

Safety Data Sheet

Issue Date: 10-Jan-1992

Revision Date: 02-Mar-2018

Version 3

1. IDENTIFICATION

Product Identifier

Product Name Cop-Plex

Other means of identification

SDS # VLS-012R

UN/ID No UN1760

Other Information Factory Formula: 53.

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: (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

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

Signal Word

Danger

Hazard statements

Harmful if swallowed

Causes severe skin burns and eye damage



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a poison center or doctor/physician

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Copper sulfate pentahydrate	7758-99-8	30-40
Inorganic base	Proprietary	1-10
Organic acid	Proprietary	1-10
Organic acid	Proprietary	1-5

**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 immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.
Skin Contact	Wash off immediately with plenty of water. Take off contaminated clothing. Wash contaminated clothing before reuse.
Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician immediately.
Ingestion	Give large quantities of water. Induce vomiting, but only if victim is fully conscious. Call a poison center or doctor/physician if you feel unwell.

Most important symptoms and effects

Symptoms	May cause irritation to the mucous membranes and upper respiratory tract. Contact will cause irritation and redness to exposed areas. 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.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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.

Environmental precautions

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. Dispose of in accordance with federal, state and local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Wash thoroughly after handling. Use personal protection recommended in Section 8. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Store away from incompatible materials.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
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
Trade Secret	-	15 mg / m3 (Total)	-
Trade Secret	STEL: 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m ³	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³

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 Safety goggles.

Skin and Body Protection Rubber gloves. Wear work uniform.

Respiratory Protection At concentrations up to 8 ppm, a dust/mist respirator is recommended. Above this level, a self-contained breathing apparatus is advised.

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		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not available	
Melting point / freezing point	Not determined	
Boiling Point / Boiling Range	Not determined	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-Not applicable	
Flammability Limit in Air		
Upper Flammability Limit	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Relative Density	Not determined	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

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**

Causes severe eye damage.

Skin Contact

Causes severe skin burns.

Inhalation

Avoid breathing vapors or mists.

Ingestion

Harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Copper sulfate pentahydrate 7758-99-8	= 472 mg/kg (Rat)	> 2 g/kg (Rat) > 8 g/kg (Rabbit)	> 2.95 mg/L (Rat)
Trade Secret	= 350 mg/kg (Rat)	-	-
Trade Secret	= 3 g/kg (Rat) = 3000 mg/kg (Rat)	-	-
Trade Secret	= 3310 mg/kg (Rat)	= 1060 mg/kg (Rabbit)	= 11.4 mg/L (Rat) 4 h

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**

Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

Not determined.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Copper sulfate pentahydrate 7758-99-8		0.96 - 1.8: 96 h Lepomis macrochirus mg/L LC50 static 0.66 - 1.15: 96 h Lepomis macrochirus mg/L LC50 semi-static 0.6752: 96 h Pimephales promelas 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	0.147 - 0.227: 48 h Daphnia magna mg/L EC50 Static
Trade Secret		8.2: 96 h Pimephales promelas mg/L LC50	0.66: 48 h Daphnia pulex mg/L EC50 0.66: 48 h water flea mg/L EC50
Trade Secret		1516: 96 h Lepomis macrochirus mg/L LC50 static	120: 72 h Daphnia magna mg/L EC50
Trade Secret		79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static	65: 48 h Daphnia magna mg/L EC50 Static 47: 24 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Trade Secret	-1.72
Trade Secret	-0.31

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
Trade Secret	Toxic Corrosive

Chemical Name	California Hazardous Waste Status
Trade Secret	Toxic Corrosive Ignitable

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN1760
Proper Shipping Name Corrosive liquid, n.o.s. (Ammonium hydroxide, Acetic acid)
Hazard Class 8
Packing Group III
Reportable Quantity (RQ) Copper sulfate (10 lbs)
Marine Pollutant This product contains a chemical which is listed as a severe marine pollutant according to DOT.

IATA

UN/ID No UN1760
Proper Shipping Name Corrosive liquid, n.o.s. (Ammonium hydroxide, Acetic acid)
Hazard Class 8
Packing Group III

IMDG

UN/ID No UN1760
Proper Shipping Name Corrosive liquid, n.o.s. (Ammonium hydroxide, Acetic acid)
Hazard Class 8
Packing Group III
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

Chemical Name	TSCA	DSL/NDL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Copper sulfate pentahydrate	X				X		X	X
Trade Secret	X	X	X	X	X	X	X	X
Trade Secret	X	X	X	X	X	X	X	X
Trade Secret	X	X	X	X	X	X	X	X

Legend:

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

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

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
Trade Secret	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Trade Secret	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

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	32	1.0
Trade Secret -		7.04	1.0

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper sulfate pentahydrate		X		
Trade Secret	1000 lb			X
Trade Secret	5000 lb			X

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

16. OTHER INFORMATION**NFPA****Health Hazards**

Not determined

Flammability

Not determined

Instability

Not determined

Special Hazards

Not determined

HMIS**Health Hazards**

Not determined

Flammability

Not determined

Physical hazards

Not determined

Personal Protection

Not determined

Issue Date: 10-Jan-1992
Revision Date: 02-Mar-2018
Revision Note: Regulatory update

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