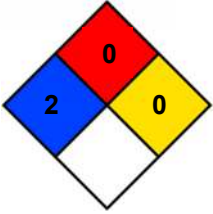




SAFETY DATA SHEET

Fertilgold® Cu



HMIS	
HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	1
PPE	C

SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT	Fertilgold® Cu	Product # 855
GENERAL USE:	Used as a part of a plant nutrition program and in the production of plant nutrient products.	
PRODUCT DESCRIPTION:	A slightly hazy blue liquid with a characteristic odor.	
SUPPLIER INFORMATION:	Fertilgold® Organics Manufactured by; Bio Huma Netics, Inc. 1331 W Houston Avenue Gilbert, AZ 85233 PHONE: (480) 961-1220	<div style="border: 1px solid black; padding: 5px; color: red; font-weight: bold;">EMERGENCY PHONE NUMBERS</div> CHEMTREC: (In the USA) 800-424-9300 (International) 703-527-3887
For Additional SDS call: 480-961-1220		

SECTION 2: HAZARDS IDENTIFICATION

HAZARDS OVERVIEW:

A slightly hazy blue liquid with a characteristic odor. The vapors, mists and liquid may cause severe irritation or burns to the eyes, and irritation to the skin and respiratory tract. It is toxic by ingestion and may be fatal if ingested in large quantities. Toxic to aquatic life due to copper sulfate content.



CLASSIFICATION: SKIN CORROSION – CATEGORY 1A

SIGNAL WORD: DANGER

HAZARD STATEMENT: H314; causes severe skin burns and eye damage

PRECAUTIONARY STATEMENT: P260; Do not breathe dusts/mist/vapors. P280; Wear protective gloves/protective clothing/eye protection/face protection P264; Wash hands thoroughly after handling



CLASSIFICATION: HAZARD CATEGORY 4

SIGNAL WORD: WARNING

HAZARD STATEMENT: H302; Harmful if Swallowed

PRECAUTIONARY STATEMENT: P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell, P330; Rinse Mouth P264; Wash hands thoroughly after handling, P270; Do not eat, drink or smoke when using this product.



CLASSIFICATION: HAZARD CATEGORY 2

SIGNAL WORD: N/A

HAZARD STATEMENT: H411; Toxic to aquatic life with long lasting effects.

PREVENTION: P273; Avoid release to the environment if this is not the intended use; P391; Collect spillage; P501; Dispose of contents/containers in accordance with federal, state and local laws regulating fertilizers.

SECTION 3: COMPOSITION & INFORMATION ON INGREDIENTS

COMPONENT	CAS #	OSHA HAZARD	WT %	ACGIH		OSHA	
				TLV _(TWA)	STEL	PEL _(TWA)	STEL
Copper Sulfate Pentahydrate*	7758-99-8	Strong Eye Irritant; Skin & Respiratory Irritant; Blood, Liver & Kidney toxin	19 ± 2	1 mg/m ³ (Dusts & Mists as Cu)	None	None	None
Citric Acid Anhydrous	77-92-9	Severe Eye Irritant; Moderate to Severe Skin & Respiratory Irritant	5 ± 0.5	None	None	None	None

* (DOT name is Cupric Sulfate)

NDA = No Data Available

N/A = Not Applicable

SECTION 4: FIRST AID MEASURES

INHALATION:	If inhaled, immediately move to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; use the Holger Nielsen method (back pressure-arm lift) or proper respiratory device. If breathing is difficult, give oxygen. Call a physician.
EYE CONTACT:	In case of contact, immediately flush eyes with plenty of clean running water for at least 15 minutes, lifting the upper and lower lids occasionally. Remove contact lenses, if worn. Get medical attention.
SKIN CONTACT:	In case of contact, flush skin with plenty of clean running water. Remove contaminated clothing and shoes and wash before reuse. If irritation occurs and persists, get medical attention.
INGESTION:	If swallowed, get medical attention immediately. Induce vomiting immediately, as directed by medical personnel. Never give anything by mouth to an unconscious person.
NOTE TO PHYSICIANS:	Copper Sulfate is toxic, and irritating to the eyes, skin and mucous membranes. If ingested, consideration should be given to careful endoscopy as stomach or esophageal irritation may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Treat exposure symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Flashpoint and Method:	This product does not flash.		
Flammable Limits (in air, % by volume)	Lower:	Not applicable	Upper: Not applicable
Autoignition Temperature:	Not applicable		
GENERAL HAZARD:	This product is a non-combustible, inorganic, acidic, aqueous solution. The Uniform Fire Code health hazard classification for this product is: Irritant . It may produce hazardous mists or hazardous decomposition products.		
FIRE FIGHTING INSTRUCTIONS:	EXTINGUISHING MEDIA: Water fog or spray, foam, CO ₂ and dry chemicals. Use a water fog or spray to cool the containers exposed to the heat of a fire.		
FIRE FIGHTING EQUIPMENT:	Fire fighters should wear full protective equipment, including self-contained breathing apparatus.		
HAZARDOUS COMBUSTION PRODUCTS:	When heated to dryness and decomposition, it emits toxic copper and sulfur oxides, with trace or ultra-trace toxic oxide amounts, of phosphorus, potassium, nitrogen, iron, magnesium, zinc, manganese, calcium, sodium and carbon.		

