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

1.1 Product identifiers
Product name: Copper (II) Nitrate
CAS-No.: 10031-43-3

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company: Central Drug House (P) Ltd
7/28 Vardaan House
New Delhi-10002
INDIA
Telephone: +91 11 49404040
Email: care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone #: +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Oxidizing solids (Category 2), H272
Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
O, Xn, Oxidising, Harmful, R 8, R22, R38, R41, R50/53
N Dangerous for the environment

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word Danger
Hazard statement(s)
H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.

Precautionary statement(s)
P220 Keep/Store away from clothing/ combustible materials.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements
none

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms: Cupric nitratetrihydrate

Formula: CuN₂O₆ · 3H₂O
Molecular weight: 241.60 g/mol
CAS-No.: 10031-43-3
EC-No.: 221-838-5

Hazardous ingredients according to Regulation (EC) No 1272/2008
Component Classification Concentration
Copper(II) nitrate trihydrate
CAS-No. 10031-43-3 Ox. Sol. 2; Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; Aquatic Acute 1; H272, H302, H315, H318, H400 <= 100 %
EC-No. 221-838-5

Hazardous ingredients according to Directive 1999/45/EC
Component Classification Concentration
Copper(II) nitrate trihydrate
CAS-No. 10031-43-3 O, Xn, N, R 8 - R22 - R38 - <= 100 %
EC-No. 221-838-5 R41 - R50/53

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 **Most important symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 **Indication of any immediate medical attention and special treatment needed**
No data available

SECTION 5: Firefighting measures

5.1 **Extinguishing media**
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 **Special hazards arising from the substance or mixture**
Nitrogen oxides (NOx), Copper oxides

5.3 **Advice for firefighters**
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 **Further information**
Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 **Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 **Methods and materials for containment and cleaning up**
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 **Reference to other sections**
For disposal see section 13.

SECTION 7: Handling and storage

7.1 **Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. For precautions see section 2.2.

7.2 **Conditions for safe storage, including any incompatibilities**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. hygroscopic Heat sensitive. Moisture sensitive. Storage class (TRGS 510): Oxidizing hazardous materials

7.3 **Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**
Components with workplace control parameters
8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>a) Appearance</th>
<th>Form: crystalline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Colour: dark blue</td>
</tr>
<tr>
<td>b) Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>c) Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>d) pH</td>
<td>No data available</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>k) Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>l) Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>m) Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>n) Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>o) Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
</tbody>
</table>
p) Auto-ignition temperature  No data available
q) Decomposition temperature  No data available
r) Viscosity  No data available
s) Explosive properties  No data available
t) Oxidizing properties  The substance or mixture is classified as oxidizing with the category 2.

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity  No data available

10.2 Chemical stability  
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions  No data available

10.4 Conditions to avoid  
Heat Avoid moisture.

10.5 Incompatible materials  
Reducing agents, Organic materials, Powdered metals

10.6 Hazardous decomposition products  
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity  
LD50 Oral - Rat - 940 mg/kg

Skin corrosion/irritation  No data available

Serious eye damage/eye irritation  No data available

Respiratory or skin sensitisation  No data available

Germ cell mutagenicity  
Rat
Ascites tumor  
Cytogenetic analysis

Carcinogenicity  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity  No data available

Specific target organ toxicity - single exposure  No data available

Specific target organ toxicity - repeated exposure  No data available

Aspiration hazard  No data available
Additional Information
RTECS: GL7875000
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Cough, Shortness of breath, Headache, Nausea
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
Very toxic to aquatic life.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 1477   IMDG: 1477   IATA: 1477

14.2 UN proper shipping name
ADR/RID: NITRATES, INORGANIC, N.O.S. (Copper(II) nitrate trihydrate)
IMDG: NITRATES, INORGANIC, N.O.S. (Copper(II) nitrate trihydrate)
IATA: Nitrates, inorganic, n.o.s.

14.3 Transport hazard class(es)
ADR/RID: 5.1   IMDG: 5.1   IATA: 5.1

14.4 Packaging group
ADR/RID: II   IMDG: II   IATA: II

14.5 Environmental hazards
ADR/RID: yes   IMDG Marine pollutant: yes   IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

- Acute Tox.: Acute toxicity
- Aquatic Acute: Acute aquatic toxicity
- Eye Dam.: Serious eye damage
- H272: May intensify fire; oxidiser.
- H302: Harmful if swallowed.
- H315: Causes skin irritation.
- H318: Causes serious eye damage.
- H400: Very toxic to aquatic life.
- Ox. Sol.: Oxidizing solids
- Skin Irrit.: Skin irritation

Full text of R-phrases referred to under sections 2 and 3

- N: Dangerous for the environment
- O: Oxidising
- Xn: Harmful
- R 8: Contact with combustible material may cause fire.
- R22: Harmful if swallowed.
- R38: Irritating to skin.
- R41: Risk of serious damage to eyes.
- R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.