Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: NAPCO LAS
Synonyms: Liquid Ammonium Sulfate, LAS, Ammonium Sulfate
Distributed By: NAPCO Chemical Company, Inc.
P.O. Box 1239
Spring, TX 77383
Telephone: 1 (281) 651-6800
Fax: 1 (281) 651-6868
E-mail:
Emergency Contact: CHEMTREC (24 Hrs) at 1 (800) 424-9300
United States, Canada, Puerto Rico, and Virgin Islands
Physical Description: Clear, yellow to hazy gray liquid

2. HAZARD IDENTIFICATION

Emergency Overview:

Causes eye irritation.
May cause skin irritation.
Inhalation of mists may cause irritation to the respiratory tract.
Heating or reacting with Alkali/Base will cause ammonia flash.

3. PRODUCT INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Sulfate</td>
<td>38-40</td>
</tr>
<tr>
<td>CAS Number:</td>
<td>7783-20-2</td>
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</tbody>
</table>
### 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with water for at least 15 minutes. Hold eyelids open to ensure adequate flushing. Get immediate medical attention.

**Skin Contact:** Remove contaminated clothing and shoes. Wash affected skin area with soap and water. If irritation develops and persists, get medical attention. Wash clothing before reuse.

**Inhalation:** Remove to fresh air. If discomfort persists seek medical attention.

**Ingestion:** If ingested, dilute swallowed material by drinking water. DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Get immediate medical attention.

**Other Instructions:** Notes to physician: Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Flash Point:** > 200 °F

**Auto Ignition Temperature:** Not applicable

**Flammable Limits, in Air:**
- **LEL (%):** Not applicable
- **UEL (%):** Not applicable

**Extinguishing Media:** Dry chemical, foam, water, or carbon dioxide

**Special Fire Fighting Procedure:**
In the event of a fire, wear NIOSH approved, positive pressure, self-contained breathing apparatus (SCBA) and full protective clothing. Evacuate all non-essential personnel from the danger area.

**Unusual Fire and Explosion Hazards:**
Explosion hazard if mixed with potassium or potassium containing oxidizers during a fire. Explosion risk exists when fed in the same carrier with Chlorine or Chlorine Dioxide. Heating or addition of strong alkalis or bases cause "Ammonia Flash" or ammonium conversion to ammonia gas which can form an ignitable mixture with the air near the surface of the liquid.

**Hazardous Combustion Products:** When heated to decomposition, hydrogen cyanide, carbon monoxide and ammonia may be emitted.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:**
Restrict access to keep out unauthorized or unprotected personnel. Stay upwind of spilled material. Wear appropriate PPE during all cleanup activities. Avoid inhalation and direct contact.

**Environmental Precautions:**
Keep spilled material away from sewage/drainage systems and waterways. This product contains a U.S. EPA Reportable Quantity (RQ) substance. If amounts exceeding the Reportable Quantity are released, notification of the National Response Center is required (800)424-8802. See section 15.
Methods for clean-up: All cleanup personnel must be properly trained. Confine the spill and remove incompatible materials and ignition sources. Ensure adequate ventilation. Secure the source of the leak if conditions are safe. Contain spill and collect using an appropriate absorbent material such as clay or vermiculite. Place waste in an appropriate container for disposal. Use care during cleanup to avoid exposure to the material and injury from broken containers.

7. HANDLING AND STORAGE

Handling: Use with adequate ventilation. Wear proper PPE. Open containers slowly in case of pressure accumulation. Wash hands after handling and before eating, drinking or smoking.

Storage: DO NOT FREEZE. Store in fiberglass or HDPE tanks. Outdoor storage tanks should have adequate secondary containment. LAS is corrosive to concrete pads and some metals such as aluminum and cast iron.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Eye Protection: Wear chemical splash goggles or face shield.

Skin Protection: Chemical resistant gloves and boots should be worn as needed to minimize skin exposure.

Respiratory Protection: None normally required. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal requirements must be followed whenever workplace conditions warrant respirator use.

