

**PRODUCT NAME: ALUMINUM SULFATE SOLUTION**

Transportation Emergencies, Call (800) 424-9300 (CHEMTREC)  
Health Emergencies, contact Your Local Poison Center  
Caution: Causes Irritation. Avoid contact with skin, eyes or clothing.

**I. PRODUCT INFORMATION**

**Product Name:** Aluminum Sulfate Solution      **Formula:**  $\text{Al}_2(\text{SO}_4)_3 \cdot 14 \text{H}_2\text{O}$   
**Chemical Name:** Aluminum Sulfate Solution      **Chemical Family:** Inorganic Salt  
**CAS Number:** 10043-01-3

<b>Typical Composition</b>	<b>%</b>
$\text{Al}_2(\text{SO}_4)_3 \cdot 14 \text{H}_2\text{O}$	48%
Water	52%

**Exposure Standard:** The ACGIH has established a TLV of  $2 \text{ mg/m}^3$  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

<b>Appearance and Odor:</b>	Clear to slightly amber liquid (or green depending on grade). No odor.
<b>Boiling Point:</b>	101°C/214°F
<b>Melting Point:</b>	N/A
<b>Vapor Density (air = 1):</b>	Same as air.
<b>Vapor Pressure:</b>	Less than 1 mm Hg @ 30°C (86°F)
<b>Solubility in water:</b>	Completely
<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	1.29 to 1.34
<b>Molecular weight:</b>	594
<b>pH:</b>	Approximately 2
<b>Other (i.e. wtg. per gallon):</b>	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

<b>Flash Point:</b>	N/A	<b>Flammable Limits:</b>	N/A
<b>Extinguishing Agents:</b>	Water, dry chemicals, foam or carbon dioxide.		
<b>Special Firefighting Procedures:</b>	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 manufactured at Baton Rouge, LA; Calhoun, TN; Chickasaw, AL; Lake Charles, LA; Pasadena, TX and West Point, MS are NSF-60 Certified. Maximum use in potable water is 150 mg/l.

**SALES OFFICE**

For Product Information:  
TEL: 662-494-3055  
FAX: 662-494-2828

Post Office Drawer 1217  
West Point, MS 39773

To Place An Order:  
TEL: 800-953-3585  
FAX: 800-953-3588

**IMPORTANT**

The information on this Material Safety Data Sheet is believed to be accurate but is not warranted to be so. Protective equipment, health effects, and other related safety measures are based on intended and anticipated product use. Recipients are advised to confirm in advance of need that the information is applicable and suitable to their circumstances.