**Section 1 - Chemical Product and Company Identification**

**Product Identifier:**
Liquid Copper Solution

**Product Use:**
Pesticide

**Chemical Name:**
Copper Ammonium Complex

**Manufacturer Information:**
Southern Agricultural Insecticides, Inc.
P.O. Box 218
Palmetto, FL 34220

Phone: 941-722-3285
Fax: 941-723-2974

Emergency: National Pesticide Information Center
1-800-858-7378

**General Comments**
NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

**Section 2 - Hazards Identification**

**Classification in accordance with 29 CFR 1910.1200**
- Skin Irritant, Category 2
- Eye Irritant, Category 2
- Skin Sensitizer, Category 1

**GHS LABEL ELEMENTS**

**Symbol(s)**

![Exclamation Mark]

**Signal Word**
WARNING!

**Hazard Statement(s)**
- Causes eye irritation
- Causes skin irritation
- May cause an allergic skin reaction

**Precautionary Statement(s)**

**Prevention**
Avoid breathing fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink, or smoke when using this product.

**Response**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present, and continue rinsing. If eye irritation persists, get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before re-use. If skin irritation or rash occurs, get medical advice/attention. Contaminated clothing should not be allowed out of the workplace.

**Disposal**
Dispose of contents/containers in accordance with applicable federal, state and local regulations.
*** Section 3 - Composition / Information on Ingredients ***

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>70-80</td>
</tr>
<tr>
<td>13822-80-5</td>
<td>Copper diammonia diacetate complex [Bis-(acetate-O) Diaminecopper]</td>
<td>20-30</td>
</tr>
</tbody>
</table>

Component Related Regulatory Information
This product may be regulated, have exposure limits or other information identified as the following: Copper compounds, n.o.s.

Component Information/Information on Non-Hazardous Components
This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication). This product is considered hazardous under the criteria specified in the Canadian Workplace Hazardous Materials Information System (WHMIS).

*** Section 4 - First Aid Measures ***

Eye Contact:
Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. If eye irritation persists, get medical advice/attention.

Skin Contact:
For skin contact, wash immediately with soap and water. In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. If irritation persists get medical attention.

Ingestion:
If material is ingested, immediately contact a physician or poison control center. Give one to two glasses of water or milk. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to a victim who is unconscious or is having convulsions.

Inhalation:
If inhaled, immediately remove the affected person to fresh air. If the affected person is not breathing, apply artificial respiration. If irritation persists get medical attention.

Note to Physician:
Provide general supportive measures and treat symptomatically.

*** Section 5 - Fire Fighting Measures ***

General Fire Hazards
This product is an aqueous mixture, which will not burn.

Hazardous Combustion Products
Oxides of carbon, oxides of nitrogen and other organic substances may be formed. Copper oxides and copper metal. Ammonia.

Extinguishing Media
Use media appropriate to surrounding fire.

Unsuitable Extinguishing Media
None known.

Specific Hazards Arising From the Chemical
None known.

Fire Fighting Equipment/Instructions
Firefighters should wear full protective clothing including self-contained breathing apparatus and impervious clothing.

NFPA Ratings: Health: 2  Fire: 0  Reactivity: 0
Hazard Scale: 0 = Minimal  1 = Slight  2 = Moderate  3 = Serious  4 = Severe

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**Section 6 - Accidental Release Measures**

**Personal Precautions**
Wear appropriate protective equipment and clothing during clean-up. Isolate area. Keep unnecessary personnel away.

**Methods and Materials for Containment**
Clean-up
Stop the flow of material, if this is without risk. Contain the discharged material and dike the spilled material where possible. Prevent entry into sewers, drains, underground or confined spaces, water intakes and waterways. Absorb spill with inert material such as: lime, polypads, or other suitable absorbent material. Shovel the absorbed material into appropriate container for disposal. Follow all Local, State, Federal and Provincial regulations for disposal.

**Section 7 - Handling and Storage**

**Precautions for Safe Handling**
Open container carefully, as needed to relieve any buildup of pressure. Do not get this material in your eyes, on your skin, or on your clothing. Do not inhale vapors or mists of this product. Use this product with adequate ventilation. Wash thoroughly after handling.

**Conditions for Safe Storage**
Store in a cool, dry area. Do not freeze. Store away from direct sunlight and any sources of heat. Empty product containers may contain product residue. Do not reuse empty containers. Do not store this material in open or unlabeled containers.

**Section 8 - Exposure Controls / Personal Protection**

**Component Exposure Limits**
Copper Ammonium Complex (23087-46-9)
NIOSH: 1 mg/m3 TWA (as Cu, except Copper fume) (related to Copper compounds)

**Appropriate Engineering Controls**
Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes/Face Protection**
Wear chemical goggles and face shield.

**Skin Protection**
Wear impervious (neoprene) gloves, impervious apron.

**Respiratory Protection**
If ventilation is not sufficient to effectively prevent buildup of vapors or mists, appropriate approved NIOSH respiratory protection must be provided. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage must be implemented.

**General Protection**
Eye wash fountain and emergency showers are recommended. An emergency spill response will necessitate the use of more stringent personal protective equipment.

