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

- **Product identifier**

- **Trade name:** Ti-Nanoxide D

- **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**

  ![GHS07](image)
  - 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**

  ![Xi](image)
  - 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**

  ![GHS07](image)

- **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.
Trade name: Ti-Nanoxide D

(Contd. of page 1)

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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 titanium dioxide (TiO2) 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:
  CO2, 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.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required.

(Contd. on page 3)
Trade name: Ti-Nanoxide D

- 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.
    - 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.
- 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 cannot be calculated in advance and has
9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Colour: According to product specification
    - Odour:
      - Odour: Characteristic
      - Odour threshold: Not determined.
    - pH-value:
      - pH-value: Not determined.
  - Change in condition
    - Melting point/Melting range: Undetermined.
    - Boiling point/Boiling range: 100°C
  - Flash point:
    - Flash point: Not applicable.
  - Flammability (solid, gaseous):
    - Flammability: Not applicable.
  - Ignition temperature:
    - Ignition temperature: Not applicable.
  - Decomposition temperature:
    - Decomposition temperature: Not determined.
  - Self-igniting:
    - Product is not self igniting.
  - Danger of explosion:
    - Product does not present an explosion hazard.
  - Explosion limits:
    - Lower: Not determined.
    - Upper: Not determined.
  - Vapour pressure at 20°C:
    - Vapour pressure: 23 hPa
  - Density:
    - Density: Not determined.
  - Relative density:
    - Relative density: Not determined.
  - Vapour density:
    - Vapour density: Not determined.
  - Evaporation rate:
    - Evaporation rate: Not determined.
  - Solubility in / Miscibility with water:
    - Solubility: Fully miscible.
  - Segregation coefficient (n-octanol/water):
    - Segregation coefficient: Not determined.
  - Viscosity:
    - Dynamic:
      - Dynamic: Not determined.
    - Kinematic:
      - Kinematic: Not determined.
  - Other information:
    - Other information: No further relevant information available.
Trade name: Ti-Nanoxide D

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.
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