Safety Data Sheet
Titanium Dioxide - Water Soluble

1. Identification

Product name: **Titanium Dioxide - Water Soluble**

Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture

White pigment for application in:
Coating materials, printing inks, man-made fibres, plastics, paper, glass, vitreous enamels, ceramic products

Uses advised against: None

Details of the supplier of the safety data sheet

Contact Info:
Windy Point Soap Making Supplies Inc.
14, 6125-12th Street SE
Calgary, AB T2H 2K1
587-318-6678
www.windypointsoap.com

Emergency telephone number:
ChemTel (MIS3548100)
(800) 255-3924 Domestic USA, Canada, Puerto Rico and the U.S. Virgin Islands
(813) 248-0585 International

2. Hazards Identification

Classification of the substance or mixture: The substance is not classified according to the Globally Harmonized System (GHS).

Label elements

GHS label elements	Not applicable
Hazard pictograms	Not applicable
Signal word	Not applicable
Hazard statements	Not applicable

3. Composition/information on ingredients

Chemical characterization: Substances

CAS No. Description:	13463-67-7 titanium dioxide
EC number:	236-675-5

4. First-aid measures

Description of first aid measures:

General information	No special measures required.
After inhalation	Supply fresh air; consult doctor in case of complaints.
After skin contact	Immediately wash with water and soap and rinse thoroughly.
After eye contact	Rinse opened eye for several minutes under running water.

After swallowing	If symptoms persist consult 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. The product is not flammable.
Special hazards arising from the substance or mixture	None
Advice for firefighters Protective equipment:	Use protective measures that suit the hazard conditions.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Not required. No special
Environmental precautions:	measures required.
Methods and material for containment and cleaning up:	Avoid dust formation. Sweep or vacuum up, use type approved vacuum cleaner. Dispose contaminated material as waste according to item 13.
Reference to other sections	See Section 8 for information on personal protection equipment.

7. Handling and storage

Handling Precautions for safe handling	Provide vacuum dust collection if dust is formed. Titanium dioxide product may be packaged at temperatures of approximately 100 to 120 °C (212 to 248 °F) and stay hot for a long time depending on ambient temperatures and inventory storage practices. Due to the potential of elevated pigment temperature, caution should be used while handling pigment and in solvent applications.
Information about protection against explosions and fires:	The product is not flammable

Conditions for safe storage, including any incompatibilities
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: Store in dry conditions.

8. Exposure controls/personal protection

Control parameters
Additional Occupational Exposure Limit Values for possible hazards during processing:

13463-67-7 titanium dioxide

ACGIH - TLV Long-term value 10 mg/m^3 TWA,
respirable fraction 1 mg/m^3 TWA
OSHA - PEL Long-term value 15* mg/m^3
*total dust, 8 hr TWA

Exposure controls: Use local exhaust ventilation if airborne concentrations would otherwise exceed applicable exposure limits.

Personal protective equipment
General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed. Titanium dioxide pigments are not irritant but as with all fine powders can absorb moisture and natural oil from the surface of the skin during prolonged exposure. Prolonged exposure should be avoided by wearing suitable protective gloves and clothing.

Breathing equipment: Use suitable respiratory protective device when high concentrations are present.
For example use a NIOSH-approved respirator for particulates with N100, P100, or R100 filter.
The respirator must be selected by a technically qualified individual.

Protection of hands: Use gloves appropriate for work conditions to minimize prolonged skin contact and prevent drying and subsequent irritation of skin.
Check protective gloves prior to each use for their proper condition.
Preventive skin protection by use of skin-protecting agents is recommended.

Eye protection: Safety glasses

Body protection: Protective work clothing.

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9. Physic al and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:

Form:	Powder
Color:	White
Odor:	Odorless
Odour threshold:	Not relevant
pH-value at 20 °C (68 °F):	7
Melting point/Melting range:	>1800 °C (>3272 °F)
Boiling point/Boiling range:	Not relevant
Flash point:	Not applicable
Flammability (solid, gaseous):	Product is not flammable.
Ignition temperature:	Not applicable
Danger of explosion:	Product is not explosive.
Density:	20 °C Anatase 3,9 g/cm^3 (30 lbs/ U.S. gal.) Rutile 4,2 g/cm' (35 lbs/U.S. gaL)
Bulk density at 20 °c (68 °F):	500-900 kg/m'
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in/Miscibility with Water:	Insoluble
Partition coefficient (n-octanol/water):	Not applicable
Viscosity: dynamic:	Not applicable.
Other information	No further relevant information available.

