Material Safety Data Sheet  
Ammonium Lauryl Sulfate

Section 1: Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Company Information</th>
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</thead>
<tbody>
<tr>
<td>Ammonium Lauryl Sulfate</td>
<td>Chemtrade International</td>
</tr>
<tr>
<td>Customs Tariff No: 34021100</td>
<td>Rm. 201, Unit 3, Building 8, Shijia Garden, No. 93, Xiangjiang Road, Qingdao Development Zone, Qingdao, Shandong, China 266555</td>
</tr>
</tbody>
</table>

Section 2: Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Composition</th>
<th>Name</th>
<th>CAS No.</th>
<th>EINECS No.</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Lauryl Sulfate</td>
<td>2235-54-3, 7732-18-5</td>
<td>70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients: Ammonium Lauryl Sulfate LD50: Not available. LC50: Not available. Formaldehyde Acute oral toxicity (LD50): 42 mg/kg [Mouse]. Acute oral toxicity (LD50): 100 mg/kg [Rat] Acute toxicity of the mist (LC50): 454000 mg/m 4 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant).

Potential Chronic Health Effects: Slightly hazardous in case of skin contact (sensitizer).

Carcinogenic Effects: Classified A2 (Suspected for human.) by ACGIH, 2A (Probable for human.) by IARC [Formaldehyde gas or Formaldehyde].

Mutagenic Effects: Mutagenic for mammalian somatic cells. [Formaldehyde gas or Formaldehyde]. Mutagenic for bacteria and/or yeast. [Formaldehyde or Formaldehyde].

Teratogenic Effects: Not available

Developmental Toxicity: Not available

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.
Section 5: Fire and Explosion Data

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable.

**Flammable Limits:** Not applicable.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not applicable.

**Explosion Hazards in Presence of Various Substances:**
- Risks of explosion of the product in presence of static discharge: Not available.
- Non-explosive in presence of shocks.

**Fire Fighting Media and Instructions:** Not applicable.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

Section 6: Accidental Release Measures

**Small Spill:**
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**
Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

**Precautions:**
Do not breathe gas/fumes/vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

**Personal Protection:**
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:**
- Formaldehyde gas
  - STEL: 0.3 (ppm) from ACGIH (TLV) [United States]
  - STEL: 0.37 (mg/m³) from ACGIH (TLV) [United States]
  - TWA: 0.75 STEL: 2 (ppm) from OSHA (PEL) [United States]
  - TWA: 2 STEL: 2 (ppm) [United Kingdom (UK)]
  - TWA: 2.5 STEL: 2.5 (mg/m³) [United Kingdom (UK)]
- Consult local authorities for acceptable exposure limits.
### Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.
**Odor:** Not available.
**Taste:** Not available.
**Molecular Weight:** Not applicable.
**Color:** Colorless to light yellow.
**pH (1% soln/water):** Neutral.
**Boiling Point:** The lowest known value is 100°C (212°F) (Water).

**Melting Point:** Not available.
**Critical Temperature:** Not available.

**Specific Gravity:** 1.01-1.05 (Water = 1)

**Vapor Pressure:** The highest known value is 2.3 kPa (@ 20°C) (Water).
**Vapor Density:** The highest known value is 0.62 (Air = 1) (Water).

**Volatile:** Not available.
**Odor Threshold:** Not available.
**Water/Oil Dist. Coeff.:** Not available.
**Ionicity (in Water):** Non-ionic.
**Dispersion Properties:** See solubility in water

**Solubility:** Easily soluble in cold water, hot water.

### Section 10: Stability and Reactivity Data

**Stability:** The product is stable.
**Instability Temperature:** Not available.
**Conditions of Instability:** Incompatible materials
**Incompatibility with various substances:** Reactive with oxidizing agents, acids.
**Corrosivity:** Non-corrosive in presence of glass.
**Special Remarks on Reactivity:** Not Available
**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

### Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Eye contact.
**Toxicity to Animals:**
- Ammonium Lauryl Sulfate:
  - LD50: Not Available
  - LC50: Not available
- Formaldehyde:
  - Acute oral toxicity (LD50): 42 mg/kg [Mouse].
  - Acute oral toxicity (LD50): 100 mg/kg [Rat]
  - Acute toxicity of the mist(LC50): 454000 mg/m 4 hours [Mouse].

