*** 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)

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 ***

CAS #	Component	Percent
7732-18-5	Water	72.5
13822-80-5	Copper diammonia diacetate complex [Bis-(acetate-O) Diaminecopper]	27.5

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

*** 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 build up 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:




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

Appearance:	Dark Blue	Odor:	None
Physical State:	Liquid	pH:	@ 59ºF (15ºC): 3.0 - 8.0
Vapor Pressure:	Not Applicable	Vapor Density:	Not Applicable
Boiling Point:	>212ºF (>100ºC)	Melting Point:	Not Determined
Solubility (H2O):	Completely	Specific Gravity:	@ 59ºF (15ºC): 1.16
Flash Point:	Not flammable	Flash Point Method:	Not applicable
Auto Ignition:	Not flammable	LFL:	Not applicable
UFL:	Not applicable	Freezing Point:	-17ºC
Evaporation Rate:	Similar to water	Octanol/H2O Coeff.:	Not Available
VOC Content:	Not Available	Viscosity:	Not Available

* * * 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.

* * * 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:

Component	CAS	CA	MA	MN	NJ	PA	RI
Copper diammonia diacetate complex [Bis-(acetate-O) Diaminecopper] ([1]related to Copper compounds)	13822-80-5	Yes[1]	No	No	Yes[1]	Yes[1]	No

Canadian WHMIS Classification

D2: Subdivision B: Toxic Materials

Symbol

Canadian WHMIS Ingredient Disclosure List (IDL)

Component	CAS #	Minimum Concentration
Copper diammonia diacetate complex [Bis-(acetate-O) Diaminecopper]	13822-80-5	1 % (related to Copper compounds, n.o.s.)

Component Analysis - Inventory

Component	CAS #	TSCA	DSL	NDSL	EINECS	AUST	MITI	PHIL	KOREA	ELINCS	CHINA
Water	7732-18-5	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes
Copper diammonia diacetate complex [Bis-(acetate-O) Diaminecopper]	13822-80-5	Yes	No	Yes	Yes	No	No	No	No	No	No

* * * 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 & Liability Act; SARA = Superfund Amendments & Reauthorization Act; RCRA = Resource Conversation & Recovery Act. TLV = Threshold Limit Value. NFPA = National Fire Protection Association. HMIS = Hazardous Material Information System. CFR = Code of Federal Regulations. HEPA = High Efficiency Particulate Air EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

End of Sheet