1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name**: Cuprofix® Ultra 40 Disperss®
**EPA Reg #:** 70506-201
**Recommended Use**: Fungicide Bactericide
**Product Code**: 12-413

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

**Contact Information**
Customer Service
1-800-438-6071
R&D Technical Service
610-223-2180

**Phone Number**
610-223-2180

**Available Hrs**
8:00 am to 5:00 pm EST
8:00 am - 5:00 pm (EST)

**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

**Emergency Overview**
- Harmful if swallowed
- Causes moderate eye irritation
- May cause moderate respiratory irritation
- Prolonged skin contact may cause local redness. May cause an allergic reaction in sensitive individuals.

**CAUTION**
- Appearance: Green, Khaki.
- Physical State: Viscous liquid.
- Odor: Odorless.

**Potential Health Effects**

- **Inhalation**: Irritating to respiratory system.
- **Skin Contact**: Irritating to skin. Prolonged or repeated contact may cause irritation, redness and rash.
- **Ingestion**: Harmful if swallowed.
- **Eye Contact**: Irritating to eyes.

3. COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients Name**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper sulfate, basic</td>
<td>1344-73-6</td>
<td>20-90</td>
<td>N/A</td>
</tr>
<tr>
<td>Calcium sulfate dihydrate</td>
<td>13397-24-5</td>
<td>&lt;10</td>
<td>TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction</td>
</tr>
<tr>
<td>Napthalene sulfonic acid polymer with formaldehyde, sodium salt</td>
<td>9084-06-4</td>
<td>&lt;25</td>
<td>N/A</td>
</tr>
<tr>
<td>Sodium lignosulfonate</td>
<td>8061-51-6</td>
<td>&lt;15</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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.
Cuprofix® Ultra 40 Disperss®

5. FIRE-FIGHTING MEASURES

Flammable Explosive Properties

- **Flash Point**: Not available
- **Autoignition Temperature**: Not available
- **Flammability Limits in Air**: Not available
- **Extinguishing Media**: Use: Water spray, Foam, Carbon dioxide (CO2), Dry chemical.
- **Fire/Explosion Hazard**: Firefighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear and self-contained breathing apparatus. Fire fighting equipment should be thoroughly decontaminated after use.

- **Hazardous Combustion Products**: No information available.

**NFPA**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

- **Personal Precautions**: Avoid contact with the skin and the eyes.
- **Environmental Precautions**: Do not flush into surface water or sanitary sewer system. 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 for Clean-up**: Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

- **Handling**: Avoid dust formation. Keep out of reach of children. Avoid breathing dust. Handle in accordance with good industrial hygiene and safety practice.
- **Storage**: Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Calcium sulfate dihydrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH TLV</td>
<td>TWA: 10 mg/m³ inhalable fraction</td>
</tr>
<tr>
<td>OSHA PEL</td>
<td>TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Eye/face Protection</th>
<th>Avoid contact with eyes. Goggles.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Protection</td>
<td>Long sleeved clothing. Long pants. Socks and footwear.</td>
</tr>
<tr>
<td>Respiratory Protection</td>
<td>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.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Green Khaki</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Viscous liquid</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>700-100 kg/m³</td>
</tr>
<tr>
<td>Percent Volatiles</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>pH</td>
<td>approx 7</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>Not available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Dispersible in water</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>VOC Content</td>
<td>Not available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>no data available</td>
</tr>
<tr>
<td>Percent Solids</td>
<td>Not available</td>
</tr>
</tbody>
</table>

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), polycheate 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)
### Hazard Class
9

### Packing Group
PG III

### ERG Code
9L

### Description
Marine pollutant

### IMDG/IMO

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

### 15. REGULATORY INFORMATION

#### International Inventories

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

#### USA

### Federal Regulations

#### SARA 313
Y

#### SARA 311/312 Hazardous Categorization

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

#### 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
Exposure Limits

Calcium sulfate dihydrate
13397-24-5 ( <10 )
Mexico: TWA 10 mg/m³

State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium sulfate dihydrate</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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</tbody>
</table>

International Regulations

Mexico - Grade

<table>
<thead>
<tr>
<th>Component</th>
<th>Category</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium sulfate dihydrate</td>
<td></td>
<td></td>
<td>Mexico: TWA 10 mg/m³</td>
</tr>
<tr>
<td>13397-24-5 ( &lt;10 )</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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