

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: BAM-FX
Chemical Name: Proprietary mixture of copper and zinc sulfates
Guaranteed Analysis: 2.1% Cu and 6.9% Zinc
CAS Registration Number: Proprietary
Product Use: Fertilizer, Micronutrient
Manufacturer/Supplier: BAM Agricultural Solutions, Inc.
190 NW Spanish River Blvd., Suite 101
Boca Raton, FL 33431-4217
Telephone: +1-561-416-0400
EMERGENCY PHONE #: CHEMTREC: +1-800-424-9300
TECHNICAL INFORMATION: www.bamagsolutions.com

SECTION 2. HAZARD IDENTIFICATION



Irritant



Corrosive

EMERGENCY OVERVIEW

Clear blue liquid complex of low pH and as such may pose eye injury hazards. Avoid eye contact. Incompatible with aluminum, galvanized steel and carbon steel. Avoid mixing with strong bases or reducing agents. Sulfuric acid fumes may be generated by thermal decomposition. Technical product may cause a hazard to watercourses.

SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Variable ionic minerals, copper derived from copper sulfate pentahydrate and zinc derived from zinc sulfate.

Copper 2.1% (w/w)

Zinc 6.9% (w/w)

SECTION 4. FIRST AID MEASURES

- If Inhaled:** Move affected person to fresh air. If victim is not breathing, call 911 or seek immediate medical attention. Administer CPR as necessary.
- If on Skin or Clothing:** Remove contaminated clothing. Launder separately from other clothing. Flush skin with plenty of water. Use soap if available. If irritation or systemic symptoms develop, seek medical attention immediately.
- If in Eyes:** Rinse affected eye with a gentle stream of water while holding eyelids apart. Remove contact lenses if present. Continue rinsing for 15 minutes. Seek medical attention.
- If Swallowed:** Call Poison Control Center or doctor as soon as possible. Have person drink water, but not excess. Do not give anything by mouth to an unconscious person or person having seizures. Seek medical attention.

SECTION 5. FIRE FIGHTING MEASURES

- Conditions of Flammability:** Non-flammable
- Flash Point (Method):** Not Available
- Auto-Ignition Temperature:** Not Available
- Extinguishing Media:** This product is not flammable or combustible
- Fire Fighting Procedures:** Do not wash material into streams, waterways or drainage ditches.
- Fire and Explosion Hazards:** Not flammable or explosive.
- Reactivity:** Avoid mixing with strong bases or strong reducing agents.
- Hazardous Combustion Products:** Sulfuric acid fumes may be generated by thermal decomposition.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Contain the spill with physical barriers e.g., sandbags or absorbent materials. Flush with water into retaining tanks if possible. Product may be neutralized with fertilizer grade lime or bicarbonate of soda. Dispose of in accordance with Local, State or Federal regulations.

Small Spills: Soak up liquid with sand or absorbent materials. Dispose of in accordance with Local, State or Federal regulations.

Do not wash contained material into streams, waterways, drainage ditches or storm drains.

SECTION 7. HANDLING AND STORAGE

Store at room temperature in well-ventilated areas away from incompatible substances. Product is a low-pH, metallic ion solution and is incompatible with aluminum, galvanized steel and carbonized steel. For storage and transportation, use only high-density polyethylene (HDPE) plastic containers with caps that seal to prevent leakage. **DO NOT** store in metal containers or allow to come in contact with metal fittings. Avoid mixing with strong bases or reducing agents.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use with adequate ventilation.

Protective Clothing: Wear long-sleeved shirts, long pants, closed-toed shoes and socks. Change clothing and shower after prolonged contact. Launder clothing separate from other clothing.

Protective Equipment: Wear eye protection, either safety goggles or full face shields. Wear vinyl gloves when working with product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance/Odor:	Clear, light blue liquid, mild sweet odor
Boiling Point:	220 degrees F
Bulk Density:	11 pounds/gallon
Evaporation Rate (Butyl Acetate):	Not Available
Melting Point:	N/A
pH:	> 1
Vapor Pressure:	0.1 mm @ 68 degrees F
Vapor Density:	1.00
Solubility in Water:	Completely Miscible
Viscosity:	Not Available
Melting Point:	N/A
Decomposition Temperature	Not Available

Non-Flammable, Non-Explosive.

