

MATERIAL SAFETY DATA SHEET

SECTION 1 MATERIAL NAME / IDENTIFIER

Eclipse 3 Algaecide

WHMIS: D2B

Manufacturer's Name: CAPO INDUSTRIES LTD
Street Address: 1200 CORPORATE DRIVE
City: BURLINGTON, ONTARIO
Postal Code: L7L 5R6

Emergency Telephone: Canutec (613) 996-6666 (Collect)

Chemical Name: Not applicable

Chemical Family: Not applicable

Chemical Formula: Not applicable

Trade Name & Synonyms: Not applicable

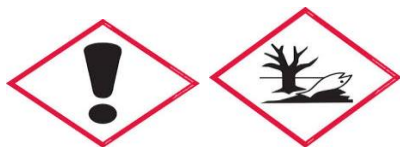
Molecular Weight: Not applicable

Material Use: Algaecide

SECTION 2 HAZARDS IDENTIFICATION

GHS classification: H315 Skin corrosion/irritation, Category 2
H320 Serious eye damage/eye irritation, Category 2B
H335 Specific target organ toxicity, Single exposure, Respiratory tract irritation, Category 3
H400 Hazardous to the aquatic environment, Acute hazard, Category 1

Symbol(s)



Signal Word

Warning

Hazard statements

Causes skin and eye irritation. May cause respiratory irritation. Very toxic to aquatic life.

Precautionary statements

Avoid contact with skin and eyes. Wear gloves and safety glasses when handling. Wash hands thoroughly after use. If in eyes, flush with copious amounts of water for 20 minutes, and seek medical attention. Use in a well ventilated area. Avoid breathing in dust. If inhaled, remove person to fresh air and seek medical attention. Avoid release into the environment.

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SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	CAS#	% Concentration
Cupric Sulphate	7758-99-8	10 – 30
Citric Acid	77-92-9	10 – 30
Sodium Carbonate	497-19-8	5 – 10

SECTION 4 FIRST AID MEASURES

Inhalation: Remove person to fresh air. Seek medical attention if irritation persists.

Skin Contact: Wash thoroughly with soap and water.

Eye Contact: Flush eyes with copious amounts of water for 20 minutes. Seek medical attention if irritation persists.

Ingestion: Drink 2 to 3 glasses of water to dilute material. Do not induce vomiting. Seek medical attention immediately.

Note to physicians None

SECTION 5 FIRE – FIGHTING MEASURES

Hazardous Combustion Products: CO, CO₂, toxic and corrosive oxides of Sulphur, calcium, carbon, sodium or copper may form.

Unusual Fire or Explosion Hazards: Dust can produce explosive mixtures if the proper concentration of dust is dispersed in air.

Sensitivity to Mechanical Impact: None

Rate of Burning: Not applicable

Explosive Power: Not applicable

Sensitivity to Static Discharge: None

Fire Extinguishing Media: Use media suitable to extinguish source of fire.

Instructions to the Fire Fighters: When heated above 110°C (230°F) material will melt. Avoid using a direct water stream on molten material, as it may cause splattering.

Fire Fighting Protective Equipment: Wear full protective clothing and a self-contained breathing apparatus with a full face piece in positive pressure mode.

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SECTION 6

ACCIDENTAL RELEASE MEASURES

Leak And Spill Procedure: Do not let material enter natural waters or public water supply. Ventilate area of leak or spill. Sweep up material into a clean, dry labelled container for reuse or disposal. Vacuum may be used to avoid dust dispersal. Do not put material into copper, aluminum or other easily corroded materials.

SECTION 7

HANDLING AND STORAGE

HANDLING

Handling Practices: Avoid contact with skin and eyes. Wash thoroughly after handling. Wear gloves and safety glasses. Keep out of reach of children. Transport in dry equipment since they may contain product residues. Observe all warnings and precautions listed for the product. This product absorbs moisture and becomes a safety hazard when spilled by becoming slippery.

Ventilation Requirements: Local exhaust ventilation to keep airborne levels below the exposure guidelines.

STORAGE

Ventilation Requirements: Store in a cool, dry ventilated area.

Storage Requirements: Keep in a tightly closed container. Protect against physical damage. Do not store in easily corroded containers.

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation to keep airborne contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Skin Specify): Latex, rubber, neoprene or nitrile gloves if skin contact is likely.

Eye (Specify): Safety glasses/goggles if eye contact is likely.

Respiratory (Specify): Dust mask

Other (Specify): Eye wash and shower stations close to work area.

