Material Safety Data Sheet

Revision Issued: 5/30/2008 Supercedes: 9/12/2001 First Issued: 9/12/2001

Section I - Chemical Product And Company Identification

Product Name: Aluminum Sulfate Solution

CAS Number: 10043-01-3 HBCC MSDS No. CA06800

HILL BROTHERS Chemical Co.

1675 NORTH MAIN STREET • ORANGE, CALIFORNIA 92867-3499
(714) 998-8800 • FAX: (714) 998-6310
http://hillbrothers.com

1675 No. Main Street, Orange, California 92867
Telephone No: 714-998-8800 | Outside Calif: 800-821-7234 | Chemtrec: 800-424-9300

Section II - Composition / Information On Ingredients

		Exposure Limits (TWAs) in Air		
Chemical Name	CAS Number	ACGIH TLV	OSHA PEL	STEL
Aluminum Sulfate	10043-01-3	2 mg/m³(solid)	2 mg/m³(solid)	N/A

Section III - Hazard Identification

Routes of Exposure: Skin contact, inhalation of mist, ingestion, eyes.

Summary of Acute Health Hazards

Ingestion: May cause abdominal pain, nausea, and or vomiting. Concentrated solutions (over 20%) can cause burns of the mouth, bleeding stomach, incoordination, muscle spasms, and/or kidney injury.

Inhalation: Product mists may cause irritation to the respiratory tract.

Skin: May cause irritation or burns if the product is wet or in the presence of perspiration.

Eyes: May cause irritation and inflammation of the eye. Concentrated solutions (over 20%) may cause severe eye damage or burns.

Summary of Chronic Health Hazards: N/A

Signs and Symptoms of Exposure: N/A

Effects of Overexposure: Irritating to skin, eyes, and mucous membranes. Accidental ingestion may cause gastrointestinal irritation, nausea and vomiting.

Medical Conditions Generally Aggravated by Exposure: N/A

Note to Physicians: All treatment should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents.

Section IV - First Aid Measures

Ingestion: Do Not Induce Vomiting - Dilute slowly with 1-2 glasses of water. SEEK MEDICAL ATTENTION IMMEDIATELY.

Inhalation: If inhaled in large amounts, move exposed person to fresh air.

Administer artificial respiration if necessary. Have qualified medical personnel administer oxygen.
Skin: Immediately remove contaminated clothing. Wash skin in flowing water or shower, then with soap and water. Contact a physician if irritation continues. Wash contaminated clothing separately before reuse. If irritation develops, get medical attention.
Eyes: Immediate and continuous flushing with flowing water for at least 15 minutes. Prompt medical consultation is essential.

Section V - Fire Fighting Measures

Flash Point: N/A
Autoignition Temperature: N/A
Lower Explosive Limit: N/A
Upper Explosive Limit: N/A

Unusual Fire and Explosion Hazards: Under fire conditions greater than 650°C (1202°F), product decomposes to give off sulfur trioxide, an oxidizing agent which will support combustion. Sulfur trioxide will react with water to form sulfuric acid.

Extinguishing Media: Not combustible. Use appropriate extinguishing media for material that is supplying fuel. Use water spray to cool the surrounding area and to maintain fire temperature below decomposition temperature.

Special Firefighting Procedures: Wear a NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Dike area to prevent runoff and contamination of water sources.

Section VI - Accidental Release Measures

Dilute small spills or leaks cautiously with plenty of water. Neutralize any further residue with alkali such as soda ash, lime or limestone. Adequate ventilation is required if soda ash or limestone is used, because of the consequent release of carbon dioxide gas. Large spills: dike up with soda ash and neutralize as above. Collect liquid and/or residue and dispose of in accordance with applicable regulations.

Section VII - Handling and Storage

Do not swallow. Avoid contact with eyes, skin and clothing. Store in a cool area in tightly closed containers.

Section VIII - Exposure Controls/Personal Protection

Respiratory Protection: Where the exposure limits are or may be exceeded, use a NIOSH/MSHA approved respirator for acid dusts. Use positive pressure supplied air or self-contained breathing apparatus for emergency or other conditions where a higher level of protection is required.
Ventilation: Provide adequate ventilation. Use local exhaust as needed to maintain airborne exposure below control limits.
Protective Clothing: Long-sleeved clothing, apron, rubber gloves and boots.
Eye Protection: Use chemical safety goggles.
Other Protective Clothing or Equipment: N/A
Work/Hygienic Practices: Wash hands thoroughly with soap and water before eating, drinking, smoking, and using toilet facilities. Do NOT place food, coffee or other drinks in the area where dusting or splashing of solutions is possible.

Section IX - Physical and Chemical Properties

Physical State: Liquid
pH: 3.5 (1% solution)
Melting Point/Range: -16°C; 3.2°F
Boiling Point/Range: 101°C; 214°F

Appearance/Color/Odor: A clear, odorless light green or amber liquid

Solubility in Water: 100

Vapor Pressure (mmHg): N/A

Specific Gravity (Water=1): 1.335

Molecular Weight: 594 for Al2(SO4) 3.14H2O in water

Vapor Density (Air=1): N/A

% Volatiles: 50%

How to detect this compound :
N/A

Section X - Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid: If evaporated to dryness, residue should not be exposed to elevated temperatures (above 760°C), as this will yield toxic and corrosive gases.

Materials to Avoid: Alakalis and water reactive materials such as oleum: causes exothermic reactions.

Hazardous Decomposition Products: At elevated temperatures, sulfur oxides may be formed. These are toxic and corrosive and are oxidizers. Sulfur trioxide is also a fire hazard. The loss of these leaves a caustic residue.

Section XI - Toxicological Information

Immediate (Acute) Effects:
Aluminum Sulfate:
LD50 (oral, mouse): 6207 mg/kg.
LD50 (oral, rat): 1930 mg/kg.

Section XII - Ecological Information

Aluminum Sulfate:
14 ppm/ 36 hr/fundulus/fatal/fresh water.
240 ppm/48 hr/mosquito fish/TLm/water type not specified.
TLm Mosquito fish, 235 ppm, 96 hours
LC50 Largemouth bass, 250 ppm, 96 hours

Section XIII - Disposal Considerations

Dispose of in accordance with federal, state and local environmental laws and regulations.

Section XIV - Transport Information

DOT Proper Shipping Name: Corrosive liquid, acidic, inorganic, N.O.S. (contains aluminum sulfate)
DOT Hazard Class/ I.D. No.: 8, UN3264, III

Section XV - Regulatory Information

Reportable Quantity: 5000 Lbs.
NFPA Rating: Health - 2; Flammability - 0; Instability - 1
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme
Carcinogenicity Lists: NTP: No **IARC Monograph:** No **OSHA Regulated:** No

Section XVI - Other Information

Synonyms/Common Names: Aluminum Sulfate Solution, Alum
Chemical Family/Type: Metal Salts
Sections Changed Since Last Revision: II – VI, VIII - XV

IMPORTANT! Read this MSDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This MSDS has been prepared according to the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The MSDS information is based on sources believed to be reliable. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Also, additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks prior to use, and then to exercise appropriate precautions for protection of employees and others.