

Material Safety Data Sheet

Copper(II)oxide Nanopowder

Revision Date: 01/12/2010

Date Issued: 24/11/2006

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

| | |
|----------------------------|---|
| Product name | Copper(II)oxide Nanopowder, 12 nm |
| Product code | NO-0004-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 if swallowed

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity (oral), Category 4, H302

Hazardous to the aquatic environment: Chronic hazard, Category 3, H412

2.2 Label elements

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

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Hazard description:

Label for supply



Xn Harmful

Information pertaining to particular dangers for man and environment

Risk phrases

R22: Harmful if swallowed.

R52/53: Harmful to aquatic organisms,
may cause long-term adverse effects in the aquatic environment

Safety phrases

S60: This material and its container must be disposed of as hazardous waste.

S61: Avoid release to the environment. Refer to special instructions/safety data sheets.

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

Hazard statements



Warning

H-phrases

H302: Harmful if swallowed.

H412: Harmful to aquatic life with long lasting effects.

Precautionary statements

P-phrases

P273: Avoid release to the environment.

P501: Dispose of contents/container to local waste management company.

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3 COMPOSITION/INFORMATION ON INGREDIENTS

| | |
|--------------------------|-------------------------|
| Ingredient name | Copper(II)oxide, 99.5 % |
| CAS No. | 1317-38-0 |
| Empirical Formula | CuO |
| Molecular weight | 79.55 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. |
| 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: Water spray, fog or mist. Carbon dioxides (CO ₂). Dry chemicals, sand, dolomite etc. |
| Special fire fighting procedures | No special procedures required. |

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| | |
|---|--|
| Unusual fire & explosion hazards | May act as an oxidizing agent. |
| 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 vapor, 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 ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. |

7 HANDLING AND STORAGE

| | |
|----------------------------|---|
| Usage precautions | Keep away from heat, sparks and open flame. Do not use in confined spaces without adequate ventilation and/or respirator. |
| Storage precautions | Store at moderate temperatures in dry, well ventilated area. |
| Storage criteria | Chemical storage. |

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8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

| | |
|---------------------------------|--|
| Protective equipment | Safety goggles. Chemical resistant gloves. Protective clothing. Protective mask. |
| 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. |
| Other protection | Wear overalls and industrial shoes. |

9 PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------|-------------------------|
| Appearance | Solid |
| Color | Dark brown. |
| Odor/taste | No characteristic odor. |

10 STABILITY AND REACTIVITY

| | |
|-------------------------------|---|
| Stability | No particular stability concerns. |
| Conditions to avoid | Avoid contact with oxidizable materials. |
| Hazardous | |
| Decomposition Products | High temperatures generate: Corrosive gases/vapor/fumes of: Oxygen (O ₂). |

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11 TOXICOLOGICAL INFORMATION

| | |
|------------------|-------------------------------|
| Ingestion | Harmful if swallowed. |
| Skin | Harmful in contact with skin. |
| Eyes | Irritation of eyes. |

12 ECOLOGICAL INFORMATION

| | |
|------------------------------|--|
| Environmental hazards | Avoid washing into water courses. Avoid contaminating public drains or water supply. |
|------------------------------|--|

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

| | |
|-----------------------------|---|
| 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. |

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15 REGULATORY INFORMATION

In accordance with local and national regulations.

16 OTHER INFORMATION

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