

Safety Data Sheet

Issue Date: 07-Sep-2021

Revision Date: 25-June-2025

Version 2

1. IDENTIFICATION

Product identifier

Product Name ET-F

Other means of identification

SDS # ESL-005

Registration Number(s) EPA Reg. No. 64962-5
UN/ID No UN3082

Recommended use of the chemical and restrictions on use

Recommended Use For industrial use.

Details of the supplier of the safety data sheet

Supplier Address

Earth Science Laboratories, Inc.
903 N 47th Street, Suite 105
Rogers, AR 72756
earthsciencelabs.com

Emergency telephone number

Company Phone Number 1-800-962-1492
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Emergency Overview This product is registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-EPA registered chemicals. See Section 15 for EPA information.

Appearance Clear blue liquid

Physical state Liquid

Odor Minimal

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

Signal Word

Warning

Hazard statements

Causes skin irritation
Causes serious eye irritation



Precautionary Statements - Prevention

Do not breathe dusts or mists

Wash face, hands and any exposed skin thoroughly after handling

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

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor

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

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

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Immediately call a POISON CENTER or doctor

IF SWALLOWED: 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	18.25-21.75

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**Description of first aid measures**

General Advice	Immediately call a poison center or doctor/physician.
Eye Contact	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.
Skin Contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician.
Ingestion	Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms	May be harmful if swallowed. Causes skin irritation. Causes serious eye irritation.
-----------------	---

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Probable mucosal damage may contraindicate the use of gastric lavage. Have the product
---------------------------	--

container or label with you when calling a poison control center or doctor or going for treatment. You may also contact INFOTRAC 1-800-535-5053 for emergencies.

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

May react with high carbon metals to produce hydrogen gas, which can form an explosive mixture.

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 Caution should be exercised regarding personal safety and exposure to released product. Keep unnecessary people away, isolate hazard area and deny entry.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Flush with water into retaining area or container.

Methods for Clean-Up Neutralize solution with bicarbonate of soda.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Do not breathe dusts or mists. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store undiluted product in original shipping containers or in containers made with plastic polymers. Store locked up. Store in a safe place away from pets and keep out of the reach of children. Store away from excessive heat. Product will freeze and freezing may cause product separation. Always store product above 32 degrees F (Do Not Freeze). Always keep container closed. Keep away from galvanized pipe and any nylon storage or handling equipment.

Incompatible Materials Strong bases. Strong reducing agents.

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
--	--	--	---

Appropriate engineering controls

Engineering Controls Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear eye/face protection.

Skin and Body Protection Wear long-sleeved shirt, long pants, and shoes plus socks. Chemical resistant protective gloves.

Respiratory Protection Refer to 29 CFR 1910.134 for respiratory protection requirements.

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	Minimal
Appearance	Clear blue liquid	Odor Threshold	Not determined
Color	Blue		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	0.2-0.3	
Melting point / freezing point	Not determined	
Boiling point / boiling range	220 °F	
Flash point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-Not applicable	
Flammability Limit in Air		
Upper flammability or explosive limits	Not determined	
Lower flammability or explosive limits	Not determined	
Vapor Pressure	0.1 mm 68°F	
Vapor Density	1.0	(Air=1)
Relative Density	1.165-1.185	(Water=1)
Water Solubility	Completely soluble	
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

Will not occur.

Conditions to Avoid

Incompatible Materials.

Incompatible materials

Strong bases. Strong reducing agents.

Hazardous decomposition products

Sulfur dioxide. Sulfur trioxide.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information****Eye Contact**

Avoid contact with eyes.

Skin Contact

Avoid contact with skin.

Inhalation

Do not inhale.

Ingestion

May be harmful if swallowed.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Copper sulfate pentahydrate 7758-99-8	= 472 mg/kg (Rat)	> 8 g/kg (Rabbit)	> 2.95 mg/L (Rat)

Symptoms related to the physical, chemical and toxicological characteristics**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**Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

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

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50 2,298.8506 mg/kg

Dermal LD50 36,818.40 mg/kg

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		0.09 - 0.19: 96 h Oncorhynchus mykiss mg/L LC50 static 0.1478 - 0.165: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 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 0.6752: 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

There is no data for this product.

Mobility

Not determined

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**UN/ID No**

UN3082

Proper Shipping Name

Environmentally hazardous substance, liquid, n.o.s. (Cupric Sulfate)

Hazard class

9

Packing Group

III

Reportable Quantity (RQ)

Cupric sulfate (10 lbs)

Marine Pollutant

This material ships as a marine pollutant when each individual container exceeds 119 gallons (882 lbs).

IATA

UN number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Cupric Sulfate)
Transport hazard class(es)	9
Packing Group	III
Description	This material ships as a marine pollutant when inner packagings exceed 5L or 5 kg.

IMDG

UN number	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s. (Cupric Sulfate)
Transport hazard class(es)	9
Packing Group	III
Marine Pollutant	This material ships as a marine pollutant when inner packagings exceed 5L or 5 kg.

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Copper sulfate pentahydrate	X				X	X		X	X

Legend:*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL - 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

SARA 313

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Copper sulfate pentahydrate - 7758-99-8	7758-99-8	18.25-21.75	1.0

CWA (Clean Water Act)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper sulfate pentahydrate		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

EPA Pesticide Registration Number EPA Reg. No. 64962-5

EPA Statement

This chemical is a pesticide product registered by the Environmental 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. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

Please see EPA label for additional information

Difference between SDS and EPA pesticide label

Please see EPA label for additional information

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	2	0	0	X
<u>HMIS</u>	Health Hazards	Flammability	Physical hazards	Personal Protection
	2	0	1	X

Issue Date: 07-Sep-2021
Revision Date: 25-June-2025
Revision Note: Stability, Hazard, and Transportation updates.

Maximum Use Limit (MUL) associated with NSF certification is 19mg/L, which does not supersede the product label.

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