
SAFETY DATA SHEET

SUPPLIER: PRODUITS CHIMIQUES ACP CHEMICALS INC.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

NAME OF PRODUCT: Cupric nitrate hydrate

SYNONIMS: Cupric nitrate hemi-pentahydrate, Copper (II) nitrate 2.5 hydrate

CAS No: 19004-19-4

MOLECULAR WEIGHT: 232.59

CHEMICAL FORMULA: $\text{Cu}(\text{NO}_2)_3 \cdot 2.5 \text{H}_2\text{O}$

SUPPLIER/MANUFACTURER AND PREPARATOR:

Produits Chimiques ACP Chemicals, Inc.

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DATE: August 12, 2016

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SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Blood, Kidney, Liver, Central nervous system, Vascular system.

WHMIS Classification

C	Oxidizing Material Oxidizer
D2B	Toxic Material Causing Other Toxic Effects Moderate skin irritant Moderate eye irritant

GHS Classification

Oxidizing solids (Category 2)
Acute toxicity, Oral (Category 4)
Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 1)

Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

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.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P220	Keep away from clothing and other 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.
P501	Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical hazards:	2

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin Harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Harmful if swallowed.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Copper(II) nitrate hemi(pentahydrate)

Formula:	$\text{Cu}(\text{NO}_2)_3 \cdot 2.5 \text{H}_2\text{O}$
Molecular weight:	232.59 g/mol
CAS-No.	19004-19-4
EC-No.	221-838-5

Index-No. -
Concentration ≤ 100 %

SECTION 4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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.

SECTION 5. FIREFIGHTING MEASURES

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO_x), Copper oxides

Explosion data - sensitivity to mechanical impact

No data available

Explosion data - sensitivity to static discharge

No data available

Further information

Use water spray to cool unopened containers.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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.

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 wetbrushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

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.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Heat sensitive. Moisture sensitive.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

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).

Hand 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.

Eye 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 and 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.

Hygiene measures

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

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	solid
Colour	No data available

Safety data

pH	No data available
Melting point/freezing point	Melting point/range: 114 °C (237 °F)
Boiling point	No data available
Flash point	Not applicable
Ignition temperature	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Density	2.320 g/cm ³
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Relative vapour density	No data available
Odour	No data available
Odour Threshold	No data available
Evaporation rate	No data available

SECTION 10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Heat Avoid moisture.

Materials to avoid

Reducing agents, Organic materials, Powdered metals

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO_x),
Copper oxides

Other decomposition products - No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - Rat - 794 mg/kg

Remarks: Behavioral: Somnolence (general depressed activity). Behavioral: Convulsions or effect on seizure threshold.

Inhalation LC50

No data available

Dermal LD50

No data available

Other information on acute toxicity

No data available

Skin corrosion/irritation

Skin - Rabbit - Skin irritation

Serious eye damage/eye irritation

Eyes - Rabbit - Severe eye irritation

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion Harmful if swallowed.

Skin Harmful if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Signs and Symptoms of Exposure

Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma.

Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has led to hemolytic anemia and accelerates arteriosclerosis. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache

Synergistic effects

No data available

Additional Information

RTECS: QU7400000

SECTION 12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC50 - other fish - 0.29 mg/l - 96.0 h

Persistence and degradability

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

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

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. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US)

UN number: 1477

Class: 5.1

Packing group: II

Proper shipping name: Nitrates, inorganic, n.o.s. (Copper(II) nitrate hemi(pentahydrate))

Reportable Quantity (RQ): 100 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 1477 Class: 5.1 Packing group: II EMS-No: F-A, S-Q
Proper shipping name: NITRATES, INORGANIC, N.O.S. (Copper(II) nitrate hemi(pentahydrate))
Marine pollutant: Marine pollutant

IATA

UN number: 1477 Class: 5.1 Packing group: II
Proper shipping name: Nitrates, inorganic, n.o.s.

SECTION 15. REGULATORY INFORMATION

WHMIS Classification

C Oxidizing Material
 Oxidizer
D2B Toxic Material Causing Other Toxic Effects
 Moderate skin irritant
 Moderate eye irritant

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

SECTION 16. OTHER INFORMATION

Disclaimer

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