**PPE Pictograms:**

![Goggles](image1.png)
![Gloves](image2.png)
![Face Shield](image3.png)
![Apron](image4.png)
**LIQUID COPPER FUNGICIDE**

**Safety Data Sheet**
EPA REG. NO. 10465-3-829

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### **Section 9 - Physical & Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Dark Blue</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;212°F (&gt;100°C)</td>
</tr>
<tr>
<td>Solubility (H2O)</td>
<td>Completely</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Auto Ignition</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Similar to water</td>
</tr>
<tr>
<td>VOC Content</td>
<td>Not Available</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>@ 59°F (15°C): 3.0 - 8.0</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>@ 59°F (15°C): 1.16</td>
</tr>
<tr>
<td>Flash Point Method</td>
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</tr>
<tr>
<td>LFL</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>-17°C</td>
</tr>
<tr>
<td>Octanol/H2O Coeff.</td>
<td>Not Available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

### **Section 10 - Chemical Stability & Reactivity Information**

**Chemical Stability**
This is a stable material.

**Conditions to Avoid**
Avoid contact with extreme heat and incompatible materials.

**Incompatibility**
This product is incompatible with flammable and combustible materials, strong reducing agents and finely powdered metals.

**Hazardous Decomposition**
Upon decomposition, product may yield copper compounds, ammonia, and nitrogen oxides.

**Possibility of Hazardous Reactions**
Will not occur.

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### **Section 11 - Toxicological Information**

**Acute Toxicity**
This product is irritating to the eyes, respiratory system and skin. May cause allergic skin sensitization reactions.

**Component Analysis - LD50/LC50**
- Water (7732-18-5)
  - Oral LD50 Rat: >90 mL/kg

**Epidemiology**
No epidemiological data is available for this product.

**Information on Likely Routes of Exposure**

**Eyes Contact**
Contact with the eyes can cause moderate irritation. Symptoms may include discomfort or pain and redness.

**Skin Contact**
This product is irritating to the skin. Depending on the duration of contact, symptoms will include reddening, discomfort, irritation, and possible tissue damage. Prolonged or repeated skin contact may cause skin irritation or allergic skin sensitization reaction.

**Ingestion**
Ingestion of this product is unlikely. However, ingestion of product may produce gastrointestinal irritation and disturbances.

**Inhalation**
This product may cause irritation to the respiratory system. Overexposure to processing fumes may cause metal fume fever which is an influenza like illness. Symptoms include headache, metallic taste in the mouth, cough, thirst, throat irritation, shortness of breath, fever, sweating and pain in the limbs. This illness is not permanent and recovery usually occurs within 24-48 hours after onset.

**Chronic Effect**
Liver and kidney disorders and adverse effects on the lungs, may also occur as a result of chronic exposure.
Carcinogenicity
No carcinogenicity data available for this product. None of this product’s components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Mutagenicity
No data available for this product.

Teratogenicity
No data available for this product.

Neurological Effects
No data available for this product.

Other Toxicological Information
No additional information available.

Medical Conditions Aggravated by Exposure
Pre-existing skin and eye conditions.

HMIS Ratings: Health: 2 Fire: 0 Physical Hazard: 0 Pers. Prot.: Safety glasses, impervious gloves, protective clothing
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe *= Chronic hazard

*** Section 12 - Ecological Information ***

Ecotoxicity
In high concentrations, this product may be harmful to both terrestrial and aquatic plant or animal life.

Component Analysis - Ecotoxicity - Aquatic Toxicity
No ecotoxicity data are available for this product’s components.

Environmental Fate
No data available for this product.

*** Section 13 - Disposal Considerations ***

Disposal Instructions
Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.
Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

Component Waste Numbers
No EPA Waste Numbers are applicable for this product’s components.

*** Section 14 - Transportation Information ***

US DOT Information
Shipping Name: This product is not regulated as a hazardous material for transportation.

Canada Transportation of Dangerous Goods Information
Shipping Name: This product is not regulated as a hazardous material for transportation.

IMDG Information
Shipping Name: This product is not regulated as a hazardous material for transportation.

*** Section 15 - Regulatory Information ***

US Federal Regulations
No additional information available. All components are on the U.S. EPA TSCA Inventory List.
Component Analysis
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4):

Copper diammonia diacetate complex [Bis-(acetate-O) Diaminecopper] (13822-80-5)
SARA 313: 1.0 % de minimis concentration (does not include copper phthalocyanine compounds substituted only with hydrogen and/or bromine and/or chlorine, Chemical Category N100) (related to Copper compounds)

SARA 311/312: Acute Health Yes : Chronic Health Yes : Fire No : Pressure No : Reactive No

State Regulations
Other state regulations may apply. Check individual state requirements.

Component Analysis - State
The following components appear on one or more of the following state hazardous substances lists:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>CA</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
<th>RI</th>
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</thead>
<tbody>
<tr>
<td>Copper diammonia diacetate complex [Bis-(acetate-O) Diaminecopper] (related to Copper compounds)</td>
<td>13822-80-5</td>
<td>Yes¹</td>
<td>No</td>
<td>No</td>
<td>Yes¹</td>
<td>Yes¹</td>
<td>No</td>
</tr>
</tbody>
</table>

Canadian WHMIS Classification
D2: Subdivision B: Toxic Materials

Symbol

Canadian WHMIS Ingredient Disclosure List (IDL)

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Minimum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper diammonia diacetate complex [Bis-(acetate-O) Diaminecopper]</td>
<td>13822-80-5</td>
<td>1 % (related to Copper compounds, n.o.s.)</td>
</tr>
</tbody>
</table>

Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>AUST</th>
<th>MITI</th>
<th>PHIL</th>
<th>KOREA</th>
<th>ELINCS</th>
<th>CHINA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

*** Section 16 - Other Information ***

Other Information
Disclaimer: Supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Safety Data Sheet before handling product.

SDS History
New SDS: 2/2015

Key/Legend
NA = Not available or Not Applicable. CERCLA = Comprehensive Environmental Response Compensation &
End of Sheet