SAFETY DATA SHEET

Date Issued : 03/23/2018
SDS No. : Miami Cuprogen Algaecide
Date Revised : 02/13/2019
Revision No : 1

Sanygen Cuprogen Algaecide

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Sanygen Cuprogen Algaecide
GENERAL USE: Algaecide

DISTRIBUTOR

Miami Products & Chemical Company
P.O. Box 486
Dayton, OH 45401

2. HAZARDS IDENTIFICATION

GHS LABEL

Not a dangerous substance according to GHS.

PRECAUTIONARY STATEMENT(S)

General:

8219D4CW: This product is not classified as hazardous according to the Globally Harmonized System.

POTENTIAL HEALTH EFFECTS

INGESTION: May be harmful if swallowed.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Triethanolamine	Proprietary	102-71-6
Ethanolamine	Proprietary	141-43-5
Basic Copper Carbonate	Proprietary	12069-69-1
Citric Acid (Eye Irritant 2A, H319)	Proprietary	77-92-9

4. FIRST AID MEASURES

EYES: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. See a doctor immediately.

SKIN: Remove contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Carbon dioxide, foam and dry chemical.

EXPLOSION HAZARDS: Will not burn.

FIRE FIGHTING PROCEDURES: Use water spray to cool unopened containers.

FIRE FIGHTING EQUIPMENT: Firefighters should wear self-contained breathing apparatus (SCBA) and turn-out gear.

6. ACCIDENTAL RELEASE MEASURES

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ENVIRONMENTAL PRECAUTIONS

WATER SPILL: This material is soluble in water. If the product contaminates rivers and lakes or drains, inform respective authorities.

LAND SPILL: Contain spillage and then collect with non-combustible absorbent material (such as sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations. After removal, flush contaminated area thoroughly with water. Avoid runoff into storm sewers and ditches which lead to waterways.

AIR SPILL: Vapors may be surpressed by the use of water fog. Keep people away from and upwind of spill/leak.

SPECIAL PROTECTIVE EQUIPMENT: See recommendations in Section 8.

COMMENTS: Prevent further leakage or spillage if safe to do so. Use personal protective equipment as required. Evacuate personnel to safe areas.

7. HANDLING AND STORAGE

HANDLING: Do not take internally. Avoid contact with skin, eyes and clothing. If in eyes or on skin, rinse well with water. Avoid inhalation of dust and fumes.

STORAGE: Store in a cool, dry, well-ventilated area away from incompatible materials. Do not freeze.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
	EXPOSURE LIMITS			
Chemical Name	**Type**		**ppm**	**mg/m³**
Triethanolamine	**ACGIH TLV**	**TWA**		5 mg/m3
Ethanolamine	**OSHA PEL**	**TWA**	3 ppm	6 mg/m3
	ACGIH TLV	**TWA**	3 ppm	7.5 mg/m3
		STEL	6 ppm	15 mg/m3
	Supplier OEL	**STEL**	6 ppm NIOSH/GUIDE	15 mg/m3 NIOSH/GUIDE
Basic Copper Carbonate	**OSHA PEL**	**TWA**	[1]	[1]
	ACGIH TLV	**TWA**	[2]	mg/m3 [2]
	Supplier OEL	**TWA**		100 mg/m3 (NIOSH/GUIDE 2005)
Citric Acid (Eye Irritant 2A, H319)	**OSHA PEL**	**TWA**	[3]	[3]
	ACGIH TLV	**TWA**	[4]	[4]

Footnotes:
1. dusts and mists
2. Calculated as copper TWA dusts and mists
3. 5 mg/m3 (respirable dust)
4. Not established. Use TLV for Nuisance dusts of 5 mg/m3.

ENGINEERING CONTROLS: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields.

SKIN: Impervious gloves.

RESPIRATORY: Wear a NIOSH approved respirator if levels above the exposure limits are possible. A NIOSH approved air purifying respirator with organic vapor cartridge and P95 particulate filter. Air purifying respirators should not be used in oxygen deficient or IDLH

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atmospheres or if exposure concentrations exceed ten times the published limit.

PROTECTIVE CLOTHING: Impervious clothing.

WORK HYGIENIC PRACTICES: Emergency eyewash station should be provided in the immediate work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Mild.

APPEARANCE: Blue viscous liquid.

pH: 9.7 to 10.3

PERCENT VOLATILE: Not Available

FLASHPOINT AND METHOD: Product is not flammable. Not combustible. Not classified as pyrophoric. Not explosive.

VAPOR PRESSURE: Not Determined

VAPOR DENSITY: Not Determined.

BOILING POINT: 100°C (212°F)

MELTING POINT: No data available.

SOLUBILITY IN WATER: Soluble in cold water.

SPECIFIC GRAVITY: 1.19 to 1.210

VISCOSITY: Not Available

OXIDIZING PROPERTIES: None established.

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Will not occur.

