1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer............: EM SCIENCE
                      A Division of EM Industries
                      P.O. Box 70
                      480 Democrat Road
                      Gibbstown, N.J. 08027

Preparation Date.: 11/30/99

Information Phone Number.: 856-423-6300
Hours: Mon. to Fri. 8:30-5

Chemtrec Emergency Number: 800-424-9300
Hours: 24 hrs a day

Catalog Number(s):

AX0715  AX0721  AX0720  AX0716

Product Name:
Aluminum Potassium Sulfate

Synonyms:
Alum, Potassium Alum

Chemical Family:
Inorganic Salt

Formula:
AlK(SO₄)₂·12H₂O

Molecular Weight.: 474.39

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Appr %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Potassium Sulfate</td>
<td>7784-24-9</td>
<td>100%</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Handling care generally in keeping with safe laboratory practices is recommended.

**Appearance:**
Colorless or white odorless crystals

**POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)**

**Symptoms of Exposure:**
Dust may be irritating to respiratory passages.

**Medical Cond. Aggravated by Exposure:**
Data not available.

**Routes of Entry:**
Inhalation, ingestion

**Carcinogenicity:**
The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

| 4. FIRST AID MEASURES |

**Emergency First Aid:**
GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.
Skin: Wash thoroughly with soap and water.
Eyes: Immediately flush thoroughly with water for at least 15 minutes.
Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion: Get immediate medical attention; if conscious, give water freely.

| 5. FIRE FIGHTING MEASURES |

**Flash Point (F):** Noncombustible
**Flammable Limits LEL (%):** N/A
**Flammable Limits UEL (%):** N/A

**Extinguishing Media:**
Use any suitable for adjacent material.

**Fire Fighting Procedures:**
Wear self-contained breathing apparatus.

**Fire & Explosion Hazards:**
Thermal decomposition produces toxic fumes.

### 6. ACCIDENTAL RELEASE MEASURES

**Spill Response:**
Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Exposure / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Disposal. Comply with Federal, State, and local regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

### 7. HANDLING AND STORAGE

**Handling & Storage:**
Keep container closed. Avoid dusting. Store in a cool, dry, well-ventilated area. Do not breathe dust. Do not get in eyes. Avoid prolonged, or repeated, skin contact.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:**
- **Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:**
  Material should be handled or transferred in an approved fume hood or with adequate ventilation. Protective gloves (Neoprene, PVC or equivalent) should be worn to prevent skin contact. Safety glasses with side shields should be worn at all times.

**Work/Hygenic Practices:**
Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

**EXPOSURE GUIDELINES**

**OSHA - PEL:**

<table>
<thead>
<tr>
<th>Component</th>
<th>TWA</th>
<th>STEL</th>
<th>CL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Potassium Sulfate</td>
<td>2 Al</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ACGIH - TLV:**

<table>
<thead>
<tr>
<th>Component</th>
<th>TWA</th>
<th>STEL</th>
<th>CL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Potassium Sulfate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
If there are no exposure limit numbers listed in the Exposure Guidelines chart, this indicates that no OSHA or ACGIH exposure limits have been established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point (C 760 mmHg) : Decomposes
Melting Point (C) : 92°C
Specific Gravity (H₂O = 1) : 1.725
Vapor Pressure (mm Hg) : N/A
Percent Volatile by vol (%) : N/A
Vapor Density (Air = 1) : N/A
Evaporation Rate (BuAc = 1) : N/A
Solubility in Water (%) : 12.2%
Appearance :
Colorless or white odorless crystals

10. STABILITY AND REACTIVITY

Stability: Yes

Hazardous Polymerization:
Does not occur

Hazardous Decomposition:
SOₓ

Conditions to Avoid:
Extreme heat. Dusting (dispersion of fine particles into the air).

Materials To Avoid:

( ) Water
( ) Acids
( ) Bases
( ) Corrosives
( ) Oxidizers
(X) Other: None indicated

11. TOXICOLOGICAL INFORMATION

Toxicity Data

None established
**Toxicological Findings:**
Tests on laboratory animals indicate material may produce adverse reproductive effects.
Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

**12. DISPOSAL CONSIDERATIONS**

**EPA Waste Numbers:**

**Treatment:**
Material does not have an EPA Waste number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished.
ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

**13. TRANSPORT INFORMATION**

**DOT Proper Shipping Name:**
non-regulated

**DOT ID Number :**
none

**14. REGULATORY INFORMATION**

**TSCA Statement:**
This product is a "Mixture". The CAS numbers of all components are listed on the TSCA Inventory.

<table>
<thead>
<tr>
<th>Component</th>
<th>SARA EHS</th>
<th>SARA EHS TPQ</th>
<th>CERCLA RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Potassium Sulfate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA Floor List</th>
<th>SARA 313</th>
<th>DeMinimis for SARA 313 (%)</th>
</tr>
</thead>
</table>
Aluminum Potassium Sulfate

If there is no information listed on the regulatory information chart, this indicates that the chemical is not covered by the specific regulation listed.

15. OTHER INFORMATION

Comments:
None

NFPA Hazard Ratings:

Health : 2
Flammability : 0
Reactivity : 0
Special Hazards :

Revision History: 8/1/81  2/1/84  1/24/87  10/27/87
1/11/88  3/1/91

| = Revised Section
N/A = Not Available
N/E = None Established

The statements contained herein are offered for informational purposes only and are based upon technical data that EM Science believes to be accurate. It is intended for use only by persons having the necessary technical skill and at their own discretion and risk. Since conditions and manner of use are outside our control, we make NO WARRANTY, EXPRESS OR IMPLIED, OR MERCHANTABILITY, FITNESS OR OTHERWISE.