

**PRODUCT NAME:** Acid Alum, Aqueous 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:** Acid Alum, Aqueous Solution      **Formula:** See Below  
**Chemical Name:** Acid Alum, Aqueous Solution

<b>Typical Composition</b>	<b>CAS #'s</b>	<b>%</b>
Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	7664-93-9	11.0 – 18.0
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	1344-28-1	1.25 – 5.50
Water	7732-18-5	Balance

**Exposure Standard:** OSHA TWA – 1 mg/m<sup>3</sup>      ACGIH TWA – 1 mg/m<sup>3</sup>

Hazard Ratings: Health = 3    Flammability = 0    Reactivity = 2  
0 = Least;    1 = Slight;    2 = Moderate;    3 = High;    4 = Extreme;

## II. PERSONAL PROTECTION INFORMATION

**Ventilation:** Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec.) at the point of vapor evacuation. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

**Eye:** Use chemical splash goggles and face shield (ANSI Z67.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

**Skin:** Chemically resistant gloves should be worn whenever this material is handled.

Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

**Respiratory:** A respiratory protection program meeting OSHA 1910.134 ANSI Z88.2 requirements must be followed whenever work place conditions warrant a respirator's use. Air-purifying respirators should be equipped with acid gas cartridges.

**Other:** Where splashing is possible, full chemically resistant protective clothing (e.g. acid suit) and boots are required.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**III. HEALTH INFORMATION****PHYSIOLOGICAL & HEALTH EFFECTS****Routes of Entry:**

- Eyes:** Direct contact with material can cause the following:  
severe irritation  
Repeated contact at high concentrations can cause the following:  
corneal burns, possible blindness
- Skin:** Contact with skin will cause damage.
- Inhalation:** Inhalation of vapor or mist can cause:  
irritation of nose, throat, and lungs – tissue and teeth damage
- Ingestion:** Material is harmful if swallowed.  
Material can cause the following:  
gastrointestinal irritation – tissue damage  
Material in large doses can cause the following:  
abdominal pain – central nervous system depression – diarrhea –  
depression - death
- Toxicity:** LD50 in rats 2140 mg/kg (based on 93-98% H<sub>2</sub>SO<sub>4</sub>)

**EMERGENCY & FIRST AID PROCEDURES**

- Eyes:** IMMEDIATELY flush eyes with a large amount of water for at least 15 minutes. Get prompt medical attention.
- Skin:** Remove contaminated clothing. Wash skin thoroughly with soap and water. Get prompt medical attention. Wash contaminated clothing thoroughly before reuse.
- Inhalation:** Move subject to fresh air. If breathing is difficult, give oxygen. Give artificial respiration if breathing has stopped. Call a physician.
- Ingestion:** Induce vomiting by giving 2 glasses of water to drink and touching back of subject's throat with finger. IMMEDIATELY see a physician. Never give anything by mouth to an unconscious person.

**IV. REACTIVITY DATA**

- Stability:** This material is considered stable.
- Conditions To Avoid:** Avoid exposure to excessive heat.
- Incompatibility:** Avoid contact with the following:  
acids – alkaline substances

**Hazardous Decomposition**

- Products:** Thermal decomposition may yield the following:  
sulfur dioxide – toxic fumes

**Hazardous Polymerization:** Product will not undergo hazardous polymerization.

## V. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance and Odor:</b>	Clear liquid, slight acidic odor	<b>Boiling Point:</b> 103°C/217°F Estimate
<b>Vapor Density (air = 1):</b>	Heavier than air	<b>Melting Point:</b> No Data
<b>Vapor Pressure:</b>	< 0.3 mm Hg at 25°C	<b>Solubility in water:</b> Dilutable
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	1.296 @ 100°F	<b>pH:</b> Less than 1.0
<b>Other (i.e. wt. per gallon):</b>	approximately 9.6 lb/gal	

## VI. SPECIAL PRECAUTIONS

### Handling and Storage Precautions:

Avoid temperature extremes during storage; ambient temperature preferred. Do not store this material near food, feed or drinking water. Store in well ventilated area. Store away from excessive heat (e.g. steampipes, radiators), from sources of ignition and from reactive material. Store out of direct sunlight in a cool place. Keep container tightly closed when not in use.

Do not handle material near food, feed or drinking water. This material is corrosive. See the PERSONAL PROTECTION MEASURES Section prior to handling. Vapors can be evolved when material is heated during processing operations. See FACILITY CONTROL MEASURES Section for types of ventilation required. Wash after handling and shower at end of work period.

CONTAINERS HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue (vapors and/or liquid) follow all MSDS and label warnings even after container is empty. Empty drums should be rinsed with water before discarding. Dispose empty container in a sanitary landfill or by incineration as allowed by state and local authorities. Avoid inhalation of smoke if incinerated.

## VII. FIRE PROTECTION INFORMATION

**Flash Point:** Not applicable                      **Flammable Limits:** Not flammable

**Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

### Special Firefighting Procedures:

Move containers promptly out of fire zone. If removal is impossible, cool containers with water spray. Remain upwind. Avoid breathing noxious fumes from fire-exposed material.

**VIII. TRANSPORTATION REQUIREMENTS**

**DOT Proper Shipping Name:** Corrosive Liquid, Acidic, Inorganic, n.o.s  
(Contains Aluminum Sulfate/Sulfuric Acid solution)

**DOT Classification:** 8

**UN/NA Identification:  
Number:** UN3264

**Packing Group:** II

**Other Labels:** Corrosive Label

**IX. SPILL AND LEAK PROCEDURES****Precaution if**

**Spilled or Released:** Contain spills immediately with inert material (i.e. sand, earth). Evacuate and ventilate spill area. Avoid all contact. Transfer liquid and solid diking material to separate suitable containers for recovery or disposal. CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

**Neutralizing  
Chemicals:**

May be neutralized with sodium hydroxide, lime or soda ash to neutral pH.

**Waste Disposal  
Methods:**

For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations (see CFR Part 268).

**Reportable  
Quantities:**

5,000 lbs (2270 Kg)

**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.