



Safety Data Sheet

Preparation Date 17-Jan-2023

Revision date 17-Jan-2023

Revision Number: 1

1. Identification of the Substance/Preparation and of the Company/Undertaking

Identification of the product

Product Description Cuprofix ® Flex

Other means of identification

Internal SDS code 12-393

UN/ID no UN3077

Registration number(s) 70506-393

Recommended use of the chemical and restrictions on use

Recommended use Fungicides. Bactericide.

Uses advised against Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet

Supplier Address

UPL NA Inc.
630 Freedom Business Center
Suite 402
King of Prussia, PA 19406

Emergency telephone number

Company Phone Number 1-800-438-6071

Emergency telephone number Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison and Drug Safety (866) 673-6671 (24hrs)

2. Hazards Identification

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral

Category 4

Label elements

EMERGENCY OVERVIEW

WARNING

Hazard Statements

HARMFUL IF SWALLOWED



Appearance Granule

Physical state solid

Odor No characteristic odor

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
Wash hands thoroughly after handling

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Hazards Not Otherwise Classified (HNOC)**OTHER INFORMATION**

- Toxic to aquatic life

3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%
Copper sulfate, basic	1344-73-6	71.1
Calcium sulfate dihydrate	13397-24-5	<10

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. First aid measures

FIRST AID MEASURES

Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Immediate medical attention is not required. If skin irritation persists, call a physician.
Inhalation	Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors or decomposition products. If symptoms persist, call a physician.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Call a physician. Clean mouth with water and drink afterwards plenty of water afterwards.
Protection of First-aiders	Use personal protective equipment.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and Effects no data available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Notes to physician Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media

Use: Dry chemical. Carbon dioxide (CO₂). Water spray. alcohol-resistant foam.

Unsuitable extinguishing media Decomposition by contact with water may generate vapours which can be ignited by heat or open flame.

Specific hazards arising from the chemical

No information available.

Hazardous combustion products No information available.

Explosion data

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment. Avoid contact with skin and eyes. Wear protective gloves/protective clothing and eye/face protection. Wash thoroughly after handling.

Environmental Precautions

Environmental precautions Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Methods and material for containment and cleaning up

Methods for Clean-Up Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Handling Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Keep out of reach of children. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Keep in a dry, cool and well-ventilated place. Keep out of the reach of children. Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits.

incompatible materials Strong acids.

8. Exposure Controls/Personal Protection

Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL
Copper sulfate, basic	TWA: 1 mg/m ³ Cu dust and mist	
Calcium sulfate dihydrate	TWA: 10 mg/m ³ inhalable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction

Engineering controls Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Personal protective equipment

Eye/Face Protection

Use eye protection to avoid eye contact. Where there is potential for eye contact have eye flushing equipment available. Safety glasses with side-shields.

Skin protection

Wear protective gloves/clothing. Socks and footwear.

Respiratory protection

Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is

recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.

General hygiene considerations

Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wear suitable gloves and eye/face protection. Wash hands and face before breaks and immediately after handling the product.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	Granule	
Physical state	solid	
Odor	No characterisitic odor	
color	Green	
<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
pH	6.8	None known
Melting point/freezing point		None known
Boiling Point/Range		None known
Flash Point	No information available	None known
Evaporation Rate		None known
Flammability (solid, gas)		None known
Specific gravity		None known
Bulk density		None known
Water solubility		None known
Solubility in Other Solvents	No information available	None known
Partition coefficient: n-octanol/water		None known
Autoignition temperature		None known
Decomposition temperature		None known
Viscosity		None known

9.2 OTHER INFORMATION- NONE

10. Stability and Reactivity

Reactivity

no data available

Chemical stability

Stable under normal conditions. Hazardous polymerisation does not occur.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

incompatible materials

Strong acids.

Hazardous decomposition products

Oxides of copper.

11. Toxicological Information

Information on Likely Routes of Exposure

Product information	Cuprofix Flex Acute oral LD50 1,030 mg/kg Acute dermal LD50 >5,000 mg/kg Acute inhalation LC50 5.369 mg/l/4hr
Inhalation	Based on available data, the classification criteria are not met.
Eye contact	Not classified.
Skin contact	Not classified.
Ingestion	HARMFUL IF SWALLOWED.

Components Information**Copper sulfate**

Workers exposed by inhalation have reported irritation of the nose and throat, occasional ulceration of nasal septum, and inflammation and diffuse fibrosis of the lungs. Humans exposed to high levels in drinking water have experienced abdominal pain, vomiting, diarrhoea, nausea, and a metallic taste in the mouth. Accidental human poisonings have caused similar gastrointestinal symptoms and, in severe cases, fatalities due to vascular injury and hemolytic anemia which caused severe kidney and liver damage. Individuals with Wilson's Disease, a genetic defect in copper transport, may be particularly susceptible to copper exposure. Liver damage and anemia have been observed in these individuals. Greenish skin discoloration may occur from dermal contact. Although there have been some reports of contact dermatitis in human studies with copper metals, industrial exposure has rarely resulted in allergic reactions or dermatitis.

