

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Steric S  
**Product Number:** FFN-00570  
**Product Use:** Macronutrient Fertilizer

**Supplier Information:** Verdesian Life Sciences, U.S., LLC  
1001 Winstead Drive, Suite 480  
Cary, NC 27513  
1-800-868-6446

**Emergency Number:** 1-800-535-5053 INFOTRAC

**2. HAZARDS IDENTIFICATION****CLASSIFICATION****HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)**

May be harmful if swallowed.

**OTHER HAZARDS**

Harmful to aquatic life with long lasting effects

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

| COMPONENTS        | CAS NO.     | % BY WEIGHT |
|-------------------|-------------|-------------|
| Ammonium Sulfate  | 7783-20-2   | Proprietary |
| Other Ingredients | Proprietary | Proprietary |

\*\*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****First Aid Measures:**

**General Advice:** Provide this SDS to medical personnel for treatment.

**If in Eyes:** If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes lifting upper and lower eyelids occasionally. If eye irritation persists: Get medical advice/attention.

**If on Skin:** Wash with soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. Get medical attention if irritation develops or persists.

**If Inhaled:** Remove exposed individual(s) to fresh air for 20 minutes. Consult a physician / poison center if individual's condition declines or if symptoms persist.

**If Swallowed:** Do not induce vomiting without medical advice. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects:** May cause eye, skin, and respiratory tract irritation. May cause nausea, vomiting, stomach ache, and diarrhea.

**Recommendations for immediate medical care and special treatment, if needed:**

**Note to Physician:** Treat symptomatically and supportively.

Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to the effects of the substance.

### 5. FIRE FIGHTING MEASURES

**Extinguishing Media:** Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.

**Specific Hazards Arising from the substance/mixture during a fire:** Emits toxic fumes under fire conditions.

**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:** Ventilate affected area. Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**Environmental Precautions:** Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

**Methods for Containment:** Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up:** Avoid creating dust. Sweep up and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. See Section 13: DISPOSAL CONSIDERATIONS for more information.

### 7. HANDLING AND STORAGE

#### Precautions for Safe Handling

**Handling:** Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Use with adequate ventilation. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash face, hands, and any exposed skin thoroughly after handling. Avoid generation of dust.

#### Conditions for safe storage, including any incompatibilities

**Storage:** Keep containers tightly closed in a dry, cool and well-ventilated place. Do not contaminate water, food or feed by storage or disposal.

**Incompatible Materials:** Strong oxidizing agents; strong alkalis.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Exposure Guidelines:

| Component             | OSHA       |      | ACGIH |      | Unit              |
|-----------------------|------------|------|-------|------|-------------------|
|                       | TWA        | STEL | TWA   | STEL |                   |
| Citric acid (77-92-9) | 15 (Total) | NE   | NE    | NE   | mg/m <sup>3</sup> |

NE = Not Established

#### Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

#### Personal Protective Equipment:

**Eye/Face Protection:** Use safety goggles, safety glasses with side shields and/or a full face shield as described by OSHA's eye and face protection regulations in 29CFR 1910.133.

**Skin and Body Protection:** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Respiratory Protection:** Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator.

**General Hygiene Considerations:** Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|  |                   |
|--|-------------------|
| <b>Appearance:</b>                                   | Clear liquid      |
| <b>Odor:</b>   | None              |
| <b>Odor threshold:</b>                               | No data available |
| <b>pH:</b>   | 5.5               |
| <b>Melting point/freezing point:</b>                 | No data available |
| <b>Initial boiling point and boiling range</b>       | No data available |
| <b>Flash point:</b>                                  | No data available |
| <b>Evaporation rate:</b>                             | No data available |
| <b>Flammability (solid, gas):</b>                    | No data available |
| <b>Upper/lower flammability or explosive limits:</b> | No data available |
| <b>Vapor pressure:</b>                               | No data available |
| <b>Vapor density:</b>                                | No data available |
| <b>Relative density:</b>                             | No data available |
| <b>Solubility(ies):</b>                              | Miscible          |
| <b>Partition coefficient: n-octanol/water:</b>       | No data available |
| <b>Autoignition temperature:</b>                     | No data available |
| <b>Decomposition temperature:</b>                    | No data available |
| <b>Viscosity:</b>                                    | No data available |

**Note:** Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

## 10. STABILITY AND REACTIVITY

**Reactivity:**

**Chemical Stability:** This material is stable under normal handling and storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Keep out of reach of children.

