

Material Safety Data Sheet

Titanium(IV)oxide, rutile

Revision Date: 01/12/2010

Date Issued: 01/03/2007

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY / UNDERTAKING

Product name	Titanium(IV)oxide, Nanopowder
Product code	NO-0046-HP
Supplier	IoLiTec Ionic Liquids Technologies GmbH Salzstrasse 184 D-74076 Heilbronn Germany
Telephone	+49 (0)7131 - 898390
Fax	+49 (0)7131 - 89839109
Emergency telephone	+49 (0)179 - 5322578
Email	msds@iolitec.de

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (67/548/EEC or 1999/45/EC)

Harmful by inhalation. Irritating to eyes, respiratory system and skin.

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity (inhalation), Category 4, H332

Skin corrosion/irritation, Category 2, H315

Serious eye damage/Eye irritation, Category 2, H319

Specific Target Organ Toxicity - Single exposure: Respiratory tract irritation, Category 3, H335

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2.2 Label elements

Labelling (67/548/EEC or 1999/45/EC)

Hazard description:

Label for supply



Xn Harmful

Information pertaining to particular dangers for man and environment

Risk phrases

R20: Harmful by inhalation.

R36/37/38: Irritating to eyes, respiratory system and skin.

Safety phrases

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36: Wear suitable protective clothing.

Labelling (REGULATION (EC) No 1272/2008, GHS)

Hazard statements



Warning

H-phrases

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

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Precautionary statements

P-phrases

P261: Avoid breathing dust/fume/gas/mist/vapours/spray .

P280: Wear protectic gloves/protective clothing/eye protection/face protection.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient name	Titanium(IV)oxide
CAS No.	1317-80-2
Empirical Formula	TiO ₂
Molecular weight	79.9 amu

4 FIRST AID MEASURES

General	Contaminated clothing should be removed and washed before being reused.
Inhalation	Move the exposed person to fresh air at once. If respiratory problems, artificial respiration/oxygen.
Ingestion	Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention immediately.
Skin	Wash the skin immediately with soap and water.

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Eyes

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

5 FIRE FIGHTING MEASURES

Extinguishing media

Use extinguishing media appropriate to surrounding fire conditions.

Special fire fighting procedures

No special procedures required.

Unusual fire & explosion hazards

Emission of toxic fumes

Protective measures in fire

Wear self-contained breathing apparatus as combustion may produce hazardous fumes.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions during spill

Wear protective clothing and avoid inhalation of powder, fume and vapor as well as skin or eye contact.

Precautions to protect environment

Avoid washing into water courses. Avoid contaminating public drains or water supply.

Spill cleanup methods

Avoid contact with skin or inhalation of spillage, dust or vapor, Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste. Extinguish all

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ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

7 HANDLING AND STORAGE

Handling precautions

Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage precautions

Keep container tightly closed.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Protective equipment

Safety goggles. Chemical resistant gloves. Protective clothing. Protective mask when high concentrations are present.

Process control measures

Provide eyewash station and safety shower. Use engineering controls to reduce air contamination to permissible exposure levels.

Ventilation

Provide adequate general and local exhaust ventilation.

Respirators

Use high efficiency particulate respirator with appropriate filter.

Exposure limits

<u>TiO₂</u>	<u>mg/m³</u>
Poland NDS	10; 30-NDSch
Denmark TWA	6
Germany OEL	6

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Norway OEL	5
Switzerland OEL	6
United Kingdom TWA	10

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid
Odor/taste	N/A
PH	N/A
Boiling Point	N/A
Melting Point	1850 °C
Flash Point	N/A
Flammability	N/A
Autoignition Temp	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	N/A
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A

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Surface Tension	N/A
Conductivity	N/A
Solubility	Insoluble

10 STABILITY AND REACTIVITY

Stability	No particular stability concerns.
Conditions/materials to avoid	Strong acids
Hazardous Decomposition	Hazardous products of decomposition: Not known

11 TOXICOLOGICAL INFORMATION

Ingestion	May be harmful if swallowed.
Inhalation	May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Skin	May cause irritation
Eyes	May cause irritation
Sensitization	No effects known
Acute toxicity	LD50, oral, Rat, > 10000 mg/kg LD50, skin, rabbit, >10000 mg/kg

12 ECOLOGICAL INFORMATION

Do not allow material to be released to the environment without proper governmental permits.

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13 DISPOSAL CONSIDERATIONS

Disposal method Contact specialist disposal companies. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Dispose of in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical.

14 TRANSPORT INFORMATION

General	Not classified as dangerous for transport purposes.
UN No.	0
Road transport notes	Not classified as dangerous for road transport.
Rail transport notes	Not classified as dangerous for rail transport.
Sea transport notes	Not classified as dangerous for sea transport.
Air transport notes	Not classified as dangerous for air transport.

15 REGULATORY INFORMATION

In accordance with local and national regulations.

16 OTHER INFORMATION

DISCLAIMER

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPOSED TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE.

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