

**Section 1: Product & Company Information**

**Product Identifier:** Aluminum Sulfate, granular

**Other Means of Identification**

Product Number: 112250  
112258  
112259

**Recommended Use and Restrictions on Use**

Recommended Use: Hydrated grades as Alum are high volume commercial chemicals. Sizing paper, lakes, alums, dyeing mordant, agent in firefighting foams, cloth fireproofing, white leather tannage, pH control in paper industry, waterproofing agent for concrete, deodorizer and decolorizer in petroleum refining, sewage precipitating agent and for water purification.

Restrictions on Use: No data available.

**Manufacturer / Importer / Supplier / Distributor Information**

**Company Name:** CORECHEM Inc.  
**Address:** 4320 Greenway Drive  
Knoxville, TN 37918  
USA

**Information Telephone Number:** 1-865-524-4239  
**Fax Number:** 1-865-524-3375  
**Website:** www.corecheminc.com  
**Contact Person:** Regulatory Manager  
**E-mail:** regulatory@corecheminc.com

**Emergency Phone Number:** Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

**Section 2: Hazards Identification**

**GHS Hazard Classification(s)**

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

**Physical Hazard(s)**

Not classified.

**Health Hazard(s)**

(Corrosion)Damage/Irritation, Eye - 1  
Specific Target Organ Toxicity (STOT)-Respiratory Irritation, Single exposure - 3  
Corrosion/Irritation, Skin - 2

**Environmental Hazard(s)**

Not classified.

**Label Elements**

**Signal Word**  
**DANGER**

**Hazard Symbol(s)**



**Hazard Statement(s)**

H318: Causes serious eye damage.  
H335: May cause respiratory irritation.  
H315: Causes skin irritation.

**Precautionary Statements**

**General**  
Not applicable.

**Prevention**

P271: Use only outdoors or in a well-ventilated area.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264: Wash face, hands and any exposed skin thoroughly after handling.

**Response**

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310: Immediately call a POISON CENTER or doctor/physician.  
P362: Take off contaminated clothing and wash before reuse.

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P302 + P352: IF ON SKIN: Wash with plenty of soap and water.  
 P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
 P332 + P313: If skin irritation occurs: Get medical advice/attention.

**Storage**

P405: Store locked up.  
 P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

**Disposal**

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Hazard(s) not otherwise classified (HNOC)**

None known.

**Section 3 : Composition/Information on Ingredients**

**Substance**

Chemical Identity <sup>2</sup>	Common Name/Synonym(s)	CAS # <sup>3</sup>	Weight %	Impurity or Stabilizing Additive
Aluminum Sulfate	-	10043-01-3	> 99	No

- Information regarding the composition and the percentage ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non- hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—" Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

**Section 4: First-Aid Measures**

**General Information**

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

**Inhalation**

If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rest. Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.

**Skin Contact**

Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in the event of irritation.

**Eye Contact**

Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Ingestion**

If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness, i.e., becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.

**Most important symptoms/effects, acute and delayed**

**Symptoms**

No data available.

**Indication of immediate medical attention and special treatment needed**

**Hazards**

No data available.

**Treatment**

Treatment is largely symptomatic.

**Section 5: Fire-Fighting Measures**

**General Fire Hazards**

Alert the Fire Brigade and tell them the location and nature of the hazard. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water courses. Use firefighting procedures suitable for surrounding area.

**Suitable (and Unsuitable) Extinguishing Media**

**Suitable Extinguishing Media**

No data available.

**Unsuitable Extinguishing Media**

No data available.

**Specific Hazards Arising from the Chemical**

No data available.

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### Special Protective Equipment and Precautions for Firefighters

#### Special Fire-Fighting Equipment Procedures

Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

#### Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

## Section 6: Accidental Release Measures

### Personal Precautions, Protective Equipment and Emergency Procedures

Do not smoke, use open fire or other sources of ignition.

Avoid inhalation of dust. Avoid contact with eyes and prolonged skin contact. Provide adequate ventilation.

### Methods and Materials for Containment and Clean-Up

Small spillage: Shovel or sweep up. Must be disposed of in accordance with local and national regulations.

Large spillage: Try to keep material dry. Remove spill using a vacuum truck. Shovel or sweep up remaining material. Must be disposed of in accordance with local and national regulations.

### Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

### Environmental Precautions

See section 12.