SECTION 9

PHYSICAL DATA FOR MATERIAL

Physical State: Gas Liquid Solid X

Odour & Appearance: Pale blue powder, odourless

Odour Threshold (ppm): Not applicable

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Flammability: Yes No X

If Yes, Under Which Conditions?:

Auto Ignition Temperature (Celsius): Not applicable

Upper Explosion Limit (% By Volume): Not applicable

Lower Explosion Limit (% By Volume): Not applicable

Decomposition Temp (°C) 825°C

Specific Gravity: 1.14

Viscosity: Not applicable

Vapour Pressure (mm): Not applicable

Vapour Density (Air-1): Not applicable

Flashpoint (°C) Not applicable

Evaporation Rate Not applicable

Boiling Point (°C): Not applicable

Freezing Point (°C): Not applicable

Solubility In Water (20°C): Soluble

% Volatile (By Weight) 0%

PH: 6 – 7 (1% solution)

Coefficient Of Water/Oil Distribution: Not applicable

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Yes X No

If No, Under Which Conditions?:

Incompatibility To Other Substances: Yes X No

If So, Which Ones:

Strong acids, metal nitrates, alkali carbonates and bicarbonates, potassium tartrate. Will corrode copper, zinc, aluminum and other alloys. Acids, fluorine, aluminum, phosphorus pentoxide, sulphuric acid, zinc, lithium, moisture, calcium hydroxide, 2,4,6-trinitrotoluene, magnesium with hydrogen. Substance will ignite hydroxylamine. Solutions are acidic and can react with magnesium to evolve flammable hydrogen gas. May react with acetylene to form dangerous acetylides. Reacts with acids to form carbon dioxide. Dangerous reaction with monoammonium phosphate or sodium potassium alloy.

Conditions to Avoid: Heat, flames, ignition sources, moisture, dusting and incompatible materials. Water is only to be avoided during storage. This product is designed to be diluted with water as per application instructions.

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Hazardous Decomposition Products: CO₂ and CO may form when heated to decomposition. Hydrolyzes to form dilute sulphuric acid. Toxic and corrosive oxides of sulphur, carbon, sodium or copper may be formed when heated to decomposition. When heated to decomposition (825°C), product emits calcium oxide fumes and liberates carbon dioxide.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Skin Contact: Causes irritation to the skin. Symptoms include redness, itching and pain.

Eye Contact: Causes irritation, redness and pain. May cause conjunctivitis, ulceration or clouding of the cornea.

Ingestion: Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

CHRONIC HEALTH EFFECTS: Excessive oral doses of calcium carbonate may produce alkalosis and hypercalcemia. Prolonged or repeated skin exposure may cause dermatitis. Prolonged or repeated exposure to dust of copper salts may cause discolouration of the skin or hair; blood and liver damage; ulceration and perforation of the nasal septum; runny nose, metallic taste in the mouth; and atrophic changes and irritation of the mucous membranes. Evidence that aluminum compounds may cause brain or nerve abnormalities is inconclusive.

Other Health Effects: Persons with pre-existing skin disorders, impaired liver, kidney or lung function, glucose-6-phosphate-dehydrogenase deficiency or pre-existing Wilson's disease (excess of copper in system) may be more susceptible to the effects of this material.

LD 50 of Material (Specify Species and Routes): Cupric Sulphate 960 mg/kg, Oral (Rat), Citric Acid 3000 mg/kg, Oral (Rat), Sodium Carbonate 4090 mg/kg, Oral (Rat).

LC 50 of Material (Specify Species and Routes): Sodium Carbonate 1150 mg/m³, Inhalation 4 h (Male Rat).

Exposure (Limits): None established

Irritancy of Material: Skin, eye, and respiratory tract irritant.

Sensitization of Material: None known

Synergistic Materials: None known

Carcinogenicity, Mutagenicity, Reproductive Effects, Teratogenicity: None known

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SECTION 12

ECOLOGICAL INFORMATION

Ecotoxicity

Cupric Sulphate is very toxic to aquatic life.

AQUATIC TOXICITY: Copper

LC50 96 h, Fish >1 mg/l

LC50 72 h, Algae >1 mg/l

Environmental Fate

Biodegradability: Cupric Sulphate is not expected to biodegrade when released into the soil or water. It may leach into groundwater and is not expected to evaporate significantly.

Bioaccumulative Potential: Cupric Sulphate is expected to bioaccumulate significantly. It has an experimentally-determined bioconcentration factor (BCF) of greater than 100.

Mobility In Soil: Not available

SECTION 13

DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of material in accordance with federal, provincial, and local regulations.

Safe Handling of Residues: Flush with copious amounts of water.

Disposal of Packaging: Dispose of packaging in accordance with federal, provincial, and local regulations.

SECTION 14

TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION: Not regulated when shipped by ground in packages of 38 kg or less of product (5 kg net Cupric Sulphate). Otherwise description is:

Proper shipping name: Environmentally Hazardous Substance, Solid, N.O.S. (Cupric Sulphate)

Class: 9

Packing group: III

UN: 3077

US DOT CLASSIFICATION (49CFR 172.101, 172.102): Not regulated when shipped in packages of 34 kg or less of product (4.54 kg net Cupric Sulphate). Otherwise description is:

Proper shipping name: Environmentally Hazardous Substance, Solid, N.O.S. (Cupric Sulphate)

Class: 9

Packing group: III

UN: 3077

