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

1.1. Product identifier

Product name: COPPER (II) OXIDE
CAS number: 1317-38-0
EINECS number: 215-269-1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: PC21: Laboratory chemicals.

1.3. Details of the supplier of the safety data sheet

Company name: Elemental Microanalysis Ltd
1 Hameldown Road Okehampton
Okehampton
Devon
EX20 1UB
United Kingdom
Tel: 44(0)183754446
Fax: 44(0)183754544
Email: info@microanalysis.co.uk

1.4. Emergency telephone number

Emergency tel: +44 (0) 7990 767375 (24 hours)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410

Most important adverse effects: Harmful if swallowed. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements:

Hazard statements: H302: Harmful if swallowed.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Hazard pictograms: GHS09: Environmental

[cont...]
SAFETY DATA SHEET
COPPER (II) OXIDE

Page: 2

Signal words: Warning

Precautionary statements:
- P264: Wash hands thoroughly after handling.
- P301+312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P270: Do not eat, drink or smoke when using this product.
- P273: Avoid release to the environment.
- P330: Rinse mouth.
- P391: Collect spillage.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:
COPPER (II) OXIDE.

<table>
<thead>
<tr>
<th>EINECS</th>
<th>CAS</th>
<th>PBT / WEL</th>
<th>CLP Classification</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>215-269-1</td>
<td>1317-38-0</td>
<td>-</td>
<td>Acute Tox. 4: H302; Aquatic Chronic 1: H410; Aquatic Acute 1: H400</td>
<td>90-99.9%</td>
</tr>
</tbody>
</table>

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water. Do not induce vomiting. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat. There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Absorption through the lungs can occur causing symptoms similar to those of ingestion.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Not applicable.

[cont...]
## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

**Extinguishing media:** Suitable extinguishing media for the surrounding fire should be used.

### 5.2. Special hazards arising from the substance or mixture

**Exposure hazards:** In combustion emits toxic fumes.

### 5.3. Advice for fire-fighters

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

## Section 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Refer to section 8 of SDS for personal protection details. Mark out the contaminated area with signs and prevent access to unauthorised personnel. If outside do not approach from downwind. Do not create dust.

### 6.2. Environmental precautions

**Environmental precautions:** Do not discharge into drains or rivers.

### 6.3. Methods and material for containment and cleaning up

**Clean-up procedures:** Use industrial vacuum cleaner to remove material. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

### 6.4. Reference to other sections

**Reference to other sections:** Refer to section 8 of SDS.

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

**Handling requirements:** Ensure there is sufficient ventilation of the area. Avoid the formation or spread of dust in the air. Avoid direct contact with the substance.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Store in a cool, well ventilated area. Keep container tightly closed.

### 7.3. Specific end use(s)

**Specific end use(s):** No data available.

## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

[cont...]
Hazardous ingredients:
COPPER (II) OXIDE.

Workplace exposure limits:

<table>
<thead>
<tr>
<th>State</th>
<th>8 hour TWA</th>
<th>15 min. STEL</th>
<th>8 hour TWA</th>
<th>15 min. STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>0.1mg/m³</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

DNEL/PNEC Values

| DNEL / PNEC | No data available. |

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Use only in a chemical fume hood.
Respiratory protection: Respiratory protective device with particle filter. Particle filter class P3S (EN143).
Hand protection: Protective gloves. Nitrile gloves. Breakthrough time of the glove material > 8 hours.
Eye protection: Safety glasses. Ensure eye bath is to hand.
Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>State</th>
<th>Wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Black</td>
</tr>
<tr>
<td>Odour</td>
<td>Barely perceptible odour</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available.</td>
</tr>
<tr>
<td>Oxidising</td>
<td>No data available.</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available.</td>
</tr>
<tr>
<td>Boiling point/range°C:</td>
<td>2000</td>
</tr>
<tr>
<td>Melting point/range°C:</td>
<td>1336</td>
</tr>
<tr>
<td>Flammability limits %: lower</td>
<td>No data available.</td>
</tr>
<tr>
<td>Flash point°C:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Autoignition potential:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>6.31</td>
</tr>
<tr>
<td>VOC g/l:</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.
10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents.

10.6. Hazardous decomposition products

Haz. decomp. products: No data available.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

COPPER (II) OXIDE.

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Route</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (ac. tox. 4)</td>
<td>ING</td>
<td>Hazardous: calculated</td>
</tr>
</tbody>
</table>

| ORAL | RAT | LD50 | 470 mg/kg |

Relevant hazards for substance:

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat. There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Absorption through the lungs can occur causing symptoms similar to those of ingestion.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity
Hazardous ingredients:

COPPER (II) OXIDE.

**Daphnia magna**

<table>
<thead>
<tr>
<th>48H EC50</th>
<th>0.0110 mg/l</th>
</tr>
</thead>
</table>

**FISH**

<table>
<thead>
<tr>
<th>96H LC50</th>
<th>25.4 mg/l</th>
</tr>
</thead>
</table>

12.2. Persistence and degradability

Persistence and degradability: Not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: Bioaccumulation potential.

12.4. Mobility in soil

Mobility: Insoluble in water.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Toxic to aquatic organisms. Toxic to soil organisms.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN3077

14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

14.3. Transport hazard class(es)

Transport class: 9

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: No
SAFETY DATA SHEET
COPPER (II) OXIDE

14.6. Special precautions for user

<table>
<thead>
<tr>
<th>Special precautions</th>
<th>No special precautions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tunnel code</td>
<td>E</td>
</tr>
<tr>
<td>Transport category</td>
<td>3</td>
</tr>
</tbody>
</table>

Section 15: Regulatory information

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

| Specific regulations | Not applicable          |

15.2. Chemical Safety Assessment

| Chemical safety assessment | A chemical safety assessment has not been carried out for the substance or the mixture by the supplier. |

Section 16: Other information

| Other information | This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830. |

Phrases used in s.2 and s.3:
- H302: Harmful if swallowed.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.