## Section 7: Handling and Storage

### Precautions for Safe Handling

Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. When handling DO NOT eat, drink or smoke.

### Conditions for Safe Storage, including any Incompatibilities

Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

## Section 8: Exposure Controls/Personal Protection

### Control Parameters

#### Occupational Exposure Limits

No data available.

#### Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

### Appropriate Engineering Controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

### Individual protection measures, such as personal protective equipment (PPE)

#### General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

#### Eye/Face Protection

Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

#### Skin Protection

##### Hand Protection

Wear appropriate chemical resistant gloves.

##### Other

Wear appropriate chemical resistant clothing.

#### Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

#### Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that

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cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

**Section 9: Physical and Chemical Properties**

<b>Appearance:</b>	
Physical State:	Crystalline, Granules or Powder
Color:	Grayish White
<b>Odor:</b>	No data available
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	3.0-3.7
<b>Melting Point/Freezing Point:</b>	770 °C (1418 °F)
<b>Initial Boiling Point and Boiling Range:</b>	>300 °C
<b>Flash Point:</b>	Not combustible
<b>Evaporation Rate (butyl acetate=1):</b>	Not applicable
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/Lower Limit on Flammability or Explosive Limits</b>	
Flammability Limit – Upper:	Not applicable.
Flammability Limit – Lower:	Not applicable.
Explosive Limit – Upper:	No data available.
Explosive Limit – Lower:	No data available.
<b>Vapor Pressure:</b>	Essentially 0 mm Hg
<b>Vapor Density (air =1):</b>	1.65 - 1.7 g/cm <sup>3</sup>
<b>Relative Density (water=1):</b>	2.710
<b>Solubility(ies):</b>	
Solubility in water:	Reacts.
Solubility (other):	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-Ignition Temperature:</b>	Not applicable.
<b>Decomposition Temperature:</b>	770 °C
<b>Viscosity:</b>	No data available.
<b>Other Information:</b>	
Molecular Weight:	342.14
Formula:	Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> •14.3H <sub>2</sub> O

**Section 10: Stability and Reactivity**

<b>Reactivity</b>	Can corrode base metals in the presence of water.
<b>Chemical Stability</b>	Unstable in the presence of incompatible materials.
<b>Possibility of Hazardous Reactions</b>	Corrodes metals under influence of moisture.
<b>Conditions to Avoid</b>	Corrosion might appear in contact with moisture. Humidity or contact with water may cause lumpiness.
<b>Incompatible Materials</b>	Bases, non-acid proof metals (for example aluminum, copper and iron) Avoid contact with unalloyed steel or galvanized surfaces.
<b>Hazardous Products</b>	<b>Decomposition</b> Sulphur oxides (SO <sub>x</sub> ).

Sulphur oxides (SO<sub>x</sub>).

**Section 11: Toxicological Information**

<b>Information on routes of exposure</b>
<b>Ingestion:</b> No data available.

**Inhalation:** No data available.  
**Skin Contact:** No data available.  
**Eye Contact:** No data available.

**Information on Toxicological Effects****Acute Toxicity (List all possible routes of exposure)****Oral**

Oral (Rat) LD50: &gt;2,000 mg/kg

**Dermal**

Dermal (rabbit) LD50: &gt;5,000 mg/kg

**Inhalation**

Inhalation (Rat) LC50; &gt;5 mg/4h

**Repeated Dose Toxicity**

No data available.

**Skin Corrosion/Irritation**

Repeated or prolonged skin contact may cause: Skin irritation dry skin.

**Serious Eye Damage/Eye Irritation**

May cause irreversible eye damage.

**Respiratory/Skin Sensitization**

Not sensitizing.

**Carcinogenicity****IARC Monographs on the Evaluation of Carcinogenic Risks to Humans**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**US. National Toxicology Program (NTP) Report on Carcinogens**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Germ Cell Mutagenicity****In Vitro**

No data available.

**In Vivo**

No data available.

**Reproductive Toxicity**

None known.

**Specific Target Organ Toxicity – Single Exposure**

None known.

**Specific Target Organ Toxicity – Repeated Exposure**

None known.

**Aspiration Hazard**

Not classified.

**Other Effects**

None known.

**Section 12: Ecological Information****Ecotoxicity****Acute Hazards to the Aquatic Environment****Fish**

LC50 96h Fish &gt;0.42mg/l 2

**Aquatic Invertebrates**

No data available.

