

Safety Data Sheet

Issue Date: 17-Nov-2000

Revision Date: 28-Mar-2016

Version 2

1. IDENTIFICATION

Product Identifier

Product Name PolyAmine Copper Organic

Other means of identification

SDS # VLS-040

Other Information Factory Formula: 1212.

Recommended use of the chemical and restrictions on use

Recommended Use Fertilizer.

Details of the supplier of the safety data sheet

Supplier Address

Verdesian Life Sciences, U.S., LLC.
1001 Winstead Drive, Suite 480
Cary, NC 27513

Emergency Telephone Number

Company Phone Number Business Phone: (800) 868-6446
Fax Phone: (919) 535-3652
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Dark blue liquid

Physical State Liquid

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

Other Hazards

Toxic to aquatic life with long lasting effects

Unknown Acute Toxicity

1% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Organic Acid	Proprietary	Proprietary
Copper sulfate pentahydrate	7758-99-8	2

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Wash off immediately with plenty of water.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	Give large quantities of water. Induce vomiting, but only if victim is fully conscious. Call a physician.

Most important symptoms and effects

Symptoms	May cause irritation to the mucous membranes and upper respiratory tract. May cause skin and eye irritation. May cause gastrointestinal irritation, nausea, diarrhea, and vomiting.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Decomposes at melting point.

Hazardous Combustion Products Sulfur dioxide.

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 as required.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. Flush area with water. Dispose of in accordance with federal, state and local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use with adequate ventilation. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials Strong reducing agents. Strong oxidizing agents. Magnesium.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Organic Acid	-	15 mg / m ³ (Total)	-
Copper sulfate pentahydrate 7758-99-8	TWA: 1 mg/m ³ Cu dust and mist	TWA: 1 mg/m ³ Cu dust and mist	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes.

Skin and Body Protection Wear suitable protective clothing.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Not determined
Appearance	Dark blue liquid	Odor Threshold	Not determined
Color	Dark blue		

Property	Values	Remarks • Method
pH	2.7	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	Not determined	
Flash Point	Not available	
Evaporation Rate	Not available	
Flammability (Solid, Gas)	n/a-liquid	
Upper Flammability Limits	Not available	
Lower Flammability Limit	Not available	
Vapor Pressure	Not available	
Vapor Density	Not available	
Specific Gravity	Not available	
Water Solubility	Appreciable	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not available	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
Density	8.99 wt/gal	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Heat.

Incompatible Materials

Strong reducing agents. Strong oxidizing agents. Magnesium.

Hazardous Decomposition Products

Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact

Avoid contact with eyes.

Skin Contact

Avoid contact with skin.

Inhalation

Avoid breathing vapors or mists.

Ingestion

Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Organic Acid	= 3000 mg/kg (Rat)	-	-
Copper sulfate pentahydrate 7758-99-8	= 472 mg/kg (Rat)	> 2 g/kg (Rat)	> 2.95 mg/L (Rat)

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

Not determined

Unknown Acute Toxicity 1% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Organic Acid		1516: 96 h Lepomis macrochirus mg/L LC50 static		120: 72 h Daphnia magna mg/L EC50
Copper sulfate pentahydrate 7758-99-8		0.66 - 1.15: 96 h Lepomis macrochirus mg/L LC50 semi-static 0.96 - 1.8: 96 h Lepomis macrochirus mg/L LC50 static 0.1478 - 0.165: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.09 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 static 0.6752: 96 h Pimephales promelas mg/L LC50 static		0.147 - 0.227: 48 h Daphnia magna mg/L EC50 Static

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Organic Acid	-1.72

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

- Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.
- Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Copper sulfate pentahydrate 7758-99-8	Toxic

14. TRANSPORT INFORMATION

- Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
- DOT** Not regulated
- IATA** Not regulated
- IMDG**
- Marine Pollutant** This product contains cupric sulfate which is listed as a DOT Marine Pollutant (49 CFR 172.101, Appendix B)

15. REGULATORY INFORMATION

International Inventories

- TSCA** Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Copper sulfate pentahydrate 7758-99-8	10 lbs	10 lbs	10 lbs

SARA 311/312 Hazard Categories

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

SARA 313

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Copper sulfate pentahydrate - 7758-99-8	7758-99-8	2	1.0

CWA (Clean Water Act)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper sulfate pentahydrate 7758-99-8 (2)		X		

US State Regulations**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Copper sulfate pentahydrate 7758-99-8	X		X

16. OTHER INFORMATION**NEPA****Health Hazards**

Not determined

Flammability

Not determined

Instability

Not determined

Special Hazards

Not determined

HMIS**Health Hazards**

2

Flammability

0

Physical Hazards

0

Personal Protection

Not determined

Issue Date:

17-Nov-2000

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28-Mar-2016

Revision Note:

Address changes

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet