



## Material Safety Data Sheet

NFPA	HMIS	PPE	Symbol(s)
			Regulated 

Preparation Date June 15, 2009

Revision Date

Revision Number: 0

Product Name: Dry Alum

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Dry Alum  
**Other/Generic Names:** Aluminum Sulfate  
**Recommended Use:** Water treatment, food additive, 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:** White or creamy white granules or powder with no odor. 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).

GC-2001 - Dry Alum

Revision Date

**Potential Health Effects**

**Skin:** May cause skin irritation, especially under repeated or prolonged contact, or when moisture is present.

**Eyes:** May irritate or burn eyes.

**Inhalation:** Dust or mist inhalation at levels above the TLV may cause irritation to the respiratory tract.

**Ingestion:** May irritate the gastrointestinal tract.

**Delayed Effects:** None known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No	Weight %
aluminum sulfate	10043-01-3	57-60

**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 for at least 15 minutes while removing contaminated clothing and shoes. If irritation develops, get medical attention.

**Inhalation:** Immediately remove to fresh air.

**Ingestion:** If conscious, immediately give large quantity of water or milk. If not already vomiting, induce vomiting by touching finger to back of throat. Get medical attention.

**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** Water spray, foam, carbon dioxide or dry chemical.

**Unsuitable Extinguishing Media** No information available.

**Explosion Limits**

**Hazardous Combustion Products** No information available

GC-2001 - Dry Alum

Revision Date

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**

Wear self-contained breathing apparatus (SCBA) and full protective equipment.

**NFPA**

Health 2

Flammability 0

Instability 1

**6. ACCIDENTAL RELEASE MEASURES**

**IN CASE OF SPILL OR OTHER RELEASE:**

Shovel up dry chemical and place in empty container and cover. Spray residue with plenty of water. Neutralize residue with alkali such as soda ash, lime or limestone. Adequate ventilation is required for soda ash or limestone due to release of CO2 gas. 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**

Keep storage container tightly closed. Store in a cool, dry and well-ventilated area. Isolate from incompatible substances.

**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 <sup>3</sup>	

**Engineering Measures**

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

**Personal Protective Equipment**

**Eye/face Protection**

Wear chemical safety goggles. Do not wear contact lenses.

**Skin Protection**

Wear appropriate personal protective clothing to prevent skin contact.

**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 White or creamy white  
Chemical Formula Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>\*14H<sub>2</sub>O  
Odor Odorless  
Odor Threshold No information available  
Physical State Solid  
pH ~3.5 (1% solution)

GC-2001 - Dry Alum

Revision Date

Flash Point:	Not flammable
Autoignition Temperature	Not applicable
Boiling Point/Range	Not applicable
Melting Point/Range	Not applicable
Flammability Limits in Air	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available
Evaporation Rate	Not applicable
Vapour Pressure	Negligible
Vapour Density	Not applicable
Specific Gravity	1.61
Solubility	No information available
Partition Coefficient (n-octanol/water)	No information available
Viscosity	No information available
Molecular Weight	~594 for Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> * 14H <sub>2</sub> O
Water Solubility	50% at 0°C
VOC Content(%)	Negligible

## 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Avoid 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	None under normal processing

## 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.

GC-2001 - Dry Alum

Revision Date

**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 Carassius auratus 96 h LC50= 37 mg/L Gambusia affinis 96 h		EC50 = 136 mg/L 15 min

**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 dissolved in water and neutralized with alkali. Neutralized waste may have to be disposed of by an approved contractor.

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

**US EPA Waste Number** No information available

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

**14. TRANSPORT INFORMATION**

**DOT** Regulated

**Proper Shipping Name** Environmentally hazardous substances, solid, n.o.s. (contains aluminum sulfate) (only if greater than 5000 lbs. in one package)

**Hazard Class** 9

**UN-No** UN3077

**Packing Group** PGIII

GC-2001 - Dry Alum

Revision Date

<b>TDG</b>	Regulated
<b>Hazard Class</b>	9
<b>UN-No</b>	UN3077
<b>Packing Group</b>	PGIII

**15. REGULATORY INFORMATION**

International Inventories

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

GC-2001 - Dry Alum

Revision Date

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**  
D2B Toxic materials



## 16. OTHER INFORMATION

**Prepared By** Kaci Rosario, Product Safety Supervisor

**Preparation Date** June 15, 2009

**Revision Date**

**Revision Summary** Changes made to sections 4, 7 and 8.

### 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 for 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 accommodation 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

## Univar USA Inc Material Safety Data Sheet

---

For Additional Information contact MSDS Coordinator during business hours, Pacific time: (425) 889-3400

### **Notice**

Univar USA Inc. ("Univar") expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Univar sales office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process