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: Heat, flames and sparks.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride

INCOMPATIBLE MATERIALS: Avoid strong acids and nitrates.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

DERMAL LD_{50}: Triethanolamine: LD50 = > 2000 mg/kg (rabbit)

Ethanolamine: LD50 = > Approx. 1000 mg/kg (rabbit)

Basic Copper Carbonate: No data

Citric Acid LD50 = believed to be > 2000 mg/kg (rabbit)

For Blended Product LD50 = believed to be approx 2000 mg/kg (rabbit)

ORAL LD_{50}: Triethanolamine: LD50 - 7390 mg/kg (rat)

Ethanolamine: LD50 = 1700 mg/kg (rat)

Basic Copper Carbonate: LD50 = 1350 mg/kg (rat)

Citric Acid: LD50 = 3000 mg/kg (rat)

For Blended Product: LD50 believed to be greater than 2000 mg/kg (rabbit)

INHALATION LC_{50}: Triethanolamine: LC50 = A saturated vapor concentration for 8 hrs (rats did not produce death.

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Ethanolamine: LC50 = 1 hr > 2.42 mg/l (mouse)

Ethanolamine: LC50 = 4 hr > 970 ppm (mouse)

Basic Copper Carbonate: No data available

Citric Acid: No data available

NOTES: May cause mild eye irritation. Ingestion may cause mild gastrointestinal discomfort. Inhalation of mist or vapor may cause irritation to the mucous membranes of the respiratory tract.

RESPIRATORY OR SKIN SENSITISATION: Not known or reported to be a skin or respiratory sensitizer. Both Triethanolamine and Ethanolamine tested negative for skin sensitization in animals.

GERM CELL MUTAGENICITY: Animal testing has shown ingredients to be non-mutagenic.

CARCINOGENICITY

NOTES: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

REPRODUCTIVE TOXICITY: Not known to cause reproductive toxicity.

Triethanolamine animal testing has shown not to produce any adverse effects on reproductive function or fetal development.

Ethanolamine animal testing has shown no evidence of teratogenicity, embryotoxicity or fetotoxicity.

Citric Acid animal testing has shown no evidence of reproductive toxicity or teratogenicity.

12. ECOLOGICAL INFORMATION

GENERAL COMMENTS: Toxic to fish and other aquatic organisms.

COMMENTS: Triethanolamine:

Fathead minnow - 96 hr LC50 = 11,800 mg/l

Daphnia Magna - 24 hr EC50 = 1850 mg/l

Common shrimp - 48 h LC50 > 100 mg/l

Green Algae - 48 hr EC 50 = 750 mg/l

Ethanolamine:

Rainbow Trout - 96 hr LC50 = 150 mg/l

Mosquito fish - 96 hr LC50 = 337.5 mg/l

Bluegill - 96 hr LC50 = 329.16 mg/l

Fathead minnow - 96 hr LC50 = 2070 mg/l

Goldfish - 96 hr LC50 = 170 mg/l

Brine shrimp: 48 hr LC50 = 7100 mg/l

Daphia Magna (water flea) - 48 hr EC50 = 65 mg/l

Citric Acid:

Bluegill sunfish: - 96 hr LC50 = 1516 mg/l

Daphia Magna (water flea) - 72 hr EC50 approx. 120 mg/l

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13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose in accordance with all applicable regulations.

RCRA/EPA WASTE INFORMATION: If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of a hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not dangerous goods

TECHNICAL NAME: Not Regulated.

OTHER SHIPPING INFORMATION: No additional information available.

ROAD AND RAIL (ADR/RID)

PROPER SHIPPING NAME: Not dangerous goods

AIR (ICAO/IATA)

SHIPPING NAME: Not dangerous goods

VESSEL (IMO/IMDG)

SHIPPING NAME: Not dangerous goods

CANADA TRANSPORT OF DANGEROUS GOODS

SHIPPING NAME: Not dangerous goods

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HEALTH HAZARDS: Not listed

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: 2, 2'-Iminodiethanol, CAS #111-42-2: 100 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: This is an EPA-registered product.

STATES WITH SPECIAL REQUIREMENTS

Chemical Name	Requirements
Triethanolamine	Massachusetts Hazardous Substance

REGULATIONS

STATE REGULATIONS: Massachusetts Right to Know: 2,2',2"-Nitrilotriethanol CAS #102-71-6 and 2-Aminoethanol, CAS#141-43-5

New Jersey Right to Know: 2,2',2"-Nitrilotriethanol CAS #102-71-6; 2-Aminoethanol, CAS#141-43-5; Copper carbonate, CAS #12069-69-1; Citric acid CAS #77-92-2

Pennsylvania Right to Know: 2,2',2"-Nitrilotriethanol CAS #102-71-6; 2-Aminoethanol, CAS#141-43-5; Copper carbonate, CAS #12069-69-1

CALIFORNIA PROPOSITION 65: WARNING! This product contains a chemical known to the State of California to cause cancer.

2,2"-Iminodiethanol, CAS #111-42-2

FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT): This chemical is a pesticide product registered by the Environmental

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Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Below you will find the hazard information that is required on the EPA pesticide label.

GENERAL COMMENTS: HAZARD INFO FOUND ON PRODUCT, EPA REG. NO. 46043-26

Toxic to fish.

EPA FIFRA APPROVED LABEL SIGNAL WORD - CAUTION

16. OTHER INFORMATION

Date Revised: 02/13/2019

REVISION SUMMARY: This SDS replaces the 03/23/2018 SDS.

MANUFACTURER DISCLAIMER: Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).