**Chronic Effects on Humans:**
- CARCINOGENIC EFFECTS: Classified A2 (Suspected for human.) by ACGIH, 2A (Probable for human.) by IARC [Formaldehyde gas or Formaldehyde].
- MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Formaldehyde gas or Formaldehyde].
- Mutagenic for bacteria and/or yeast. [Formaldehyde gas or Formaldehyde].
- TERATOGENIC EFFECTS: Not Available
- DEVELOPMENTAL TOXICITY: Not available

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant).

**Special Remarks on Toxicity to Animals:** Not available.
**Special Remarks on Chronic Effects on Humans:**
- May affect genetic material
- May cause adverse reproductive effects (paternal and maternal effects and fetotoxicity) and birth defects.
- May cause cancer. (Formaldehyde gas or Formaldehyde)

**Special Remarks on other Toxic Effects on Humans:**
Acute Potential Health Effects:
- Skin: Causes skin irritation. May have drying effect on the skin.
Eyes: Causes eye irritation.  
Inhalation: May cause respiratory tract irritation.  
Ingestion: No information.  
The toxicological properties of this substance have not been fully investigated.  
(Ammonium Lauryl Sulfate)

Section 12: Ecological Information

Ecotoxicity: Not available.  
BOD5 and COD: Not available.  
Products of Biodegradation: 
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.  
Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.  
Special Remarks on the Products of Biodegradation: Not Available

Section 13: Disposal Considerations

Waste Disposal: 
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).  
Identification: Not applicable.  
Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:  
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Formaldehyde  
California prop. 65 (no significant risk level): Formaldehyde: 0.04 mg/day (inhalation)  
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Formaldehyde  
Connecticut hazardous material survey: Formaldehyde  
Illinois toxic substances disclosure to employee act: Formaldehyde  
Illinois chemical safety act: Formaldehyde  
New York release reporting list: Formaldehyde  
New York acutely hazardous substances: Formaldehyde  
Rhode Island RTK hazardous substances: Formaldehyde  
Pennsylvania RTK: Formaldehyde  
Minnesota: Formaldehyde Solution  
Massachusetts RTK: Formaldehyde  
Massachusetts spill list: Formaldehyde  
New Jersey: Formaldehyde  
New Jersey spill list: Formaldehyde  
Louisiana RTK reporting list: Formaldehyde  
Louisiana spill reporting: Formaldehyde  
California Director's List of Hazardous Substances: Formaldehyde  
TSCA 8(b) inventory: Ammonium Lauryl Sulfate; Water; Formaldehyde  
TSCA 4(f) priority risk review: Formaldehyde  
SARA 302/304/311/312 extremely hazardous substances: Formaldehyde  
SARA 313 toxic chemical notification and release reporting: Formaldehyde  
CERCLA: Hazardous substances: Formaldehyde Solution: 100 lbs. (45.36 kg);  
Other Classifications:  
WHMIS (Canada): CLASS D-2B: Material causing other toxic effects (TOXIC).  
DSCL (EEC):
R36/37/38- Irritating to eyes, respiratory system and skin.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28- After contact with skin, wash immediately with plenty of water.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

**HMIS (U.S.A.):**
- **Health Hazard:** 2
- **Fire Hazard:** 0
- **Reactivity:** 0
- **Personal Protection:** h

**National Fire Protection Association (U.S.A.):**
- **Health:** 1
- **Flammability:** 0
- **Reactivity:** 0

**Specific hazard:**
- **Protective Equipment:**
  - Gloves.
  - Lab coat.
  - Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
  - Splash goggles.

### Section 16: Other Information

**MSDS Creation Date:** 6/16/2000
**Revision #4 Date:** 3/15/2007

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