

# MATERIAL SAFETY DATA SHEET

LIQUID NUT CROP MIX

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Issue Date: 4/07

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### Chemical Product

LIQUID NUT CROP MIX

Common Name: Fertilizing compound, liquid.

Chemical Description: Copper/Manganese/Zinc lignosulfonate complex, aqueous solution.

TSCA/CAS No.: This product is a mixture — there is no specific CAS number.

### Manufactured For

Monterey AgResources

P. O. Box 35000

Fresno, CA 93745-5000

### Emergency Phone Numbers

Emergency Telephone: DAYS: (559) 499-2100 EVES: (559) 994-9144

CHEMTREC (24-Hour Emergency Number): (800) 424-9300

EPA National Response Center: (800) 424-8802

## SECTION 2. HAZARDOUS INGREDIENTS

CHEMICAL	CAS NO.	%	TLV OR PEL	RQ (lbs)
Copper sulfate pentahydrate	7758-99-8	8.0		N.P.*
Contributing copper sulfate	7758-98-7	5.1	1 mg/m <sup>3</sup> (as Cu) <small>ACGIH TWA</small>	10 lbs.
Manganese sulfate, monohydrate	10034-96-5	6.7		
Contributing manganese sulfate	7785-87-7	6.0	5 mg/m <sup>3</sup> (as Mn) <small>OSHA PEL</small>	N.P.
Zinc sulfate, monohydrate	7446-19-7	8.5		
Contributing zinc sulfate	7733-02-0	7.6	N.P.	1,000

\* N.P. - Not pertinent.

## SECTION 3. EMERGENCY/HAZARDS OVERVIEW

Dark brown viscous liquid with slight lignin odor. Mild irritant to eyes and skin. If ingested, may cause stomach cramps and/or nausea. High temperatures may result in sulfur trioxide fumes. Contain any liquid runoff. D.O.T. regulated when shipped in containers > 18 gallons.

HEALTH: 1 REACTIVITY: 0 FLAMMABILITY: 0 ENVIRONMENT: 1  
(0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme)

## SECTION 4. FIRST AID

Eyes: Flush immediately with water for at least 15 minutes. Call a physician if eye irritation persists.

Skin: Wash thoroughly with soap and water. Remove contaminated clothing and wash before reuse. See a physician if skin becomes irritated.

Ingestion: If conscious and alert, drink water or milk to dilute, then induce vomiting. Call a physician or Poison Control Center immediately.

Inhalation: Move to fresh air. If breathing becomes difficult, call a physician.

**SECTION 5. FIRE AND EXPLOSION HAZARDS**

Flash Point:	> 200°F.
Test Method:	ASTM D-56.
LEL Flammable Limits:	Not available.
UEL Flammable Limits:	Not available.
Autoignition Temperature:	Not available.
Flammability Classification:	Noncombustible.
Known Hazardous Products of Combustion:	Thermal degradation at > 575°C (1067°F) may produce sulfur trioxide.
Properties that Initiate/Contribute to Intensity of Fire:	None.
Potential For Dust Explosion:	None.
Reactions that Release Flammable Gases or Vapors:	Not known.
Potential For Release of Flammable Vapors:	None.
Unusual Fire & Explosion Hazards:	Sulfur trioxide fumes at temperatures > 575°C.
Extinguishing Media:	Does not burn.
Special Firefighting Procedures:	Wear positive pressure, self-contained breathing apparatus and goggles. Contain any liquid runoff.

**SECTION 6. SPILLS AND LEAKS**

Containment:	Prevent product spillage from entering drinking water supplies or streams.
Clean Up:	Collect liquid or absorb onto absorbent material and package for disposal.
Evacuation:	Not necessary.