**Toxicity to Aquatic Plants**

EC50 72h Algae or other aquatic plants 0.04mg/l

**Chronic Hazards to the Aquatic Environment****Fish**

No data available.

**Aquatic Invertebrates**

No data available.

**Toxicity to Aquatic Plants**

No data available.

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**Persistence and Degradability****Biodegradation**

There are no data on the degradability of this product.

**BOD/COD Ratio**

No data available.

**Bioaccumulative Potential****Bioconcentration Factor (BCF)**

No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

LOW (LogKOW = -2.2002)

**Mobility in Soil**

LOW (KOC = 6.124) - The product is soluble in water.

**Other Adverse Effects**

No data available.

**Section 13: Disposal Considerations****Disposal Instructions**

Recycle wherever possible or consult a manufacturer for recycling options. Consult State Land Waste Management Authority for disposal. Bury residue in an authorized landfill.

**Contaminated Packaging**

Handle contaminated packages in the same way as the substance itself.

**Section 14: Transportation Information****US Department of Transportation (DOT)**

UN Number: UN 3260  
UN Proper Shipping Name: Corrosive solid, acidic, inorganic, n.o.s.  
Technical Name: Aluminum Sulfate  
Hazard Class: 8  
Subsidiary Hazard Risk: -  
Packing Group: III  
DOT Label/Placard Exemptions: Not determined  
Special Provisions: IB8, IP3, T1, TP33  
Packaging Exceptions: 49CFR 173. 154  
Packaging Non-Bulk: 49CFR 173. 213  
Packaging Bulk: 49CFR 173. 240  
Reportable Quantity (RQ): 5,000lb  
Marine Pollutant: Yes  
Poison Inhalation Hazard: No  
Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that person transporting the product know what to do in the event of an accident or spillage.

Emergency Response Guidebook (ERG) #:

*Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.*

**Section 15: Regulatory Information****US Federal Regulations****Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)**

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

**Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)**The following chemical(s) in this material are subject to reporting levels established by CERCLA:  
Aluminum Sulfate (CAS# 10043-01-3)**Clean Air Act (CAA), Section 112(r)**

No chemical(s) in this material are subject to the reporting requirements of CAA.

**Emergency Planning and Community Right-To-Know Act (EPCRA)****EPCRA 302 Extremely Hazardous Substance**

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

**EPCRA 304 Emergency Response Notification**

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

**EPCRA 311/312 Emergency and Hazardous Materials Reporting**

Fire Hazard: No  
Sudden Release of Pressure: No  
Reactive: No  
Acute (Immediate) Health Hazard: Yes  
Hazard:

Chronic (Delayed) Health Yes  
Hazard:

**EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting**

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**US State Regulations****California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)**

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

*Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.*

**Section 16: Other Information****Hazardous Materials Identification System (HMIS®) Classification**

Health Hazard: 3

Chronic Health Hazard: \*

Flammability: 0

Physical Hazard: 1

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

**National Fire Protection Association (NFPA 704) Rating**

Health Hazard: 3

Fire Hazard: 0

Reactivity Hazard: 1

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Current Revision: 03

Sections Revised: Changes were made to sections 1, 6, 9-11, 14-16

**Key to Abbreviations and Acronyms**

ATE - Acute Toxicity Estimate

BCF - Bioconcentration Factor

EC50 - Effective concentration, 50%

IDHL – Immediately Dangerous to Life and Health

Kg – Kilogram

l – Liter

lb – Pound

LC50 - Lethal Concentration, 50%

LD50 - Lethal Dose, 50%

mg - milligram

ml – milliliter

N/A – Not Applicable

N/D – Not Determined

PEL – Permissible Exposure Limit

REL – Recommended Exposure Limit

STEL – Short-term Exposure Limit

TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists

AIHA – American Industrial Hygiene Association

BEI - Biological Exposure Indices

CAS – Chemical Abstracts Service

DOT – US Department of Transportation

EPA – US Environmental Protection Agency

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - Intermediate Bulk Container

IMDG - International Maritime Dangerous Goods

NIOSH – National Institute for Occupational Safety and Health

NTP – National Toxicology Program

OSHA – US Occupational Health and Safety Administration

SARA – US EPA Superfund Amendments and Reauthorization Act

TSCA – US EPA Toxic Substances Control Act

UN - United Nations

**References**

HSDB® - Hazardous Substances Data Bank

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