



Safety Data Sheet

United Phosphorus, Inc.

Preparation Date 10-May-2015

Revision date 10-May-2015

Revision Number: 2

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

Product identifier

Product Description: Cuprofix® Ultra 40 Disperss®

Other means of identification

Item#: 12-413
UN-No UN3077
Synonyms Not Available
Registration number(s) 70506-201

Recommended use of the chemical and restrictions on use

Recommended use Fungicide. Bactericide.
Uses advised against Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet

Supplier Address

United Phosphorus 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 Control Center
(866) 673-6671 (24hrs)

2. Hazards Identification

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

Label elements

EMERGENCY OVERVIEW

hazard statements

Very toxic to aquatic life



appearance Green powder

Physical state solid Dry Flowable

Odor odorless

Hazards Not Otherwise Classified (HNOC)

OTHER INFORMATION

- Toxic to aquatic life

3. Composition/information on Ingredients

| Chemical name | CAS-No | Weight % | Trade secret |
|---------------------------|------------|----------|--------------|
| Copper sulfate, basic | 1344-73-6 | 20-90 | |
| Calcium sulfate dihydrate | 13397-24-5 | <10 | |
| Sodium xylene sulfonate | 1300-72-7 | <20 | |

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 information 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 the skin and the eyes. Wear protective gloves/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 |
|---------------------------|--|---|
| Calcium sulfate dihydrate | TWA: 10 mg/m ³ inhalable fraction | 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

Information on basic physical and chemical properties

| | | | |
|-----------------------|--------------------------|-------------|----------|
| Physical state | solid Dry Flowable | Odor | odorless |
| appearance | Green powder | | |
| color | No information available | | |

| <u>Property</u> | <u>VALUES</u> | <u>Remarks/ • Method</u> |
|---|--------------------------|--------------------------|
| pH | 7 | |
| Melting point/freezing point | 8 °C / 46 °F | |
| Boiling Point/Range | No information available | |
| Flash Point | No information available | |
| Evaporation Rate | No information available | |
| flammability (solid, gas) | No information available | |
| Flammability limit in air | | |
| Upper Flammability Limit | No information available | |
| Lower Flammability Limit | No information available | |
| vapor pressure | No information available | |
| Vapor Density | No information available | |
| Specific gravity | No information available | |
| Water solubility | No information available | |
| Solubility in Other Solvents | No information available | |
| Partition coefficient: n-octanol/water | No information available | |
| Autoignition temperature | No information available | |
| decomposition temperature | No information available | |
| Viscosity, kinematic | No information available | |
| Dynamic viscosity | No information available | |
| Explosive properties | No information available | |
| Oxidizing properties | No information available | |

OTHER INFORMATION

| | |
|-------------------------|---------------------------|
| Softening point | No information available |
| molecular weight | No information available |
| VOC Content | No information available |
| density | No information available |
| Bulk density | 700-100 kg/m ³ |

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

| | |
|-------------------|------------------------|
| Inhalation | Harmful by inhalation. |
|-------------------|------------------------|

| | |
|---------------------|-----------------------|
| Eye contact | May cause irritation. |
| Skin contact | May cause irritation. |
| Ingestion | HARMFUL IF SWALLOWED. |

Component 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) Napthalene 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.

| Chemical name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------------------------------|----------------------|-------------|-----------------|
| Sodium xylene sulfonate 1300-72-7 | = 7200 mg/kg (Rat) | - | - |

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

Numerical Measures of Toxicity - No information available

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 information available.

Bioaccumulation/ Accumulation

No information available.

Other Adverse Effects

No information available

13. Disposal Considerations

Waste Treatment Methods

Waste Disposal Method

Pesticide wastes are acutely 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

| | |
|-----------------------------|---|
| UN-No | UN3077 |
| Proper shipping name | Environmentally hazardous substances, solid, n.o.s (Basic Copper sulfate) |
| Hazard class | 9 |
| Packing group | PG III |
| Marine Pollutant | Marine Pollutant. |

ICAO

| | |
|-----------------------------|--|
| UN-No | UN3077 |
| Proper shipping name | Environmentally hazardous substance, solid, n.o.s (Basic Copper Sulfate) |
| Hazard class | 9 |
| Packing group | PG III |
| Description | Marine Pollutant |

IATA

| | |
|-----------------------------|---|
| UN-No | UN3077 |
| Proper shipping name | Environmentally hazardous substances, solid, n.o.s (Basic copper sulfate) |
| Hazard class | 9 |
| Packing group | PG III |
| Description | Marine Pollutant |

IMDG/IMO

| | |
|-----------------------------|---|
| UN-No | UN3077 |
| Proper shipping name | Environmentally hazardous substances, solid n.o.s. (Basic Copper sulfate) |
| Hazard class | 9 |

Packing group
Marine Pollutant

PG III
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. Harmful if swallowed. Harmful if inhaled. Prolonged or frequent repeated skin contact may cause allergic reaction in some individuals. Toxic to fish and aquatic invertebrates.

International Inventories

| | |
|-------------------|-----------------|
| USINV | Not determined |
| DSL/NDSL | Not determined |
| EINECS/ ELINCS | Does not comply |
| ENCS | Does not comply |
| China | Complies |
| KECL | Does not comply |
| PICCS | Does not comply |
| AICS | Does not comply |
| TSCA | Does not comply |

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 40n of the Code of Federal Regulations, Part 372:

SARA 311/312 Hazardous

Categorization

| | |
|-----------------------------------|-----|
| Acute health hazard | yes |
| Chronic health hazard | yes |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

CERCLA

SARA Product RQ 0

RCRAPesticide InformationState RegulationsState Right-to-Know

| Chemical name | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---------------------------|---------------|------------|--------------|----------|--------------|
| Calcium sulfate dihydrate | | X | X | | |

International regulationsU.S. EPA Label information

EPA Pesticide registration number 70506-201

| |
|------------------------------|
| 16. Other Information |
|------------------------------|

NFPA HEALTH 2 flammability 0 Instability 0 Physical hazard -

Preparation Date 10-May-2015

Revision date 10-May-2015

Revision Summary

Update to GHS format

Disclaimer

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End of MSDS