Acute inhalation exposure to guinea pigs showed evidence of reduced lung function. In studies conducted by the NTP, repeated administration in the feed of rats produced inflammation of the liver and forestomach lining, kidney damage, and slight anemia. Mice showed only inflammatory changes of the forestomach. Dietary administration prior to and during pregnancy in mice resulted in increased litter size, fetal weight, fetal mortality and the number of birth defects. No genetic changes were observed in tests using bacteria; however, changes were observed in animal cells.

Single exposure studies indicate that this material is slightly to moderately toxic if swallowed (rat LD50 300-960 mg/kg) Naphthalene sulfonic acid polymer with formaldehyde, sodium salt. Single exposure studies indicate that this material is practically non-toxic if swallowed (rat LD50 4,300 mg/kg) no more than slightly toxic if absorbed through skin (rat LD50 >2,000 mg/kg) and slightly toxic to rabbit eyes and skin.

Information on Toxicological Effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Mutagenic effects	no data available.
Carcinogenicity	There are no known carcinogenic chemicals in this product.
Reproductive effects	Not Available.
STOT - Single Exposure	no data available.
STOT - Repeated Exposure	no data available.
Chronic toxicity	Avoid repeated exposure.
Target organ effects	Respiratory System, EYES, skin.
Aspiration hazard	No information available.

Numerical Measures of Toxicity - See above**12. Ecological Information**

Marine Pollutant.

ecotoxicity

Copper sulfate: This material is highly toxic to worms, snails, and clams (EC50 35.8 -900 ug/L) Daphnia magna, Daphnia pulex, crayfish and midges (EC50 6.5 - 25.42 ug/L) Salmon (LC50 17-890 ug/L) polycrate worm, alabone, mussel, and oyster (LC50 5.3 - 480 ug/L) and Florida pompano (LC50 360 -510 ug/L). It is moderately to highly toxic to carp, minnows, guppies, pumpkinskin, perch, and bass (LC50 22-1760 ug/L) and bluegill sinfish (LC50 200 - 10,200 ug/L)
 Copper Sulfate Chem Fate : The bioconcentration factor (BCF) in fish is 10-100 indicating a low potential for bioconcentration. The BCF is higher in mollusks, especially oysters, where it may reach 30,000. The bioaccumulation ration in fish is less than 1 indicating no biomagnification in the food chain. No bioaccumulation was obtained from a study of pollutant concentration in the muscles and livers of 10 mammal species and no evidence of biomagnification in the food chain was observed.

Persistence/Degradability

no data available.

Bioaccumulation/ Accumulation

No information available.

Other Adverse Effects

no data available

13. Disposal Considerations

Waste Treatment Methods

Waste Disposal Method

Pesticide wastes can be hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Contaminated packaging

Refer to product label.

14. Transport Information

DOT

Not regulated when shipped domestically by highway in non-bulk containers as per 49 CFR 171.4

UN/ID no

UN3077

Proper shipping name

Environmentally hazardous substances, solid, n.o.s (Basic Copper sulfate)

Hazard class

9

Packing group

PG III

IMDG - Marine Pollutant

Marine Pollutant.

ICAO

UN/ID no

UN3077

Proper shipping name

Environmentally hazardous substance, solid, n.o.s (Basic Copper Sulfate)

Hazard class

9

Packing group

PG III

Description

IMDG - Marine Pollutant

IATA

UN/ID no

UN3077

Proper shipping name	Environmentally hazardous substances, solid, n.o.s (Basic copper sulfate)
Hazard class	9
Packing group	PG III
Description	IMDG - Marine Pollutant

IMDG

UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substances, solid n.o.s. (Basic Copper sulfate)
Hazard class	9
Packing group	PG III
Environmental hazards	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

signal word CAUTION

Ventilation Control PESTICIDE APPLICATORS & WORKERS THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

Keep out of Reach of Children. Causes moderate eye irritation. Harmful if swallowed. Harmful if inhaled. Toxic to fish and aquatic invertebrates. and may contaminate water through run off.

International Inventories

USINV	Present
DSL/NDSL	Present
EINECS/ ELINCS	Not Present
ENCS	Not Present
China	Present
KECL	Not Present
PICCS	Not Present
AICS	Not Present
TSCA	Not Present

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

CERCLA

Not applicable

CERCLA

SARA Product RQ 0

RCRAPesticide Information

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Copper sulfate, basic 1344-73-6 (71.1)			X	
Calcium sulfate dihydrate 13397-24-5 (<10)			X	

State RegulationsState Right-to-Know

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Calcium sulfate dihydrate - 13397-24-5		X	X		

International regulationsU.S. EPA Label information

EPA Pesticide registration number 70506-393

16. Other InformationNFPA

HEALTH 2

flammability 0

Instability 0

Physical hazard -

Preparation Date 17-Jan-2023

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Revision Summary

Add to system

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End of SDS