I. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

PRODUCT IDENTITY: Aluminum Sulfate 48%  
Aluminum Sulfate Solution Formula: Al2(SO4)3 14 H2O  
CHEMICAL NAME: Aluminum Sulfate Solution  
Chemical Family: Inorganic Salt  
COMPANY IDENTITY: SOLVCHEM, INC.  
COMPANY ADDRESS: 4704 SHANK ROAD  
COMPANY CITY: PEARLAND, TX 77588-0490  
COMPANY PHONE: 1-281-485-5377  
CHEMTREC PHONE: 1-800-424-9300

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
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</thead>
<tbody>
<tr>
<td>Al2(SO4)3 14 H2O</td>
<td>10043-01-3</td>
<td>48%</td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td>52%</td>
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</table>

Exposure Standard: The ACGIH has established a TLV of 2 mg/m3 for aluminum in the form of soluble salts.

Hazard Ratings: Health = 1 Flammability = 0 Reactivity = 0

0 = Least; 1 = Slight; 2 = Moderate; 3 = High; 4 = Extreme;

II. PERSONAL PROTECTION INFORMATION

Ventilation: Handle in open or well ventilated areas.

Eye: Prevent eye contact through the use of chemical safety glasses, goggles or a face shield.

Skin: Prevent skin contact through the use of protective clothing, gloves and footwear.

Respiratory: Where mists or aerosols may occur, use a NIOSH approved half-face piece cartridge air purifying respirator.

Other: Eye wash and shower shall be available.

III. HEALTH INFORMATION

PHYSIOLOGICAL & HEALTH EFFECTS

Routes of Entry:
- Eyes: Irritant to the eyes.
- Skin: Irritation may result by contact with concentrated solutions.
- Inhalation: Inhalation of mists may cause considerable irritation.
- Ingestion: Oral and gastrointestinal irritation and local tissue damage. Nausea, vomiting, diarrhea may occur.

Toxicity: The acute oral LD50 is greater than 5000 mg/kg.
EMERGENCY & FIRST AID PROCEDURES

Eyes: IMMEDIATELY flush with large quantities of water for at least 15 minutes. Seek medical attention.

Skin: IMMEDIATELY flush affected area with water for 15 minutes. Remove contaminated clothing. See medical attention.

Inhalation: Remove to fresh air. Keep warm. Give artificial respiration if not breathing. Seek medical attention.

Ingestion: Give large quantities of water. Induce vomiting. Seek medical attention.

SYMPTOMS OF OVEREXPOSURE

Acute: Oral and gastrointestinal irritation if swallowed. Skin contact will cause irritation.

Chronic: Long term exposure to skin by concentrated solutions will cause irritation. Prolonged contact with dilute solutions may cause irritation.

IV. REACTIVITY DATA

Stability: Stable at ambient temperatures and atmospheric pressure.

Conditions To Avoid: This material will undergo reactions typical of acidic substances.

Incompatibility: Aluminum sulfate will react with strong alkalies to form aluminum hydroxide.

Hazardous Decomposition Products: Thermal decomposition may release toxic oxides of sulfur.

Hazardous Polymerization: Will not occur.

V. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear to slightly amber liquid (or green depending on grade). No odor.

Boiling Point: 101°C/214°F

Melting Point: N/A

Vapor Density (air = 1): Same as air.

Vapor Pressure: Less than 1 mm Hg @ 30°C (86°F)

Solubility in water: Completely

Specific Gravity: 1.29 to 1.34 (H2O = 1)

Molecular weight: 594

pH: Approximately 2

Other (i.e. wtg. per gallon): Approximately 11.1 lbs/gal

VI. SPECIAL PRECAUTIONS

Handling and Storage
Precautions: Store in tanks designed to withstand the corrosive effects of aluminum sulfate. Stainless steel or fiberglass tanks are recommended.
VII. FIRE PROTECTION INFORMATION

Flash Point: N/A
Flammable Limits: N/A
Extinguishing Agents: Water, dry chemicals, foam or carbon dioxide.
Special Firefighting Procedures: Prevent human exposure to fire, smoke, fumes or products of combustion.

VIII. TRANSPORTATION REQUIREMENTS

DOT Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, n.o.s. (contains Aluminum Sulfate Solution)
DOT Classification: 8
Packing Group: III
UN/NA Identification Number: UN 3264

IX. SPILL OR LEAK PROCEDURES

Environmental Impact: Releases to streams may kill aquatic life. Large releases to land may react with soil and may penetrate great distances underground.

Precautions if Spilled or Released: Contain released material by diking or neutralize with soda ash.

Neutralizing Chemicals: Soda ash, slaked lime.

Waste Disposal Methods: Consult state or federal regulatory agencies for disposal procedures.

Reportable Quantities: 5,000 lbs.

X. NSF CERTIFICATION

Aluminum Sulfate is available as NSF-60 Certified. Maximum use in potable water is 150 mg/l.

EMPLOYEE TRAINING

Employees should be made aware of all hazards of this material (as stated in this MSDS) before handling it.

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