic physical and c	chemical properties	
· General Information		
· Appearance:		
Form:	Powder	
Color:	White	
· Odor:	Odorless	
· Odor threshold:	Not determined.	
· pH-value:	~7	
· Change in condition		
Melting point/Melting range:	>1,800 °C (>33.8 °F)	
Boiling point/Boiling range:	>2,500 °C (>35.6 °F)	
· Flash point:	Not applicable.	
· Flammability (solid, gaseous):	Product is not flammable.	
· Ignition temperature:		
Decomposition temperature:	Not determined.	
· Auto igniting:	Not determined.	
• Danger of explosion:	Product does not present an explosion hazard.	
· Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
· Vapor pressure:	Not applicable.	
· Density at 20 °C (68 °F):	~3.8 g/cm ³ (~31.711 lbs/gal)	
· Bulk density:	$\sim 500 \ kg/m^3$	
· Relative density	Not determined.	
· Vapor density	Not applicable.	
· Evaporation rate	Not applicable.	
· Solubility in / Miscibility with		
Water:	Insoluble.	
· Partition coefficient (n-octanol/wate	er): Not determined.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
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Trade name: Titanium Dioxide, Technical Grade Powder

• Other information

No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- \cdot on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) 2B
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes: Generally not hazardous for water
- · Results of PBT and vPvB assessment
- · *PBT:* Not applicable.
- · **vPvB**: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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· Uncleaned packagings:

• Recommendation: Disposal must be made according to official regulations.

Transport information	
UN-Number DOT, ADN, IMDG, IATA	Not regulated
UN proper shipping name DOT, ADN, IMDG, IATA	Not regulated
· Transport hazard class(es)	
DOT, ADN, IMDG, IATA Class	Not regulated
Packing group DOT, IMDG, IATA	Not regulated
Environmental hazards: Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not regulated

15 Regulatory information

 \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture

• Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.

· TSCA (Toxic Substances Control Act):

Titanium Dioxide

· Proposition 65

- · Chemicals known to cause cancer: Substance is listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency) Substance is not listed.

 \cdot TLV (Threshold Limit Value established by ACGIH) A4

· NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is listed.

• GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



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Trade name: Titanium Dioxide, Technical Grade Powder

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Signal word Warning
Hazard statements
Suspected of causing cancer.
Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Environment protection department.

· Contact:

• Date of preparation / last revision 01-08-2018: review SDS for accuracy. STN Creation date for SDS 03-09-2015. STN 01/08/2018 / -

· Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit **REL:** Recommended Exposure Limit Carc. 2: Carcinogenicity - Category 2