1. Identification

GHS Product Identifier: Nutrivix Zn Cu	Version #: 1.1
Synonyms:	Issue Date: 01/23/20 Revision Date: 01/23/20 Supersedes Date: 10/31/19
CAS#: None	
Recommended Use: Fertilizer, Micronutrient.	
Recommended Restrictions: Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.	
Supplier: VERANO365, LLC 375 Commerce St. STE 100 Southlake, TX 76092 (817) 713-8387	
Emergency Phone #: CHEMTREC at (703) 527-3887 or 1-800-424-9300	Email: qualitysupportv365@verano365.com

2. Hazard Identification

GHS Classification & Label Elements

Signal Word: **Danger**

Type of Hazard		Category	Hazard Symbol
Physical Hazards			
Health Hazards	Skin Corrosion/Irritation Serious Eye Damage Acute toxicity	2 2A 4	
Environmental Hazards	Aquatic Toxicity (Acute) Aquatic Toxicity (Chronic)	1 1	

Hazard Statement

- H315 – Cause skin irritation
- H318 – Causes serious eye damage.
- H400 – Very toxic to aquatic life.
- H410 – Very toxic to aquatic life with long lasting effects.

Precautionary Statement

- Prevention
  - P264 – Wash (hands) thoroughly after handling.
  - P273 – Avoid release into environment.
  - P280 – Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response
  - P301 + P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
  - P302 + P352 – IF ON SKIN: Wash with plenty of soap and water.
  - P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P330 – Rinse mouth
  - P332 + 313 – If skin irritation occurs, get medical attention.
  - P337 + 313 – If eye irritation persists, get medical attention.
  - P362 + 364 – Take off contaminated clothing and wash it before reuse.
  - P391 – Collect spillage
- Storage
  - P403 + P235 – Store in a well-ventilated place. Keep cool
- Disposal
  - P501 - Dispose of contents / container in accordance with local regulations
- Hazards Not Otherwise Classified
  - None known

3. Composition / Information on Ingredients

Components	Common Synonyms	CAS#	Percent (w/w)
Copper (II) sulfate pentahydrate	Copper Sulfate	7758-99-8	2.25 – 3.5%
Zinc Sulfate Monohydrate	NA	7446-19-7	16.0 – 24.5%
Sulfuric Acid 35%	NA	7664-93-9	0.1 – 5.0%

4. First Aid Measures

First Aid Procedures

- Inhalation
  - Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.
- Skin Contact
  - Wash off with soap and plenty of water for at least 15 minutes. Removed contaminate clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
- Eye Contact
  - Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

- Ingestion
  - Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

Symptoms/Effects (Acute & Delayed)

- See Section 11 for more detailed information on health effects and symptoms.

Treatment

- Treat symptomatically.

Notes to Physician

- Treat symptomatically.

General Information

- In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use
- personal protective equipment as required.

5. Fire-fighting Measures

Flammable Properties:

- None flammable

Extinguishing Media:

Suitable	Do Not Use
• Use alcohol-resistant foam, carbon dioxide, water or dry chemical spray.	

Protection of Fire-fighters:

Specific Hazards Arising from the Chemical	Protective Equipment and Precautions
• Sulfuric acid fumes may be generated by thermal decomposition	• Self-contained breathing apparatus (SCBA) and full protective gear. • Structural firefighting protective clothing will only provide limited protection.

Fighting Equipment/Instructions:

- Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not.

6. Accidental Release Measures

Personal Precautions and Protections

- Ensure adequate ventilation.
- Keep people away from and upwind of spill/leak.
- Avoid inhalation, ingestion and contact with skin and eyes.
- When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Ensure clean-up is conducted by trained personnel only.
- Refer to protective measures listed in sections 7 and 8.

Environmental Precautions

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

Methods of Containment

- Stop leak if safe to do so. Contain spillage, and then collect with non- combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
- For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Cleanup

- Dike the spilled area where possible. Small spills may be absorbed with sand or inert non-combustible absorbent pads. Collect product using non-sparking tools and placed in suitable, covered, labeled containers. Never return spills in original containers for re-use.
- Absorb spilled liquid with poly pads or other suitable absorbent materials. Shovel up and place all spill residue in suitable containers. Dispose of at an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal (see Section 13 - Disposal Considerations).

7. Handling and Storage

Handling

- Do not breathe dust/fume/gas/mist/vapours/spray.
- Do not get in eyes, on skin, or on clothing.
- Wash hands thoroughly after handling.
- Use only with adequate ventilation.
- Section 2 – Precautionary Statements

Storage and Incompatibilities

- Store at room temperature, between 40F and 86F (4C – 30C).
- Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers
- Store in a well-ventilated area away from incompatible materials (see Section 10 of the SDS). Keep container tightly closed and upright when not I use to prevent leakage.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits

Components	Limit Type	OSHA PEL	ACGIH TLV	NIOSH REL
Zinc Sulfate	TWA	5 mg/m^3 8 hours	-	-
Copper Sulfate Pentahydrate	REL	-	-	1mg/m^3
Sulfuric Acid	REL	-	-	1mg/m^3

Notes: PEL = Permissible Exposure Limit; PPM = Parts Per Million; REL = Recommended Exposure Limit; TVL = Threshold Limit Value; TWA = Time-Weighted Average. All Values are based on 2012 Standards.