**SECTION 7. STORAGE AND HANDLING**

Storage:	Store in plastic or stainless steel container in a cool, well-ventilated, dry place at temperatures above 40°F. Do not store in contact with brass. Do not store near food or feeds. Do not stack pallets more than two (2) high.
Transfer Equipment:	Transfer product using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc.
Work/Hygienic Practices:	Keep out of reach of children. Avoid contact with eyes, skin and clothing. Avoid inhalation of spray mists. Wash thoroughly with water after handling.

**SECTION 8. PERSONAL PROTECTIVE EQUIPMENT**

Eyes:	Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.
Skin:	Impervious gloves and clothes.
Respiratory:	Not normally needed. If use generates an aerosol mist or respiratory irritation, use NIOSH-approved dust/mist respirator (such as 3M #8710).
Ventilation:	Recommended but no TLV established.

**SECTION 9. PHYSICAL AND CHEMICAL DATA**

Appearance:	Dark brown, viscous liquid.
Odor:	Slight lignin odor.
pH:	1.7-4.3
Vapor Pressure:	760 mm Hg.
Vapor Density (Air = 1):	< 1.0
Boiling Point:	100°C (212°F)
Freezing Point:	Not available.
Water Solubility:	Completely miscible.
Density:	10.2-10.5 lbs./gal.
Evaporation Rate:	Same as water.
Viscosity:	Not available.
% Volatile:	Not available.
Octanol/Water Partition Coefficient:	Not available.
Saturated Vapor Concentration:	Not available.

**SECTION 10. STABILITY AND REACTIVITY**

Stability:	Stable.
Conditions To Avoid:	None known.
Incompatibility:	Contact with brass or strong oxidizing agents.
Hazardous Decomposition Products:	Thermal degradation at high temperatures above 575°C (1067°F) may produce sulfur trioxide.
Hazardous Polymerization:	Will not occur.

**SECTION 11. POTENTIAL HEALTH EFFECTS**Acute Effects:

Eyes:	Mild irritant. May cause redness.
Skin:	Mild irritant, especially from prolonged exposure. May cause redness.
Ingestion:	May cause stomach cramps and/or nausea.
Inhalation:	None expected but inhalation of aerosol mist may cause mild irritation of nasal mucous membranes.

Subchronic Effects: None known.

Chronic Effects: None known.

**SECTION 12. ECOLOGICAL INFORMATION**

Algal/Lemna Growth Inhibition:	Not known.
Toxicity to Fish and Invertebrates:	Not known.
Toxicity to Plants:	Not known.
Toxicity in Birds:	Not known.

**SECTION 13. DISPOSAL**

Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents according to state and local regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal. Do not discharge.

**SECTION 14. TRANSPORTATION**

D.O.T. Information:	< 18 gallons	Not D.O.T. Regulated.
	18-1253 gallons	Environmentally Hazardous Substance, Liquid, N.O.S., (Cupric Sulfate), 9, UN3082, PG III, RQ 10 lbs.
	≥ 1254 gallons	Environmentally Hazardous Substance, Liquid, N.O.S., (Cupric Sulfate/Zinc Sulfate), 9, UN3082, PG III, RQ 10/1000 lbs.

Other Shipping Description:	Fertilizing Compounds (Manufactured), Liquid. NMFC Item 68140 Sub 6, LTL Class 70
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**SECTION 15. REGULATORY INFORMATION**

CERCLA: Copper sulfate and zinc sulfate are listed as priority pollutants under the Clean Water Act and, as such, fall under the CERCLA spill reporting requirements of 40 CFR 302.

SARA TITLE III, Section 313 Toxic Chemicals: Copper compounds (8.0%), Manganese compounds (6.7%), Zinc compounds (8.5%).

PROPOSITION 65 (CA): WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**SECTION 16. OTHER**

While the information contained herein is based on data considered accurate and was compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act, it is provided for guidance only. Monterey AgResources does not guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations; in so doing, user assumes all risk in use of the material. The information contained herein is not to be taken as a warranty or representation for which Monterey AgResources assumes legal responsibility.