SECTION 6: ACCIDENTAL RELEASE MEASURES

RELEASE TO LAND:	Wearing recommended protective equipment and clothing, dike the spill and pick up the bulk of liquid using pumps or a vacuum truck, or absorb the liquid in sand or a commercial absorbent. Place in approved containers for recovery, disposal, or satellite accumulation. Neutralize the acidity, of the remaining liquid, using soda ash, lime, or other agent appropriate for neutralizing acidic liquids. Flush the spill area with water; collect the rinsates for disposal, as appropriate.
RELEASE TO WATER:	Wear recommended protective equipment and clothing if contact with hazardous material can occur. Stop or divert water flow. Dike contaminated water and remove for disposal and/or treatment. As appropriate, notify all downstream users of possible contamination.

SECTION 7: HANDLING AND STORAGE

STORAGE TEMPERATURE:	Ambient	STORAGE PRESSURE:	Ambient
GENERAL:	Store in a cool, dry, well-ventilated area away from incompatible materials and products. Avoid getting this product in eyes, on skin or on clothing. Wear recommended personnel protective equipment when handling this product. Do not breathe mists, vapors, or aerosols. Use with adequate ventilation. Do not take internally. Keep the container tightly closed when not in use. Wash thoroughly after handling this product.		

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL MEASURES: Use a local or general, mechanical exhaust ventilation system capable of maintaining emissions, in the work area, below the ACGIH-TLV, for Copper, or levels that may cause irritation.

RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT

RESPIRATOR: For exposure above the ACGIH-TLV, for Copper, or levels that may cause irritation, wear a NIOSH-approved full facepiece or half mask air-purifying cartridge respirator equipped with a good mist / particulate filter cartridge or supplied air. **Note:** Always consult the respirator manufacturer's data when determining the suitability of respiratory protective devices prior to use.

EYES: Wear chemical goggles (recommended by ANSI Z87.1-1979), unless a full facepiece respirator is worn. **Note:** Always consult the protective eyewear manufacturer's data when determining the suitability of protective eyewear prior to use.

GLOVES: Wear Neoprene, Nitrile, Butyl Rubber or Natural Rubber gloves. **Note:** Always consult the glove manufacturer's permeation data when determining the suitability of gloves prior to use.

CLOTHING & EQUIPMENT: Wear a Neoprene, Nitrile, Butyl Rubber or Natural Rubber apron, or full protective clothing when handling this product. An eye wash station and safety shower should be available in the work area. **Note:** Always consult the clothing/equipment manufacturer's permeation data when determining the suitability of clothing/equipment prior to use.

FOOTWEAR: Wear Neoprene, Nitrile, Butyl Rubber or Natural Rubber boots. **Note:** Always consult the footwear manufacturer's permeation data when determining the suitability of footwear prior to use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	A slightly hazy blue	Bulk Density (pounds/ft³):	Not applicable
Physical State:	Liquid	Vapor Pressure:	No data available
Odor:	Characteristic	Vapor Density (air=1):	No data available
Odor Threshold:	No data available	Evaporation Rate (n-Butyl Acetate=1):	No data available
Molecular Formula:	Mixture	VOC Content / Organic Matter:	No data available / 4.0%
Molecular Weight:	Not applicable	% Volatile:	No data available
Boiling Point:	Greater than 100° C. (212° F.)	Solubility in H₂O:	Complete
Freezing/Melting Point:	Less than 0° C. (32° F.)	Octanol/Water Partition Coefficient:	No data available
Specific Gravity:	1.17 – 1.30 @ 20° C.	pH (as is):	1.0 - 1.5
Density (pounds/gallon):	Approximately 9.76	pH (1% solution):	No data available

SECTION 10: STABILITY AND REACTIVITY

GENERAL: This product is stable and hazardous polymerization will not occur.

