

NFPA	HMIS	PPE	Symbol(s) Regulated
			

Preparation Date August 14, 2008

Revision Date

Revision Number: 0

Product Name: Liquid Alum

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Liquid Alum

Other/Generic Names: Aluminum sulfate, aqueous solution

Recommended Use: Water treatment. Various industrial uses.

Manufacturer

General Chemical, LLC
90 East Halsey Road
Parsippany, NJ 07054

General Chemical Performance Products Ltd.
90 East Halsey Road
Parsippany, NJ 07054

Further information

FOR MORE INFORMATION CALL:
Customer Service US ONLY: 800-631-8050
(Monday-Friday, 9:00am - 4:30pm)

Customer Service CANADA ONLY: 866-543-3896
(Monday-Friday, 9:00am - 4:30pm)

Emergency Telephone Number IN CASE OF EMERGENCY CALL CHEMTREC: 800-424-9300 US ONLY
24 Hours/Day, 7 Days/Week) CANADA ONLY CALL CANUTEC: 613-996-6666
(24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: A clear, odorless light green or amber liquid. Can irritate the skin and eyes. Not flammable, but may release toxic vapors if decomposed in a fire.

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Skin:	May cause skin irritation.
Eyes:	May strongly irritate or burn the eyes.
Inhalation:	Product mists may cause irritation to the respiratory tract.
Ingestion:	May irritate the gastrointestinal tract. Concentrated solutions may cause burns to the digestive tract.
Delayed Effects:	None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
aluminum sulfate	10043-01-3	~48.5

4. FIRST AID MEASURES

Eye Contact	Immediately flush eyes with water for at least 15 minutes. Get medical attention if irritation persists.
Skin Contact:	Flush with plenty of water, removing contaminated clothing. If irritation develops, get medical attention.
Inhalation:	Remove victim immediately to fresh air.
Ingestion:	If conscious, immediately give large quantity of water or milk. Do not induce vomiting. Get medical attention immediately.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Flammable Properties**

Flash Point:	Not flammable
FLASH POINT METHOD:	Not applicable.
Autoignition Temperature	Not applicable
UPPER FLAME LIMIT (volume % in air):	Not applicable
LOWER FLAME LIMIT (volume % in air):	Not applicable
FLAME PROPAGATION RATE (solids):	Not applicable
OSHA FLAMMABILITY CLASS:	Not applicable

Suitable Extinguishing Media Product is not flammable. Use any extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media No information available.

Explosion Limits

Hazardous Combustion Products No information available

Impact sensitivity No information available

Sensitivity to static discharge

No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Protective Equipment and Precautions for Firefighters

Use self-contained breathing apparatus. Use water spray to keep containers cool.

NFPA**Health 2****Flammability 0****Instability 1****6. ACCIDENTAL RELEASE MEASURES****IN CASE OF SPILL OR OTHER RELEASE:**

(See Section 8 for recommended personal protective equipment.) 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.

7. HANDLING AND STORAGE**Handling**

Avoid contact with skin, eyes and clothing. Do not breathe product mists.

Storage

Store in a cool area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	ACGIH TLV	OSHA PEL	Ontario TWAEV	Mexico OEL (TWA)	NIOSH IDLH
aluminum sulfate 10043-01-3				TWA: 2 mg/m ³	

Engineering Measures

Use local exhaust to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment**Eye/face Protection**

Wear chemical safety goggles or face shield to prevent eye contact. Do not wear contact lenses.

Skin Protection

Wear appropriate personal protective clothing to prevent skin contact. If prolonged or repeated contact is anticipated, all clothing should be impervious to liquid.

Respiratory Protection

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

General Hygiene Considerations

To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product. Eyewash and safety showers are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

No information available

Color

Clear, light green or amber

Chemical Formula48.5% Al₂(SO₄)₃ * 14H₂O in water**Odor**

Odorless

Odor Threshold

No information available

Physical State

Liquid

pH	~3.5 (1% solution)
Flash Point:	Not flammable
Autoignition Temperature	Not applicable
Boiling Point/Range	101 °C
Melting Point/Range	-16 °C
Flammability Limits in Air	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available
Evaporation Rate	Not determined
Vapour Pressure	Not applicable
Vapour Density	Not applicable
Specific Gravity	1.335
Solubility	No information available
Partition Coefficient (n-octanol/water)	No information available
Viscosity	No information available
Molecular Weight	~594 for Al ₂ (SO ₄) ₃ * 14H ₂ O
Water Solubility	100
VOC Content(%)	~50

10. STABILITY AND REACTIVITY

Chemical Stability	Normally stable. If evaporated to dryness, residue should not be exposed to elevated temperatures (above 760°C), as this will yield toxic and corrosive gases.
Incompatible Products	Alkalis 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 gases leaves a caustic residue.
Possibility of Hazardous Reactions	Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

LD50 Oral: (oral-mouse): 6207 mg/kg
(oral-rat): 1930 mg/kg

Component Information

Irritation	No information available
Corrosivity	No information available.
Sensitization	No information available.

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product.

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

Target Organ Effects No information available

Endocrine Disruptor Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
aluminum sulfate		LC50= 100 mg/L goldfish 96 h		

Persistence and Degradability No information available.

Bioaccumulation No information available.

Mobility in Environmental Media No information available

Other adverse effects 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

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods If permitted by regulations, material may be neutralized with alkali. The information offered in Section 13 is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

Contaminated Packaging Empty containers should be taken for local recycling, recovery or waste disposal.

US EPA Waste Number No information available

Component	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
aluminum sulfate - 10043-01-3				

14. TRANSPORT INFORMATION

DOT Regulated
Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s. (contains aluminum sulfate)
Hazard Class 8
UN-No UN3264
Packing Group PGIII

TDG Regulated
Hazard Class 8

UN-No UN3264
Packing Group PGIII

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL Complies
NDSL Complies
EINECS/ELINCS Does not Comply
ENCS Complies
CHINA Complies
KECL Does not Comply
PICCS Complies
AICS Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Chronic Health Hazard	No
Acute Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

CERCLA

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
aluminum sulfate	X	X	X		

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

E Corrosive material

D2B Toxic materials

**16. OTHER INFORMATION**

Prepared By Kaci Rosario, Product Safety Supervisor

Preparation Date August 14, 2008

Revision Date

Revision Summary Transfer to new Weracs format

Disclaimer

All information, statements, data, advice and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping and transportation (collectively referred to herein as "information") are believed to be accurate and reliable. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness or a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. General Chemical, LLC, is not engaged in the business of providing technical, operational, engineering or safety information for a fee, and therefore, any such information provided herein has been furnished as an accomodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill and experience in the chemical industry. General Chemical, LLC, shall not be responsible or liable for the use, application or implementation of the information, provided herein, and all such information is to be used at the risk, and in the sole judgement and discretion, of such persons, their employees, advisors and agents.

End of MSDS