

Section 1: Product & Company Information

Product Identifier: Aluminum Sulfate, Std. Ground

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

Environmental Hazard(s)

Not classified.

Label Elements

Signal Word

DANGER

Hazard Symbol(s)



Hazard Statement(s)

H318: Causes serious eye damage.

Precautionary Statements

Prevention

P234: Keep only in original container.
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.
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 ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Aluminum Sulfate	Aluminium Sulphate	10043-01-3	≤ 100%	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. Prostheses 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

Corrosive effects, may cause irreversible eye damage.

Treatment

Treatment is largely symptomatic.

Section 5: Fire-Fighting Measures

General Fire Hazards

Alert the fire department 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

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Unsuitable Extinguishing Media

No data available.

Specific Hazards Arising from the Chemical

Sulfur oxides. Aluminum oxide. Not combustible. Ambient fire may liberate hazardous vapors.

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 fire or other sources of ignition. Avoid inhalation of dust. Avoid contact with eyes & prolonged skin contact. Provide adequate ventilation.

Methods and Materials for Containment and Clean-Up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions. Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Notification Procedures

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

Environmental Precautions

Do not let product enter drains.

Section 7: Handling and Storage

Precautions for Safe Handling

Read and follow manufacturer's recommendations. Do not eat, drink or smoke when using the product. Avoid inhalation of dust and contact with skin and eyes. Avoid handling which leads to dust formation. Observe good chemical hygiene practices. Mechanical ventilation or local exhaust ventilation is required. The product is hygroscopic. Danger for slipping.

Conditions for Safe Storage, including any Incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from food, drink and animal feeding stuffs. Avoid moisture. Avoid freezing. Avoid high temperatures. Keep away from incompatible materials. Suitable packaging material: Plastic (PE, PP, PVC), fiberglass-reinforced polyester, epoxy-coated concrete, titanium, acidproof or rubber-coated steel.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Aluminum Sulfate	TWA	2 mg/m ³	NIOSH

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 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

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. required when dusts are generated. Our recommendations on filtering respiratory protection are based on these standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

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 & PPE to remove contaminants. Discard contaminated footwear that 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

Appearance:

Physical State: Crystalline, Granules or Powder
Color: Gray to White

Odor:

No data available.

Odor Threshold:

No data available.

pH:

3.0-3.7

Melting Point/Freezing Point:

80 – 100 °C (212 °F)

Initial Boiling Point and Boiling Range:

112-116 °C (234-241 °F)

Flash Point:

Not combustible

Evaporation Rate (butyl acetate=1):

Not applicable

Flammability (solid, gas):

No data available.

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: Not applicable.

Flammability Limit – Lower: Not applicable.

Explosive Limit – Upper: No data available.

Explosive Limit – Lower: No data available.

Vapor Pressure:

Essentially 0 mm Hg

Vapor Density (air = 1):

1.65 - 1.7 g/cm³

Relative Density (water=1):

2.71 g/mL at 25 °C (77 °F)

Solubility(ies):

Solubility in water: Reacts.

Solubility (other): No data available.

Partition coefficient (n-octanol/water):

No data available.

Auto-Ignition Temperature:

Not applicable.

Decomposition Temperature:

770 °C

Viscosity:

No data available.

Other Information:

Molecular Weight: 342.14

Formula: Al₂(SO₄)₃•14.3H₂O

Section 10: Stability and Reactivity

Reactivity

Can corrode base metals in the presence of water.

Chemical Stability

The product is chemically stable under standard ambient conditions (room temperature).

Possibility of Hazardous Reactions

Corrodes metals under influence of moisture.

Conditions to Avoid

Corrosion might appear in contact with moisture. Humidity or contact with water may cause lumpiness.

Incompatible Materials

Bases, non-acid proof metals (for example aluminum, copper and iron). Avoid contact with unalloyed steel or galvanized surfaces.

Hazardous Decomposition Products

Sulphur oxides (SO_x).

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Ingestion may provoke the following symptoms: Nausea, Vomiting, irritation of mouth, esophagus, and stomach.

Inhalation: Cough and difficulties in breathing.

Skin Contact: Effects of repeated or prolonged skin contacts may include: Dry skin, irritation.

Eye Contact: Contact with eyes causes a smarting pain and a flood of tears. Risk of serious damage to eyes.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Oral (Rat) LD50: > 2,000 mg/kg

Dermal

Dermal (rabbit) LD50: > 5,000 mg/kg

Inhalation

Inhalation (Rat) LC50: > 5 mg/l4h

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 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 - Danio rerio (zebra fish) - > 87.5 mg/l - 96 h

Aquatic Invertebrates

EC50 - Daphnia magna (Water flea) - > 200 mg/l - 48 h

Toxicity to Aquatic Plants

ErC50 - Pseudokirchneriella subcapitata (microalgae) - 0.24 mg/l - 72 h

Chronic Hazards to the Aquatic Environment

Fish

NOEC - Salvelinus fontinalis (Brook trout) - 0.024 mg/l - 60d

Aquatic Invertebrates

NOEC - Ceriodaphnia dubia (water flea) - 3.8 mg/l - 8d

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

The methods for determining biodegradability are not applicable to inorganic substances.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Not expected to bioaccumulate.

Partition Coefficient n-octanol / water (log Kow)

LOW (LogKOW = -2.2002)

Mobility in Soil

The product is soluble in water.

Other Adverse Effects

May lower the pH of water and thus be harmful to aquatic organisms.

Section 13: Disposal Considerations

Disposal Instructions

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated Packaging

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

Section 14: Transportation Information

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

*This SDS corresponds to Aluminum Sulfate (CAS number 10043-01-3). The solid form is classified with hazard statement H318, while the liquid form is classified with both H290 and H318. If H290 applies, a UN transport code must be assigned to the product. *Info from H&E**

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
Chronic (Delayed) Health Hazard: Yes

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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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

Disclaimer

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