Material Safety Data Sheet

Copper(II) nitrate, trihydrate, p.a.

MSDS# 02026

Section 1 - Chemical Product and Company Identification

MSDS Name: Copper(II) nitrate, trihydrate, p.a.
Catalog Numbers: 20768-0000, 20768-0050, 20768-1000, 20768-5000, C/8080/50, C/8080/53, C/8080/60, C/8120/50, C/8120/53
Synonyms: Cupric nitrate trihydrate.
Company Identification: Fisher Scientific UK
Bishop Meadow Road, Loughborough
Leics. LE11 5RG
For information in Europe, call: (01509) 231166
Emergency Number, Europe: 01509 231166

Section 2 - Composition, Information on Ingredients

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CAS#: 10031-43-3
Chemical Name: Copper(II) nitrate trihydrate
%: >99
EINECS#: unlisted
Hazard Symbols:
Risk Phrases:
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Text for R-phrases: see Section 16
Hazard Symbols:
XN 0
Risk Phrases:
22 36/38 8

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Harmful if swallowed. Irritating to eyes and skin. Contact with combustible material may cause fire.
Potential Health Effects
Eye:
Contact with eyes may cause severe irritation, and possible eye burns. Contact may cause ulceration of the conjunctiva and cornea.
Skin:
May cause severe irritation and possible burns. May cause dermatitis. May cause skin discoloration.
Ingestion:
May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. May cause liver and kidney damage. May cause hemorrhaging of the digestive tract.
Inhalation:
May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, tachycardia, dyspnea (labored breathing), and death. May cause ulceration and perforation of the nasal septum if inhaled in excessive quantities. May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation.
Chronic:
Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. May cause liver and kidney damage. Individuals with Wilson's disease are unable to metabolize copper. Thus, copper accumulates in various tissues and may result
in liver, kidney, and brain damage.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15
minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of
water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by
mouth to an unconscious person. Get medical aid.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh
air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:
Antidote: The use of d-Penicillamine as a chelating agent should be
determined by qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information: Strong oxidizer. Contact with other material may cause fire. During
a fire, irritating and highly toxic gases may be generated by
thermal decomposition or combustion. Wear appropriate protective
clothing to prevent contact with skin and eyes. Wear a self-
contained breathing apparatus (SCBA) to prevent contact with thermal
decomposition products.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in
the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Contents may develop
pressure upon prolonged storage. Keep away from heat, sparks and flame. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Do not ingest or inhale.

Storage: Keep away from heat, sparks, and flame. Do not store near combustible materials. Store in a tightly closed container.
a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits
CAS# 3251-23-8:
CAS# 10031-43-3:

Personal Protective Equipment
Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:
Wear appropriate gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Color: blue
Odor: odorless
pH: 4.0 for 0.2M soln.
Vapor Pressure: Not applicable.
Viscosity: Not available
Boiling Point: Not applicable.
Freezing/Melting Point: 114 deg C (237.20 F)
Autoignition Temperature: Not applicable
Flash Point: Not applicable.

Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available

Solubility in water: Soluble in water.
Specific Gravity/Density: 2.05
Molecular Formula: Cu(NO3)2.3H2O
Molecular Weight: 241.60

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures. Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:
Incompatible materials, combustible materials, reducing agents, strong oxidants, organic matter.

Incompatibilities with Other Materials
Not available

Hazardous Decomposition Products
Oxides of nitrogen, irritating and toxic fumes and gases, copper fumes.

Hazardous Polymerization
Has not been reported.

Section 11 - Toxicological Information

RTECS#: 
CAS# 3251-23-8: QU7400000
CAS# 10031-43-3: GL7875000

LD50/LC50:
CAS# 3251-23-8: Draize test, rabbit, eye: 100 mg
Severe; Draize test, rabbit, skin: 500 mg Severe; Oral,
mouse: LD50 = 430 mg/kg; Oral, rat: LD50 = 794 mg/kg; Oral,
rat: LD50 = 940 mg/kg;
CAS# 10031-43-3: Oral, rat: LD50 = 940 mg/kg;

Carcinogenicity:
Cupric nitrate -
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Copper(II) nitrate trihydrate -
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other:
See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.

IATA
Shipping Name: NITRATES, INORGANIC, N.O.S.
Hazard Class: 5.1
UN Number: 1477
Packing Group: II

IMO
Shipping Name: NITRATES, INORGANIC, N.O.S.
Hazard Class: 5.1
UN Number: 1477
Packing Group: II

RID/ADR
Shipping Name: NITRATES, INORGANIC, N.O.S.
Hazard Class: 5.1
UN Number: 1477
Packing Group: II

USA RQ: CAS# 3251-23-8: 100 lb final RQ; 45.4 kg final RQ

Section 14 - Transport Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XN O
Risk Phrases:
R 22 Harmful if swallowed.
R 36/38 Irritating to eyes and skin.
R 8 Contact with combustible material may cause fire.

Safety Phrases:
S 17 Keep away from combustible material.
S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)
CAS# 3251-23-8: Not available
CAS# 10031-43-3: 2
Canada
CAS# 3251-23-8 is listed on Canada's DSL List

US Federal
TSCA
CAS# 3251-23-8 is listed on the TSCA Inventory.
CAS# 10031-43-3 is not on the TSCA Inventory because it is a hydrate.
It is considered to be listed if the CAS number for the anhydrous form in on the

Section 16 - Other Information

Text for R-phrases from Section 2
MSDS Creation Date:
5/07/1998
Revision #5 Date
10/03/2005

The information above is believed to be accurate and represents the
best information currently available to us. However, we make no
warranty of merchantibility or any other warranty, express or
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howsoever arising, even if the company has been advised of the
possibility of such damages.

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