






Material Safety Data Sheet

United Phosphorus, Inc.

NFPA	PPE		
			

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Revision Number: 11

1. PRODUCT AND COMPANY IDENTIFICATION

UPI
 630 Freedom Business Center
 Suite 402
 King of Prussia, PA 19406

Emergency Telephone Number
 Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
 Medical: Rocky Mountain Poison Control Center
 (866) 673-6671 (24hrs)

<u>Company Information</u>	<u>Contact Information</u>	<u>Phone Number</u>	<u>Available Hrs</u>
UPI	Customer Service R&D Technical Service	1-800-438-6071 610-223-2180	8:00 am to 5:00 pm EST 8:00 am - 5:00 pm (EST)

Product Name EPA Reg # Recommended Use Product Code	Cuprofix® Ultra 40 Disperss® 70506-201 fungicide Bactericide 12-413
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2. HAZARDS IDENTIFICATION

Emergency Overview

Harmful if swallowed
Causes moderate eye irritation
May cause liver effects based on animal data
Prolonged skin contact may cause local redness. May cause an allergic reaction in sensitive individuals.

CAUTION

Appearance Green, Khaki.

Physical State Solid. Dry Flowable.

Odor Odorless.

Potential Health Effects

- Inhalation
- Skin contact

Eyes

Irritating to eyes.

Skin

Irritating to skin. Prolonged or repeated contact may cause irritation, redness and rash.

Inhalation

Irritating to respiratory system.

Ingestion

Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Copper sulfate, basic	1344-73-6	20-90	N/A
Calcium sulfate dihydrate	13397-24-5	<10	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
Napthalene sulfonic acid polymer with formaldehyde, sodium salt	9084-06-4	<25	N/A
Sodium lignosulfonate	8061-51-6	<15	N/A

4. FIRST AID MEASURES

Eye Contact

Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.
Remove contact lenses, if present, after 5 minutes, then continue rinsing eye
Call a poison control center or doctor for treatment advice.

Skin Contact

Take off contaminated clothing
Rinse skin immediately with plenty of water for 15-20 minutes
Call poison control center or doctor for treatment advice.

Inhalation

If breathing is irregular or stopped, administer artificial respiration
May cause allergic respiratory reaction
Call a poison control center or doctor for further treatment advice.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	Calcium sulfate dihydrate
ACGIH TLV	TWA: 10 mg/m ³ inhalable fraction
OSHA PEL	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. 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.

Personal Protective Equipment

Eye/face Protection

Avoid contact with eyes. Goggles.

Skin Protection

Long sleeved clothing. Long pants. Socks and footwear.

Respiratory Protection

Avoid breathing dust. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer.

General Hygiene Considerations

Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Green Khaki	Odor	Odorless
Physical State	Solid Dry Flowable	pH	approx 7
Boiling Point/Range	Not available	Melting Point/Range	Not available
Specific Gravity	Not available	Solubility	Dispersible in water
Evaporation Rate	Not available	Vapor pressure	Not available
Vapor Density	Not available	VOC Content	Not available
Viscosity	Not available	Molecular Weight	no data available
Bulk Density	700-100 kg/m ³	Percent Solids	Not available
Percent Volatiles	Not available		

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Conditions to Avoid	Heat, flames and sparks
Incompatible Materials	Strong acids
Hazardous Decomposition Products	Oxides of copper
Possibility of Hazardous Polymerization	Hazardous polymerisation does not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

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, diarrhea, 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.

Chronic Toxicity

Carcinogenicity

There are no known carcinogenic chemicals in this product.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Copper sulfate

This material is highly toxic to worms, snails, and clams (EC50 35.9-900ug/l); Daphnia magna, Daphnia pulex, crayfish, and midges(EC50 6.5-25.42ug/l); salmon (LC50 17-890 ug/l), polychaete worm, abalone, mussel, and oyster (LC50 5.3-480 ug/l); and, Florida pompano (LC50360-510 ug/l). It is moderately to highly toxic to carp, minnows, guppies, pumpkinseed, perch, and bass (LC50 22-1760 ug/l) and bluegill sunfish (LC50 200-10,200 ug/l, depending on water hardness).

Chem Fate

The bioconcentration factor (BCF) in fish is 10-100, indicating a low potential for bioconcentration. The BCF is higher in molluscs, especially oysters, where it may reach 30,000. The biomagnification ration in fish is less than 1, indicating no biomagnification in the food chain. No bioaccumulation was obtained from a study of pollutant concentrations in the muscle and livers of 10 mammal species and no evidence of biomagnification in the food chain was observed.

13. DISPOSAL CONSIDERATIONS

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

Non refillable container. Do not reuse this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

DOT

When shipped domestically by highway in non-bulk containers this product can be shipped as not regulated. When shipped in bulk, by vessel, or internationally use the IMDG shipping description:

Proper Shipping Name	Environmentally hazardous substances, solid, n.o.s. (Basic Copper sulfate)
Hazard Class	9
UN-No	UN3077
Packing Group	PG III
Marine pollutant	Y.

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)

12-413
Cuprofix® Ultra 40 Disperss®

Hazard Class 9
Packing Group PG III
ERG Code 9L
Description Marine pollutant

IMDG/IMO

Proper Shipping Name Environmentally hazardous substances, solid n.o.s. (Basic Copper sulfate)
Hazard Class 9
UN-No UN3077
Packing Group PG III
Marine pollutant This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS/ ELINCS	ENCS	CHINA	KECL	AICS
Copper sulfate, basic	XU	X		X	(1)-300	X	KE-32586	X
Calcium sulfate dihydrate		X			(1)-193	X		
Napthalene sulfonic acid polymer with formaldehyde, sodium salt	XU	X			(4)-557	X	KE-25565	X
Sodium lignosulfonate	XU	X			(8)-209	X	KE-31519	X

USA

Federal Regulations

SARA 313
 Y

SARA 311/312 Hazardous Categorization

Chronic Health Hazard Yes
Acute Health Hazard Yes
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
 This product does not contain any HAPs.

CERCLA

RCRA

Pesticide 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 (20-90)			X	
Napthalene sulfonic acid polymer with formaldehyde, sodium salt 9084-06-4 (<25)			X	
Sodium lignosulfonate 8061-51-6 (<15)			X	

State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Calcium sulfate dihydrate		X	X		

International Regulations

Mexico - Grade

Mexico - Grade

Component	Category	Carcinogen Status	Exposure Limits
Calcium sulfate dihydrate 13397-24-5 (<10)			Mexico: TWA 10 mg/m ³

Canada

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

WHMIS Hazard Class

Not determined

16. OTHER INFORMATION

Revision Date

22-Aug-2013

Revision Summary

Recurrent confirmation/update of data

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End of MSDS