

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 01.05.2011

Version number 1

Revision: 01.05.2011

### 1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
- Trade name: **Ti-Nanoxide T**
- Relevant identified uses of the substance or mixture and uses advised against
- Application of the substance / the preparation Transparent Nanocrystalline Titanium Dioxide
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:  
SOLARONIX SA  
Rue de l'Ouriette 129, CH-1170 Aubonne, Switzerland  
info@solaronix.com  
T +41 21 821 22 80  
www.solaronix.com  
F +41 21 821 22 89  
info@solaronix.com
- Emergency telephone number: Swiss Toxicological Information Center: +41 44 251 51 51

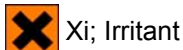
### 2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2 H319 Causes serious eye irritation.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC



R36/38: Irritating to eyes and skin.

- Information concerning particular hazards for human and environment:  
The product has to be labelled in the latest valid version according to the calculation procedure of the "General Classification guideline for preparations of the EU" .
- Classification system:  
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- Label elements
- Labelling according to Regulation (EC) No 1272/2008  
The product is classified and labelled according to the CLP regulation.
- Hazard pictograms



- Signal word Warning
- Hazard statements  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.
- Precautionary statements  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P362 Take off contaminated clothing and wash before reuse.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.





### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:**

Paste containing about 11% wt. of 15-20 nm titanium dioxide (TiO<sub>2</sub>) anatase particles CAS 1317-70-0

- **Dangerous components:**

78989-43-2	Red fuming nitric acid	≤2.5%
	 C R35;  O R8	
	 Ox. Liq. 2, H272;  Skin Corr. 1A, H314	

- **Additional information:** For the wording of the listed risk phrases, refer to section 16.

### 4 First aid measures

- **Description of first aid measures**

- **After excessive inhalation:**

In case of unconsciousness place patient in a stable laying down side position for transportation.

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:** If symptoms persist consult a 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 Firefighting measures

- **Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards arising from the substance or mixture**

No further relevant information available.

- **Advice for firefighters**

- **Protective equipment:** No special measures required.

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### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
  - Dilute with plenty of water.
  - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protective equipment.
  - See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **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 container tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see section 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
  - The product does not contain any significant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:**
  - As a basis for the production of this document, the most current valid lists were used.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Keep away from food, beverages and petfood. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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**· Gloves material :**

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which may vary from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked before use.

**· Eye protection:**


Tightly sealed goggles

### 9 Physical and chemical properties

**· Information on basic physical and chemical properties**
**· General Information**
**· Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	According to product specification
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

<b>pH-value:</b>	Not determined.
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**· Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100°C

<b>Flash point:</b>	Not applicable.
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<b>Flammability (solid, gaseous):</b>	Not applicable.
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<b>Ignition temperature:</b>	Not applicable.
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<b>Decomposition temperature:</b>	Not determined.
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<b>Self-igniting:</b>	Product is not self igniting.
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<b>Danger of explosion:</b>	Product does not present an explosion hazard.
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**· Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

<b>Vapour pressure at 20°C:</b>	23 hPa
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<b>Density:</b>	Not determined.
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<b>Relative density</b>	Not determined.
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<b>Vapour density</b>	Not determined.
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<b>Evaporation rate</b>	Not determined.
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<b>Solubility in / Miscibility with water:</b>	Fully miscible.
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<b>Segregation coefficient (n-octanol/water):</b>	Not determined.
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**· Viscosity:**

<b>Dynamic:</b>	Not determined.
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<b>Kinematic:</b>	Not determined.
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
- **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:** Irritant to skin and mucous membranes.
- **On the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following hazards according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**



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

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- **Land transport ADR/RID (cross-border) :**
- **ADR/RID class:** -

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

- **UN "Model Regulation":** -
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

### 15 Regulatory information

- **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.

- **Relevant phrases**

H272 May intensify fire; oxidiser.  
H314 Causes severe skin burns and eye damage.

R35 Causes severe burns.  
R8 Contact with combustible material may cause fire.

- **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)  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals