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

- Product identifier
- Trade name: **Zr-Nanoxide ZR/SP**
- Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.
- Application of the substance / the preparation: Preparation
- 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:
  - France (ORFILA 24h/24) - Tel : +33 (0)1 45 42 59 59
  - Ireland - Tel : 00 353 1 8092568 - 00 353 1 8379964 (24h/24)
  - EU Tel : 112

2 Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008:
  - GHS07
  - Skin Irrit. 2 H315 Causes skin irritation.
- 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

- Signal word: Warning
- Hazard statements
  - H315 Causes skin irritation.
- Precautionary statements
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P264 Wash thoroughly after handling.

(Contd. on page 2)
Trade name: Zr-Nanoxide ZR/SP

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

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture: consisting of the following components.

- Dangerous components:
  - 8000-41-7 terpineol (isomers mixture) Xi R38
  - Skin Irrit. 2, H315
  - 10-25%

- 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: Supply fresh air; consult a doctor in case of complaints.
  - After skin contact: Generally the product does not irritate the skin.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - 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.
- Environmental precautions: 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.

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Trade name: Zr-Nanoxide ZR/SP

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: None.

· 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

<table>
<thead>
<tr>
<th>Ingredients with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1314-23-4 zirconium dioxide (50-100%)</td>
</tr>
<tr>
<td>WEL (Great Britain)</td>
</tr>
<tr>
<td>Short-term value: 10 mg/m³</td>
</tr>
<tr>
<td>Long-term value: 5 mg/m³</td>
</tr>
<tr>
<td>as Zr</td>
</tr>
<tr>
<td>MAK (Switzerland)</td>
</tr>
<tr>
<td>Long-term value: 5e mg/m³</td>
</tr>
<tr>
<td>als Zr berechnet</td>
</tr>
</tbody>
</table>

· 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: Wash hands before breaks and at the end of work.
  · Respiratory protection: Not required.

· Protection of hands:
  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 can not be calculated in advance and has therefore to be checked before use.

· Eye protection: Goggles recommended during refilling

(Contd. on page 4)
9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
  - Appearance:
    Form: Liquid
  - Colour: According to product specification
  - Odour: Characteristic
  - Odour threshold: Not determined.
  - pH-value: Not determined.
- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: Undetermined.
- Flash point: Not applicable.
- Flammability (solid, gaseous): Not applicable.
- Ignition temperature: Not applicable.
- 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: Not determined.
  - Density:
    - Relative density: Not determined.
  - Vapour density: Not determined.
  - Evaporation rate: Not determined.
- Solubility in / Miscibility with water: Not miscible or difficult to mix.
- Segregation coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- Solvent content:
  - VOC (EC): 0.00 %
- Other information: 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.
Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 09.06.2015
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11 Toxicological information

- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

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 2 (German Regulation) (Self-assessment): hazardous for water

  Do not allow product to reach ground water, water course or sewage system.

  Danger to drinking water if even small quantities leak into the ground.

- 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.

14 Transport information

- UN-Number
- ADR, ADN, IMDG, IATA: Not classified as hazardous for transport

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# Safety data sheet according to 1907/2006/EC, Article 31

**Trade name:** Zr-Nanoxide ZR/SP

## 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**
  - H315 Causes skin irritation.
  - R38 Irritating to skin.

- **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)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  - VOC: Volatile Organic Compounds (USA, EU)