CONDITIONS TO AVOID: Do not store this product below 50° F (10° C) or above 90° F (30° C)

INCOMPATIBLE MATERIAL: Caustics and alkali, sulfides, sulfites, cyanides and chlorine releasers.

HAZARDOUS DECOMPOSITION PRODUCTS: When heated to dryness and decomposition, it emits toxic oxides of copper and sulfur, with trace or ultra-trace toxic oxide amounts, of phosphorus, potassium, nitrogen, iron, magnesium, zinc, manganese, calcium, sodium and carbon.

SENSITIVITY TO MECHANICAL IMPACT: This product is not sensitive to mechanical impact.

SENSITIVITY TO STATIC DISCHARGE: This product is not sensitive to static discharge.

SECTION 11: TOXICOLOGICAL INFORMATION

Components:	<u>Copper Sulfate Pentahydrate</u>	<u>Citric Acid Anhydrous</u>
Eye Contact:	No data available	Rabbit: 750 ug/24 Hours; Severe
Skin Contact:	No data available	Rabbit: 500 mg/24 Hours; Moderate
Oral Rat LD₅₀:	300 mg/kg	3 gm/kg
Dermal Rabbit LD₅₀:	No data available (Dermal Rat Subcutaneous LD ₅₀ : 43 mg/kg)	No data available
Inhalation Rat LC₅₀:	No data available	No data available
Human Data:	Oral Human TD _{Lo} : 11 mg/kg; Toxic Effects: Gastrointestinal – Gastritis, Hypermotility, diarrhea, nausea or vomiting	No data available
Other Toxicological Data:	Oral Child TD _{Lo} : 150 mg/kg; Toxic Effects: Kidney, Ureter and Bladder – Changes in tubules (acute renal	Intravenous Mouse LD ₅₀ : 42 mg/kg
Carcinogenicity:	Parenteral Chicken TD _{Lo} : 10 mg/kg; Equivocal tumorigenic agent by RTECS criteria; Endocrine – Tumors	No data available
Teratogenicity:	Intratesticular Rat TD _{Lo} : 3,192 ug/kg (male 1 Day prior to mating); Paternal Effects – Spermatogenesis, epididymis	No data available
Mutagenicity:	Rat DNA Damage; Ascites tumor: 500 umol/Liter; (Rat DNA Damage; liver: 1 mmol/Liter)	No data available
Synergistic Products:	None reported	None reported
Target Organs:	Eyes, Skin, Mucous membranes, Lungs, Liver, Kidneys & Blood	Eyes, Skin, Mucous membranes, Lungs & Teeth
Medical Conditions Aggravated By Exposure:	Wilson's Disease, Skin, Liver, Kidney & Respiratory disorders	Skin or Respiratory disorders

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

This product is completely soluble in water and can affect the pH of water. No specific environmental fate data is available.

ENVIRONMENTAL CONSIDERATIONS:

The exact aquatic toxicity for this product has not been determined, however, the EPA has determined that Copper Sulfate salts are toxic to fish and aquatic organisms. The DOT lists Copper Sulfate as a severe marine pollutant.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA 40 CFR 261 CLASSIFICATION: Corrosive

U.S. EPA WASTE NUMBER/DESCRIPTION: D002

If this product is disposed of as shipped, it meets the criteria of a hazardous waste as defined under 40 CFR 261 due to its corrosivity. If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly. As a hazardous liquid waste, it must be disposed of in accordance with local, state, and federal regulations in a permitted hazardous waste treatment, storage, and disposal facility.

SECTION 14: TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Environmentally hazardous substances, liquid, n.o.s. (Cupric Sulfate)

Hazard Class: 9 **UN Number:** UN3082 **Packing Group:** III

Primary Label: Class 9 **Subsidiary Label(s):** None

Primary/Subsidiary Placards: Class 9

DOT Reportable Quantity (RQ): 10 pounds (CuSO₄) **RQ for Product:** 74 lbs. (7.8 gallons)

Marine Pollutant: Yes (Severe Marine Pollutant) Applicable to transport by water & in a bulk packaging.