Engineering Controls

- Effective exhaust ventilation system.
- Maintain air concentrations below occupational exposure standards.

PPE

- Impervious chemical resistant gloves
- Goggles/face shield
- For higher level protection, use MSHA/NIOSH approved respiratory protection.
- Cover-all, rubber aprons, or chemical protective clothing
- Impervious footwear (if situation requires)

General Hygiene

- Handle in accordance with good industrial hygiene and safety practice.
- Remove and wash contaminated clothing before re-use.
- Wash face, hands and any exposed skin thoroughly after handling.
- Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

9. Physical and Chemical Properties

Physical State	Clear, Liquid
Color	Light blue
Odor	Mild
Odor Threshold	Not available
pH	1.5 – 2.5
Melting Point/Freezing Point	Not available
Boiling Range	220°F (104°C)

Freezing Point	32°F (0°C)
Flash Point	No Flash at 214°F (101°C)
Evaporation Rate	Not available
Flammability (solid, gas)	Not available
Lower Explosive Limit (by volume)	Not available
Upper Explosive Limit (by volume)	Not available
Vapor Pressure	Not available
Vapor Density	Not available
Specific Gravity / Density	1.19 – 1.25
Bulk Density	10.0 – 10.5 lb./gal
Solubility(ies)	Completely miscible
Partition Coefficient (n-octanol/water)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available
Dynamic Viscosity Temperature	Not available

10. Stability and Reactivity

Reactivity

- Water soluble.

Chemical Stability

- Stable under normal conditions of use.

Possibility of Hazardous Reactions

- No data available.

Conditions to Avoid

- None known.

Incompatible

Materials

- May react with strong acids and strong reducing agents.

Hazardous Decomposition Products

- Thermal decomposition may create Sulfuric Acid fumes

11. Toxicological Information

Routes of Exposure

- Eye Contact – Causes serious eye damage.
- Skin Contact – Causes skin irritation.
- Ingestion – May be irritating to the mucous membranes and upper respiratory tract.
- Inhalation – May be harmful by inhalation or skin absorption.

Toxicological Effects

- No data available at this time

Mutagenicity

- No data available at this time.

Carcinogenicity

- No data available at this time.

Reproductive Toxicity

- No data available at this time.

Specific Target Organ Toxicity-Single Exposure

- See routes of exposure.

Specific Target Organ Toxicity-Repeated Exposure

- No data available at this time

Aspiration Hazard

- No data available at this time.

12. Ecological Information

Eco toxicity

- No data available at this time.

Persistence and Degradability

- No data available at this time.

Bio accumulative Potential

- Bioaccumulation of this product has not been determined.

Mobility in Soil

- Mobility of this material has not been determined.

Water Solubility

- Product is expected to be miscible in water.

Other Adverse Effects

- No data available at this time.

13. Disposal Considerations

Disposal Methods

- Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for classification determinations are listed in 40 CFR 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
- Do not contaminate lakes, streams, ponds, estuaries, ocean or other bodies of water by discharge of waste effluents or equipment wash-water. Do not dispose of in surface waters, or in storm drains. Waste should be recycled or disposed of in accordance with regulations. Large amounts should be collected for reuse or consigned to licensed hazardous waste haulers for disposal.

Regulations

- Dispose in accordance with all applicable regulations.

Waste from Residues/ Unused Products

- Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. The material and its container must be disposed of in a safe manner.

Hazardous Waste Code

- The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Contaminated Packaging

- Follow container label warnings. Containers should be taken to an approved waste handling site for appropriate disposal.

14. Transport Information

DOT

UN Number(s)	1760
UN Proper Shipping Name	Corrosive, corrosive liquid n.o.s. (cupric sulfate), (zinc sulphate)
Transport Hazard Class(es)	8, 9
Packing Group	III
ERG	154

Special Provisions	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.

15. Regulatory Information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

- None listed

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

- None listed

CERCLA (Superfund) Reportable Quantities

- Copper (II) sulfate pentahydrate: 10lb.
- Zinc Sulfate Monohydrate: 1000lb.

Superfund Amendments And Reauthorization Act of 1986 (SARA)

- SARA 302 Components – None listed.
- SARA 311/312 – Refer to Section 2: Hazard Identification of this SDS for classification of substance.
- SARA 313 Components – Copper (II) sulfate pentahydrate, Zinc Sulfate Monohydrate

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

- None listed

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

- None listed.

Safe Drinking Water Act (SDWA)

- None listed.

16. Other Information

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Revision Date: 01/23/20

Version #: 1.1

References: NA

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