



Safety Data Sheet

Date of Issue: 22.09.2021

Date of Expiry: 22.09.2026

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
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Product Name	Copper (II) Nitrate
Product Code	20201 , 20208
CAS No.	10031-43-3

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification

Oxidizing liquids or solids (Category B), H272
Acute toxicity, Oral (Category D), H302
Aquatic toxicity (Acute or Chronic) (Category A), H400

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.

Precautionary statement(s)

Prevention

P210 Keep away from heat.
P220 Keep/Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P321 Specific treatment (see supplemental first aid instructions on this label).
P330 Rinse mouth.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P391 Collect spillage.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards - none

3: Composition/information on ingredients

3.1 Substances

Synonyms	:	Cupric nitrate trihydrate
Formula	:	$\text{CuN}_2\text{O}_6 \cdot 3\text{H}_2\text{O}$
Molecular weight	:	241.60 g/mol
CAS-No.	:	10031-43-3
EC-No.	:	221-838-5

4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). 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

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x)

Copper oxides

Not combustible.

Has a fire-promoting effect due to release of oxygen.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Do not store near combustible materials.

hygroscopic Heat sensitive. Moisture sensitive.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

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 or 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.

9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance

Form	:	solid
b) Odor	:	No data available
c) Odor Threshold	:	No data available
d) pH	:	No data available
e) Melting point/freezing point	:	No data available
f) Initial boiling point- and boiling range	:	No data available
g) Flash point	:	No data available
h) Evaporation rate	:	No data available
i) Flammability (solid, gas)	:	The product is not flammable.
j) Upper/lower flammability or- explosive limits	:	No data available
k) Vapor pressure	:	No data available
l) Vapor density	:	No data available
m) Relative density	:	No data available
n) Water solubility	:	No data available
o) Partition coefficient: n-octanol/water	:	No data available
p) Autoignition temperature	:	No data available
q) Decomposition temperature	:	No data available

- r) Viscosity
 Viscosity, kinematic : No data available
 Viscosity, dynamic : 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

10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Exothermic reaction with:

Acetic anhydride

Risk of explosion with:

Ammonia

amides

cyanide complexes

Organic Substances

Metals

oxidisable substances

10.4 Conditions to avoid

Heat. Avoid moisture.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 940 mg/kg

Remarks: (RTECS)The value is given in analogy to the following substances: Copper(II) nitrate

Skin corrosion/irritation

Skin - Rabbit

Result: Irritations

(OECD Test Guideline 404)

Remarks: The value is given in analogy to the following substances: Copper(II) nitrate

Serious eye damage/eye irritation

Eyes - Rabbit

Result: irritating

(OECD Test Guideline 405)

Remarks: The value is given in analogy to the following substances: Copper(II) nitrate

Respiratory or skin sensitization
Maximization Test - Guinea pig
Result: negative
(OECD Test Guideline 406)

Remarks:

The value is given in analogy to the following substances: Copper(II) nitrate

Germ cell mutagenicity : No data available

Carcinogenicity : No data available

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

11.2 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.

12: Ecological information

12.1 Toxicity

Toxicity to fish LC50 - Fish - 0.29 mg/l - 96 h

Remarks: (anhydrous substance)
(HSDB)

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

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12.4 Mobility in soil

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12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

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13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

14: Transport Information Table

	ADR/RID – European	IMDG International	IATA – DGR International Air
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		packaging certification	Maritime Dangerous Goods Code	Travel Association – Dangerous Goods Regulations
14.1	UN Number	1477	1477	1477
14.2	UN Proper Shipping name	NITRATES, INORGANIC, N.O.S. (Copper(II) nitrate trihydrate)	NITRATES, INORGANIC, N.O.S. (Copper(II) nitrate trihydrate)	Nitrates, inorganic, n.o.s.
14.3	Transport Hazard Class	5.1	5.1	5.1
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	Yes	Yes	No
14.6	Special precautions for user	None		
14.7	Hazchem Code	1Y		

15: Regulatory information

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

National regulatory information

HSNO Approval Code: HSR001323

HSNO Group Standard Approval: HSR002693 - Laboratory Chemicals and Reagent Kits (Oxidising [5.1.1]) Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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