2012 North American Emergency Response Guidebook No.: 171

TDG PROPER SHIPPING NAME: Environmentally hazardous substances, liquid, n.o.s. (Cupric Sulfate)

Hazard Class: 9 **UN Number:** UN3082 **Packing Group:** III

Primary Label: Class 9 **Subsidiary Label(s):** None

Primary/Subsidiary Placards: Class 9

TDG Reportable Quantity (RQ): * At least 1 kg

TDG Schedule XII: Not listed

Regulated Limit (RL): ** Not listed **RL for Product:** N/A

Other Shipping Information: None

* Canadian Transportation of Dangerous Goods Regulations (TDGR), Part IX, Table I, Quantities or levels for Immediate Reporting: releases of reportable quantities, RQ, that meet the definition of a "dangerous occurrence" (a threat to life, health, property, or the environment) must be reported to the appropriate authorities as outlined in TDGR 9.13(1) and 9.14(1). ** Reporting to Environment Canada is required for any releases exceeding the regulated limits, RL, of 9.2 materials (primary or secondary). The regulated limits are found in Schedule XIII of the TDGR.

SECTION 15: REGULATORY INFORMATION

COMPONENTS:	<u>Copper Sulfate Pentahydrate</u>	<u>Citric Acid Anhydrous</u>
<u>OSHA Target Organs:</u>	Eyes, Skin, Mucous membranes, Lungs, Liver, Kidneys & Blood	Eyes, Skin, Mucous membranes, Lungs & Teeth
<u>Carcinogenic Potential:</u>		
Regulated by OSHA:	No	No
Listed on NTP Report:	No	No
Listed by IARC:	No	No
IARC Group:	Not applicable	Not applicable
ACGIH Appendix A:	Not listed	Not listed
A1 Confirmed Human:	Not applicable	Not applicable
A2 Suspected Human:	Not applicable	Not applicable

U.S. EPA Requirements

Release Reporting

CERCLA (40 CFR 302)

Listed Substance:	Yes	Not listed
Reportable Quantity:	10 pounds (Anhydrous)	Not applicable
Category:	A	Not applicable
RCRA Waste No.:	Not listed	Not applicable

Unlisted Substance:	Not applicable	Yes
Reportable Quantity:	Not applicable	100 pounds
Characteristic:	Not applicable	Corrosivity
RCRA Waste No.:	Not applicable	D002

SARA TITLE III

Section 302 & 303 (40 CFR 355):

Listed Substance:	Not listed	Not listed
Reportable Quantity:	Not applicable	Not applicable
Planning Threshold:	Not applicable	Not applicable

SECTION 15: REGULATORY INFORMATION (Continued from Page 5)

COMPONENTS:	<u>Copper Sulfate Pentahydrate</u>	<u>Citric Acid Anhydrous</u>			
Section 311 & 312 (40 CFR 370):					
Hazard Categories (product):	Fire: <u>N</u>	Sudden Release of Pressure: <u>N</u>	Reactive: <u>N</u>	Acute Health: <u>Y</u>	Chronic Health: <u>N</u>
Planning threshold:	10,000 pounds	10,000 pounds			
Section 313 (40 CFR 372):					
Listed Toxic Chemical:	Yes (Copper Category)	Not listed			
Reporting Threshold:	10,000 pounds	Not applicable			

U.S. TSCA Status

Listed (40 CFR 710):	Yes	Yes
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State Regulations

State of California: Safe Drinking Water and Toxins Enforcement Act, 1986 (Proposition 65):

Carcinogen:	No	No
Reproductive Toxin:	No	No

Other Regulations

State Right To Know Laws:	MA, NJ, PA	MA, NJ, PA
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Canadian Regulations

Product Information:		
Controlled Product:	Yes	
WHMIS Hazard Symbols:	Material Causing Other Toxic Effects	
WHMIS Class & Division:	D.2B	
Ingredient Information:		
IDL Substance:	Yes	Yes
DSL or NDSL Lists:	DSL	DSL

SECTION 16: OTHER INFORMATION

EPA Registration number: Not applicable

Approved Product Uses: Used as a part of a plant nutrition program.

Special Notes:

This product is not manufactured, or formulated to contain substances, which the State of California has found to cause cancer and/or birth defects or other reproductive harm. However, as containing mined minerals, this product may contain trace (parts per million) or ultra-trace (parts per billion) of elements known to the State of California to cause cancer, birth defects or other reproductive harm.

Special Instructions:

When making dilutions, always add Fertilgold® Cu to water with adequate mixing to ensure a uniform solution.

Do not add this product to hypochlorite bleaches, chlorine sanitizers, or chlorinated cleaners as this can liberate toxic, corrosive Chlorine gas.

SDS Revision Information: Revised Date: 9/14/2020

SDS Distributed by: Bio Huma Netics, Inc.

Prepared By: Frank S. Pidgeon, Sr. EHSS Director

Date Prepared: May 3rd 2018

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