10. Stability and reactivity

Reactivity	The substance is stable under normal use conditions.
Chemical stability	
Thermal decomposition / conditions to be avoided:	No decomposition under normal use conditions.
Possibility of hazardous reactions	No dangerous reactions known

Conditions to avoid	No further data; see item 7.
Incompatible materials:	No further data; see item 7.
Hazardous decomposition products:	No dangerous decomposition products known

11. Toxicological Information

Information on toxicological effects

Acute toxicity:

LD/LC50 values that are relevant for classification:
13463-67-7 titanium dioxide

Oral	LD50	>5000 mg/kg (rat) (OECD 425)
Dermal	LOSO	>5000 mg/kg (rabbit)
Inhalative	LC50/4h	>6.8 mg/l {rat)

Primary irritant effect: on the skin:	OECD 404: No irritant effect. Powderized material may dry and mechanically irritate skin.
on the eye:	OECD 405: No irritating effect. Like any foreign body, particles {dust) can cause mechanical irritation.
Sensitization:	OECO 406, OECD 429 No sensitizing effects known.

Subacute to chronic toxicity:
13463-67-7 titanium dioxide

Oral	NOAEL	3500 mg/kg/d {rat) (90 d)
Dermal	NOAEL	(-) no relevant data available
Inhalative	NOAEC	10 mg/m^3 (rat) {90 d)

Additional toxicological information:

In lifetime inhalation studies of rats, airborne respirable-size titanium dioxide particles have been shown to cause an increase in lung tumors at concentrations associated with substantial particle lung burdens and consequential pulmonary overload and inflammation. The potential for these adverse health effects appears to be closely related to the particle size and the amount of the exposed surface area that comes into contact with the lung. However, tests with other laboratory animals, such as mice and hamsters, indicate that rats are significantly more susceptible to the pulmonary overload and inflammation that causes lung cancer.
Epidemiology studies do not suggest an increased risk of cancer in humans from occupational exposure to titanium dioxide.

Titanium dioxide has been characterized by IARC as possibly carcinogenic to humans (Group 28) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

Carcinogenic categories

IARC (International Agency for Research on Cancer)
13463-67-7 titanium dioxide: 2B

NTP (National Toxicology Program)
Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.

12. Ecological Information

Toxicity

Toxicity to fish	Titanium dioxide Freshwater fish: Pimephales promelas LC50 (96 h): > 1000 mgfl (static, EPA-54019-85-006, Acute Toxicity Test for Freshwater Fish) Oncorhynchus mykiss LC50 (96 h): > 100 mgfl (static, equivalent or similar to OECD 203) Marine water fish: Cyprinodon variegatus LC50 (96 h): > 10000 mg/! (semi-static, CECO 203)
Toxicity to Daphnia and other aquatic invertebrates	Titanium dioxide Freshwater: Oaphnia magna LC50 (48 h): > 100 mg/l (static, equivalent or similar to OECD 202) Marine water: Acartia tonsa LC50 (48 h): > 10000 mg/l (ISO 14669 (1999); ISO 5667-16 (1998))
Toxicity to algae and aquatic plants	Titanium dioxide Freshwater: Pseudokirchnerella subcapitata EC50 (72 h): 16 mg/l (static, EPA-600-9/78- 018; ASTM Annual Book of Standards E1218-90, Vol 11.04)) Marine water: Skeletonema costatum EC50 (72 h): > 10000 mg/l (ISO 10253)
Toxicity to micro-organisms	Titanium dioxide Freshwater: Hyalella azteca NOEC(28 d): 100000 mg/kg sediment dw (semi-static, ASTM 1706) Marine water: Corophium volutator NOEC (10 d): > 14989 mg/kg sediment dw (semi-static, OSPARCOM guidelines (1995))
Persistence and degradability	Not relevant for inorganic substances.

Bioaccumulative potential	Does not accumulate in organisms
Mobility in soil	The substance is immobile in soil.

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

Material is not a hazardous waste.
Disposal must be made according to all federal, state, and local {municipal) regulations.

Uncleaned packagings:
Recommendation:

Material is not a hazardous waste.
Disposal must be made according to all federal, state, and local (municipal) regulations.

14. Transportation information

UN-Number DOT, ADR, AON, IMDG, IATA	Not applicable
UN proper shipping name DOT, ADR, AON, IMDG, IATA	Not applicable
Transport hazard class(es) DOT, ADR, AON, IMDG, IATA Class	Not applicable
Packing group DOT, ADR, IMDG, IATA	Not applicable
Environmental hazards:	Not an environmentally hazardous substance.
Special precautions for user	Not applicable.
Transport in bulk according to Annex 11 of MARPOL73/78 and the IBC Code	Not applicable.

15. Regulatory Information

Safety, health and environmental regulationsflegislation 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 and Canada DSL Status:
Substance is listed

Proposition 65

Chemicals known to cause cancer:

13463-67-7 titanium dioxide

Additional information: The listing is for titanium dioxide (airborne, unbound particles of respirable size) and does not cover titan'1um dioxide when it remains within a product matrix.

Carcinogenic categories

EPA (Environmental Protection Agency)

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

13463-67-7 titanium dioxide: A4 Not classifiable as human carcinogen

Substance is listed.

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.

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Abbreviations and acronyms:

ADR: Accord european sur le transpat 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)
LC50: Lethal concentration, 50 percent
LOSO: Lethal dose, 50 percent

Disclaimer & Caution

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