

Safety Data Sheet

Titanium nitride

Revision Date: 8/14/2019

Date Issued: 8/14/2019

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

Product name	Titanium nitride
Product code	NC-0012
CAS	25583-20-4
REACH No.	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
Identified uses	Laboratory chemicals, Manufacture of substances
Supplier	IoLiTec Ionic Liquids Technologies GmbH Salzstrasse 184 D – 74076 Heilbronn Germany
Telephone	+49 (0)7131-89839-0
Fax	+49 (0)7131-89839-109
Emergency telephone	+49 (0)176-84850874
Email	msds@iolitec.de

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable solids, Category 2, H228

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

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

Flammable solid

Irritating to respiratory system

2.2 Label elements

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

Pictogram



Signal word

Warning

Hazard statement(s)

H228

Flammable solid.

H335

May cause respiratory irritation.

Precautionary statement(s)

P210

Keep away from heat/sparks/open flames/hot surfaces – No smoking.

P261

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

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P370 + P378

In case of fire: Use CO₂, powder or water spray for extinction

Caution - substance not yet tested completely.

Supplemental Hazard Statements none

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

Hazard symbol(s)



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R-phrases(s)

R 11 Highly flammable.

R37 Irritating to respiratory system

S-phrases(s)

S16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 24/25 Avoid contact with skin and eyes.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient name	Contents	Health(Class)	Risk(R/No.)
Titanium nitride	99%		Substance not yet fully tested!

Formula	Molecular Weight
TiN	61.87 g/mol

4 FIRST AID MEASURES

General Contaminated clothing should be removed and washed before being reused.

Inhalation Move 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 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

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

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.

Spill cleanup methods

Avoid contact with skin or inhalation of spillage, dust or vapour, Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

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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 tightly closed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace.

Protection against explosions and fires

Keep ignition sources away. Protect against electrostatic charges. Fumes can combine with air to form an explosive mixture.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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Respiratory protection

For nuisance exposures use type P95 (US) or type P2 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P3 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid, dark brown powder
Odor/taste	No characteristic odor.
Melting Point	2950°C
SG/Density (20°C)	5.22 g/cm ³
Bulk Density	0.08 g/cm ³
Solubility in Water	Insoluble

10 STABILITY AND REACTIVITY

Stability	Decomposition will not occur if used and stored according to specifications.
Conditions to avoid	Strong acids and oxidizing agents. Heat
Hazardous Decomposition	No dangerous reactions known
Products	Nitrogen oxides, Titanium, Titanium oxide.

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11 TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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

no data available

Potential health effects

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.

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Additional Information

RTECS: Not available

Full Data on the toxicity of this product are not available. Hazardous properties cannot be excluded.

12 ECOLOGICAL INFORMATION

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

13 DISPOSAL CONSIDERATIONS

Disposal method Contact specialist disposal companies. Dispose of in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical.

14 TRANSPORT INFORMATION

UN number: UN 3178

UN proper shipping name

ADR/RID: FLAMMABLE SOLID, INORGANIC, N.O.S
TITANIUM NITRIDE

IMDG: FLAMMABLE SOLID, INORGANIC, N.O.S
TITANIUM NITRIDE

IATA: Flammable solid, inorganic, n.o.s., titanium
nitride

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Transport hazard class(es)

ADR/RID: 4.1

IMDG: 4.1

IATA: 4.1

Packaging group

ADR/RID: III

IMDG: III

IATA: III

Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

15 REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

Chemical Safety Assessment

no data available

Country specific information:

Germany

WGK 3 - hazardous to waters (self classification)

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16 OTHER INFORMATION

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