Safety Data Sheet

Issue Date 01-May-2006 **Revision Date:** 17-Sep-2013 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name CHEM-STARTER POP-UP FOR CORN 3.5%S, 0.25%Cu, 1.0%Fe, 1.0%Mn, 4.5%Zn

Other means of identification

SDS # CNI-016

Recommended use of the chemical and restrictions on use

Recommended Use Plant Nutrients.

Details of the supplier of the safety data sheet

Supplier Address
CNI AgriMinerals
P.O. Box 3706
Albany, GA 31706

Emergency Telephone Number

Company Phone Number 1-229-883-5538 (Business)
1-229-439-0842 (fax)

Emergency Telephone (24 hr) Chemtrec 1-800-424-9300 (North America) 1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Appearance Dark brown liquid **Physical State** Liquid **Odor** Ammonia

Classification

Hazards Not Otherwise Classified (HNOC)
Causes mild skin irritation

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
A proprietary blend of Micronutrient citrates and sulfates in an aqueous ammonia solution	Proprietary	100
Zinc as drived from Zinc Citrate	Proprietary	4.5 (Included in the above blend)
Combined Sulfur	Proprietary	3.5 (Included in the above blend)
Manganese as derived from Manganese Citrate	Proprietary	1 (Included in above blend)
Iron as derived from Iron Citrate	Proprietary	1.0 (Included in above blend)
Copper as derived from Copper Citrate	Proprietary	.25 (Included in the above blend)

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.

Skin Contact Remove contaminated clothing. Wash skin with soap and water. Wash clothing before reuse. Get medical attention if irritation develops or persists.

Inhalation Remove to fresh air. Seek medical attention if irritation develops or persists.

Ingestion If victim is conscious and alert, give 2-4 cupfuls of milk or water. Call a physician or poison control center immediately.

Most important symptoms and effects

Symptoms Direct contact with eyes may cause irritation or damage. Corrosive to eyes. Contact with skin may cause irritation. May cause irritation to the mucous membranes and upper respiratory tract. Ingestion may cause irritation of the gastrointestinal tract, cramps, vomiting or diarrhea.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Overexposure may aggravate pre-existing skin and lung disorders. Chronic ingestion may cause damage to heart, liver, and blood-forming tissues. Ingestion of large quantities may cause headache, mental impairment, dizziness, and may be fatal.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not release runoff from fire control methods to sewers or waterways.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

None.

Hazardous Combustion Products Metal oxide/oxides. Oxides of sulfur. Ammonia.

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 Use personal protective equipment as required.

For Emergency Responders Follow applicable OSHA regulations (29 CFR 1910.120).

Environmental Precautions Prevent runoff to sewers, streams, and other bodies of water. See Section 12 for additional Ecological Information. See Section 13, Disposal Considerations, for additional information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so. For large spills, dike far ahead of spill for later disposal.

Methods for Clean-Up For small spills, absorb with sand, clay, or other inert absorbent. For large spills contained material may be salvaged for use if uncontaminated.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Use in accordance with product label instructions.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in closed, properly labeled containers in a cool, ventilated area. Keep away from children, pets, domestic animals, and wildlife. Store in compatible containers. Product may be corrosive to aluminum, mild steel and brass. Store in HDPE, fiberglass or stainless steel containers. Use only stainless steel , PVC or polypropylene fittings.

Packaging Materials Do not reuse container. Empty containers should be triple rinsed and use the rinsate in product tank.

Incompatible Materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese as derived from Manganese Citrate	-	(vacated) Ceiling: 5 mg/m^3 Ceiling: 5 mg/m^3 Mn	IDLH: 500 mg/m^3 Mn TWA: 1 mg/m^3 Mn STEL: 3 mg/m^3 Mn
Iron as derived from Iron Citrate	TWA: 1 mg/m^3 Fe	(vacated) TWA: 1 mg/m^3 Fe	TWA: 1 mg/m^3 Fe
Copper as derived from Copper Citrate	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 Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin and Body Protection Wear chemically protective gloves to prevent skin contact. Wear protective clothing. Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Respiratory Protection Respiratory protection suitable for ammonia vapors may be needed. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Seek professional advice prior to respirator selection and use. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. WARNING!: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

General Hygiene Considerations Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Dark brown liquid	**Odor**	Ammonia
Color	Dark brown	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	Not determined	
Melting Point/Freezing Point	~ 0 °C / ~32 °F	
Boiling Point/Boiling Range	84 °C / 184 °F	
Flash Point	Not available	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid-not applicable	
Upper Flammability Limits	Not available	
Lower Flammability Limit	Not available	
Vapor Pressure	Not available	
Vapor Density	Not available	
Specific Gravity	1.254-1.264	(1=Water)
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 Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children. Avoid evaporating to dryness.

Incompatible Materials
None known based on information supplied.

Hazardous Decomposition Products
Metal oxides. Sulfur oxides. Ammonia.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Causes mild skin irritation.

Inhalation Avoid breathing vapors or mists.

Ingestion Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
A proprietary blend of Micronutrient citrates and sulfates in an aqueous ammonia solution	> 90 mL/kg (Rat)	-	-
Combined Sulfur	> 3000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 9.23 mg/L (Rat) 4 h

Information on physical, chemical and toxicological effects

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

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. This product may be moderately toxic to aquatic life and may cause eutrophication. Product contains copper compounds which may exhibit aquatic plant and fish toxicity characteristics.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Combined Sulfur		866: 96 h Brachydanio rerio mg/L LC50 static 14: 96 h Lepomis macrochirus mg/L LC50 static 180: 96 h Oncorhynchus mykiss mg/L LC50 static		

Persistence/Degradability

Not determined

Bioaccumulation

Not determined

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 as derived from Copper Citrate	Toxic

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

Not determined

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*

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Manganese as derived from Manganese Citrate -		1 (Included in above blend)	1.0
Copper as derived from Copper Citrate -		.25 (Included in the above blend)	1.0

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper as derived from Copper Citrate (.25 (Included in the above blend))		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
Combined Sulfur	X	X	X
Manganese as derived from Manganese Citrate	X		X
Iron as derived from Iron Citrate			X
Copper as derived from Copper Citrate	X		X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	Not determined	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	Not determined	Not determined	Not determined	Not determined

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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