SECTION 10. STABILITY AND REACTIVITY

Stability: This product is stable at temperatures down to 0 degrees C and temperatures up to 38 degrees C and 75% RH

Incompatibilities/Conditions to Avoid: May react with strong acids and strong reducing agents. Sulfuric acid fumes may be released by thermal decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Dermal: LD50 rat more than 5000 mg/kg
Skin: Irritant
Eye: Irritant

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available. Components within the mixtures may be toxic to aquatic organisms.
Chemical Fate: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Container Disposal: Do not contaminate lakes, streams, ponds, estuaries, ocean or other bodies of water by discharge of waste effluents or equipment wash-water. Dispose of waste materials in accordance with local, state or federal regulations.

SECTION 14. TRANSPORT INFORMATION

Note: The shipping classifications in this section (Section 14) are meant as a guide to the overall classification of the product. Consult shipping requirements under CFR, IATA and INDG to assure regulatory compliance.

US DOT: CFR 100-185 Revised September 17, 2015

UN/NA: 1760 Corrosive, corrosive liquid n.o.s., 3077 Environmentally Hazardous Substance, n.o.s. (cupric sulfate), (zinc sulphate)

SPECIAL PROVISIONS FOR TRANSPORT: additional markings “MARINE POLLUTANT” required for bulk shipments. The words “Marine Pollutant” must be entered on the shipping papers in association with the basic DOT description of bulk shipments.

DOT:



UNITED NATIONS:

UN/NA: 1760
Shipping name: Corrosive liquid n.o.s. (cupric sulfate, zinc sulfate)
Required Labels: Class 8
Markings: This material is considered a Marine Pollutant by the IMO. MARINE POLLUTANT markings required when shipping by ground greater than 882 pounds single container or any quantity by water. Refer to IMO Amendment 36-12 Chapter 2.9 and 2.10

SECTION 15. REGULATORY INFORMATION


California Proposition 65 Warnings:	Copper sulfate pentahydrate and zinc sulfate are not listed on the California Proposition 65 chemical list.
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Micronutrient Approvals/Registrations (State):	
California Department of Food and Agriculture	Company Registration # 347890
Florida Department of Agriculture and Consumer Affairs	Company Registration # F002148
Utah Department of Agriculture and Food	Company Registration # 107576
Office of The Texas State Chemist	Company Registration # 705904-2

WHIMS (Canada) Classification:	Liquid, corrosive to metal Category 1 Eye Irritation, Skin Irritation, 2B
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NFPA	Fire		
	0	1	0
	Health	COR	Reactivity

ADR (Europe):	European # 80 corrosive UN # 1760, corrosive, liquid n.o.s.
	

Protective Equipment:		
		
Gloves	Splash Goggles	Vapor Respirator

SECTION 16. OTHER INFORMATION			
Major use:	Agricultural, plant micronutrient		
Prepared by:	BAM Agricultural Solutions, Inc. 190 NW Spanish River Blvd., Suite 101 Boca Raton, FL 33431-4217 Phone: +1-561-416-0400		
<p><i>The information in this Safety Data Sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. All information concerning this product and/or all suggestions for handling and use contained herein are offered in good faith and are believed to be reliable as of the date of publication. BAM Agricultural Solutions, however, makes no warranty as to the accuracy and/or sufficiency of such information and/or suggestions, as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Nothing contained herein shall be construed as granting or extending any license under any patent. Buyer shall determine, for him/her self, by preliminary tests or otherwise, the suitability of this product for his/her purposes, including mixing with other products. The information contained herein supersedes all previously issued bulletins on the subject matter covered.</i></p>			
Date of First Issue:	May 28, 2014	Revision Date:	March 3, 2017