Engineering Controls: Provide sufficient general and local exhaust ventilation to maintain safe exposure levels. Provide a source of clean water for flushing eyes and skin.

Required Work/Hygiene Procedure: Wash hands thoroughly after handling. Do not eat, drink or smoke in work area. If unusual exposures are expected, an industrial hygiene review of work practices, engineering controls and PPE is recommended.

Exposure Guidelines:

<table>
<thead>
<tr>
<th>Element</th>
<th>ACGIH-TLV</th>
<th>OSHA-PEL</th>
<th>NIOSH IDLH</th>
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<tbody>
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<td>Ammonium Sulfate</td>
<td>7783-20-2</td>
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<td></td>
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</table>
9. PHYSICAL PROPERTIES

Physical Form: Liquid
Color: Yellow to hazy gray
Odor: Odorless
Molecular Weight: 132.14 g/mol \((\text{NH}_4)_2\text{SO}_4\)
Boiling Point: 214.6 °F (102 °C)
Freezing Point: 32 °F (0 °C)
Solubility in Water: Soluble
Specific Gravity: 1.216 - 1.288
Vapor Density: > 1 (air = 1)
Evaporation Rate: <1 (Butyl Acetate = 1)
Vapor Pressure: No Data Available
% Volatile: Not Applicable
pH: 3.0 - 5.0

The physical data included above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.
Conditions to Avoid: Will emit toxic fumes when added to strong oxidizing agents, strong alkalis, strong acids, chlorates and nitrates. Heating or addition of strong alkalis or bases will cause "ammonia flash" or when ammonium is converted to ammonia which can then form an ignitable mixture with the air near the surface of the liquid or within the container. Corrosive to most metals.

Hazardous Decomposition: Forms sulfur trioxide and nitrogen and ammonia oxides.
Hazardous Polymerization: Not expected to occur.
**11. TOXICOLOGY INFORMATION**

**Primary Exposure:** Eye, skin contact, inhalation

**Potential Health Effects:**
- **Eye Contact:** Liquid, fumes, mists or vapors may cause irritation.
- **Skin Contact:** May cause irritation.
- **Inhalation:** May cause moderate irritation to respiratory tract.
- **Ingestion:** May cause irritation to mouth, throat and stomach. Vomiting, difficulty breathing and other gastrointestinal effects.

**Carcinogenicity:** The components of this product are not classified as carcinogenic by OSHA, NTP, or IARC.

**Medical Concerns:** Not known.

**Toxicological Data:**

<table>
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<tr>
<th>Substance</th>
<th>Oral LD50 (Rat)</th>
<th>Dermal LD50 (Rabbit)</th>
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<tr>
<td>Ammonium Sulfate</td>
<td>2840 mg/kg</td>
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</table>

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity:** Contains no substances known to be hazardous to the environment.

**Biodegradability:** Degradable through normal treatment in waste water treatment plants.

**13. DISPOSAL CONSIDERATIONS**

**Disposal Method:** This product must be disposed of in accordance with Federal, state and local environmental regulations regarding inorganic chemical wastes.

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

**14. TRANSPORTATION INFORMATION**

**Proper Shipping Name:** Not regulated by DOT

**Hazard Label:** Not Applicable

**Hazard Class:** Not Applicable

**UN/NA Number:** Not Applicable

**Packing Group:** Not Applicable

**EPA Reportable Quantity (RQ):** Not Applicable

**Marine Pollutant:** Not Applicable

**Emergency Response Guide:** Not Applicable
15. REGULATORY INFORMATION

NFPA 704 Information:

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<th>Health Rating</th>
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<tbody>
<tr>
<td>Flammability Rating</td>
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<tr>
<td>Reactivity Rating</td>
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<tr>
<td>Other Hazards</td>
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U.S. Federal Regulatory Information:

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<tr>
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<tr>
<td>SARA Title III § 313</td>
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16. OTHER INFORMATION

All information appearing herein is based up data obtained from the manufacturer and/or recognized technical sources.

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