**Incompatible Materials:** Strong oxidizing agents; strong alkalis.

**Hazardous Decomposition Products:** Under fire conditions may produce gases such as oxides of carbon.

## 11. TOXICOLOGICAL INFORMATION

**Potential Health Effects:**

To the best of our knowledge, the chemical, physical and toxicological properties of this material have not been thoroughly investigated.

**Likely Routes of Exposure:** Inhalation, ingestion, eye and skin contact.

**Eye Contact:** Irritating to eyes.

**Skin Contact:** Irritating to skin.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** Do not inhale.

**Toxicological Data:**

| Chemical Name                 | Oral LD50            | Dermal LD50 | Inhalation LC50 |
|-------------------------------|----------------------|-------------|-----------------|
| Ammonium Sulfate<br>7783-20-2 | = 2000 mg/kg ( Rat ) | -           | -               |
| Citric Acid<br>77-92-9        | = 3000 mg/kg ( Rat ) | -           | -               |

**Symptoms:** Please see section 4 of this SDS for symptoms.

**Assessment Carcinogenicity:** None listed with ACGIH, IARC, NTP or OSHA.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:**

Harmful to aquatic life with long lasting effects.

**Component Information:**

| Chemical Name                 | Fish  | Crustacea   |
|-------------------------------|---|---|
| Ammonium Sulfate<br>7783-20-2 | 250: 96 h Brachydanio rerio mg/L LC50<br>480: 96 h Brachydanio rerio mg/L LC50 flow-through<br>126: 96 h Poecilia reticulata mg/L LC50<br>460 - 1000: 96 h Leuciscus idus mg/L LC50 static<br>420: 96 h Brachydanio rerio mg/L LC50 semi-static<br>18: 96 h Cyprinus carpio mg/L LC50<br>32.2-41.9: 96 h Oncorhynchus mykiss mg/L LC50 flow-through<br>5.2-8.2: 96 h Oncorhynchus mykiss mg/L LC50 static<br>100: 96 h Pimephales promelas mg/L LC50<br>123-128: 96 h Poecilia reticulata mg/L LC50 semi-static | 14: 48 h Daphnia magna mg/L LC50<br>423: 24 h Daphnia magna mg/L EC50 |
| Citric Acid<br>77-92-9        | 1516: 96 h Lepomis macrochirus mg/L LC50 static   | 120: 72 h Daphnia magna mg/L EC50                                     |

**Persistence and Degradability:** No data available

**Bioaccumulation:** No data available

**Mobility in Soil:**

| Chemical Name                 | Partition Coefficient |
|-------------------------------|-----------------------|
| Ammonium Sulfate<br>7783-20-2 | -5.1                  |
| Citric Acid<br>77-92-9        | -1.72                 |

**Other Adverse Effects:** No data available

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:**

Disposal should be in accordance with applicable local, state and federal laws and regulations.

**Container Disposal Method:**

Disposal should be in accordance with applicable local, state and federal laws and regulations.

## 14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this SDS.

**DOT:**

Non Regulated

**IMDG:**

Non Regulated

**IATA:**

Non Regulated

**15. REGULATORY INFORMATION****U.S. FEDERAL REGULATIONS**

**TSCA Inventory:** All components are listed.

**SARA Hazard Notification/Reporting:**

**Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370.66):**

Immediate

**Section 313 Toxic Chemical(s):**

None

**Reportable Quantity (RQ) under U.S. CERCLA:**

None

**RCRA Waste Code:**

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

**State Information:**

Other state regulations may apply. Check individual state requirements.

**California Proposition 65:** Not Listed.

**16. OTHER INFORMATION**

**National Fire Protection Association (NFPA) Hazard Rating:**

**Health Hazards:** 1    **Flammability:** 1    **Instability:** 0    **Special Hazards:** ND

**HMIS**

**Health Hazards:** 1    **Flammability:** 1    **Physical Hazards:** 0    **Personal Protection** ND

Hazards Scale: 0 = Minimal    1 = Slight    2 = Moderate    3 = Serious    4 = Severe

**Key to abbreviations:**

ACGIH = America Conference of Governmental Industrial Hygiene

IARC = International Agency for Research on Cancer

N/A = Not applicable

ND = Not determined

NDA = No data available

NE = Not Established

NTP = National Toxicology Program

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits

TWA = Time Weighted Average

**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.

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