

Section 1: Product & Company Information

Product Identifier: Aluminum Sulfate Solution 48%

Other Means of Identification

Product Number: 174155
174156

Recommended Use and Restrictions on Use

Recommended Use: No data Available
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)

Corrosive to Metals - 1

Health Hazard(s)

(Corrosion)Damage/Irritation, Eye - 1

Environmental Hazard(s)

Not applicable

Label Elements

Signal Word

DANGER

Hazard Symbol(s)



Hazard Statement(s)

H290: May be corrosive to metals.
H318: Causes serious eye damage.

Precautionary Statements

General

Not applicable.

Prevention

P234: Keep only in original container.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

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.
P321: Specific treatment (see supplemental first aid instructions on this label).
P390: Absorb spillage to prevent material damage.

Storage

P406: Store in corrosive resistant container with a resistant inner liner.

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

Section 3: Composition/Information on Ingredients

Mixture

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Water		7732-18-5	Balance	No
Sulfuric acid, aluminum salt (3:2)	Aluminum sulfate; Alum	10043-01-3	48	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

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation

Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact

Remove contaminated clothing and wash exposed area thoroughly with soap and water for at least 15 minutes. Seek medical attention, if you feel unwell.

Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Do NOT induce vomiting. Rinse mouth. Immediately call poison control center or doctor/physician.

Most important symptoms/effects, acute and delayed

Symptoms

Irritating to eyes, respiratory system and skin.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

No data available.

Section 5: Fire-Fighting Measures

General Fire Hazards

No data available.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media

Avoid water in straight hose stream; will scatter and spread fire.

Specific Hazards Arising from the Chemical

Not considered flammable but may burn at high temperatures. Product is not explosive. Hazardous reactions will not occur under normal conditions. Liquid alum may react with some metals, to give flammable, potentially explosive hydrogen gas. Hydrogen gas can accumulate to explosive concentrations inside confined spaces.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

No Data available

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

Steps should be taken to contain spilled liquids and prevent discharges to streams or sewer systems

Methods and Materials for Containment and Clean-Up

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Notification Procedures

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

Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Section 7: Handling and Storage

Precautions for Safe Handling

Handle all chemicals with respect. Keep separated from incompatible substances. Handle only with equipment, materials and supplies specified by their manufacturer as being compatible and appropriate for use with this product.

Conditions for Safe Storage, including any Incompatibilities

Store at appropriate temperature to protect from freezing or crystallization. Store away from excessive heat (e.g., steam pipes, radiators), and from reactive materials. Do not store this material near food, animal feed or drinking water. Store in well-ventilated area. Keep container tightly closed when not in use.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Aluminum Sulfate	TWA	5mg/m ³	US. ACGIH Threshold Limit Values

Biological Limit Values

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

Appropriate Engineering Controls

Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

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

Use chemical splash goggles and face shield. Eye protection worn must be compatible with respiratory protection system employed.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

Use NIOSH-approved dust mask if dust has the potential to become airborne.

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 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: Liquid
Color: Clear to slightly amber

Odor: Odorless

Odor Threshold: No data available.

pH: 1.9 – 2.4

Melting Point/Freezing Point: -16 °C

Initial Boiling Point and Boiling Range: 101°C / 214°F

Flash Point: Not applicable.

Evaporation Rate (butyl acetate=1): No data available.

Flammability (solid, gas): No applicable.

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: No data available.

Flammability Limit – Lower: No data available.

Explosive Limit – Upper: No data available.

Explosive Limit – Lower: No data available.

Vapor Pressure: Like water

Vapor Density (air =1): Like water

Relative Density (water=1): 1.29 – 1.34

Solubility(ies):

Solubility in water: Completely miscible

Solubility (other): No data available.

Partition coefficient (n-octanol/water): No data available.

Auto-Ignition Temperature: No data available.

Decomposition Temperature: No data available.

Viscosity: No data available.

Other Information:

Molecular Weight: 594 for $\text{Al}_2(\text{SO}_4)_3 \cdot 14\text{H}_2\text{O}$

Formula: $\text{Al}_2(\text{SO}_4)_3 \cdot 14\text{H}_2\text{O}$ (Dry Equivalent)

Section 10: Stability and Reactivity

Reactivity

Hazardous reactions will not occur under normal conditions.

Chemical Stability

Material is stable under normal conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Avoid exposure to excessive heat.

Incompatible Materials

Avoid contact with acids and oxidizing agents.

**Hazardous
Products**

Decomposition

Thermal decomposition may yield toxic oxides of sulfur.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Inhalation: May cause respiratory irritation.

Skin Contact: Causes severe skin irritation.

Eye Contact: Causes serious eye damage.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Aluminum Sulfate: LD50- (Rat) >5000 mg/kg

Dermal

No data available.

Inhalation

No data available.

Repeated Dose Toxicity

No data available.

Skin Corrosion/Irritation

Redness. Pain. Serious skin burns. Blisters.

Serious Eye Damage/Eye Irritation

Redness. Pain. Blurred vision. Severe burns.

Respiratory/Skin Sensitization

No classified.

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

Not classified.

In Vivo

Not classified.

Reproductive Toxicity

Not classified.

**Specific Target Organ Toxicity - Single
Exposure**

Not classified.

**Specific Target Organ Toxicity - Repeated
Exposure**

Not classified.

Aspiration Hazard

Not classified.

Other Effects

None known.

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

Aluminum Sulfate- LC50 (Mosquitofish) 96 h 235 ppm

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

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)

No data available.

Mobility in Soil

No data available.

Other Adverse Effects

Avoid release into the environment.

Section 13: Disposal Considerations

Disposal Instructions

Dispose of waste material in accordance with all local, regional, national, and international regulations.

Contaminated Packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied.

US Department of Transportation (DOT)

UN Number: UN3264

UN Proper Shipping Name: Corrosive liquid, acidic, inorganic, n.o.s.

Technical Name: (contains Aluminum sulfate)

Hazard Class: 8

Subsidiary Hazard Risk: -

Packing Group: III

DOT Label/Placard Exemptions: Not determined

Special Provisions: IB3, T7, TP1, TP28

Packaging Exceptions: 49CFR 173.154

Packaging Non-Bulk: 49CFR 173.203

Packaging Bulk: 49CFR 173.241

Reportable Quantity (RQ): 5,000lb (2,270kg)

Marine Pollutant: No

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 persons transporting the product know what to do in the event of an accident or spillage.

Emergency Response Guidebook (ERG) #: 154

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
Chronic (Delayed) Health Hazard: No

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 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.

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 1

Chronic Health Hazard: /

Flammability: 0

Physical Hazard: 0

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

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 1

Fire Hazard: 0

Reactivity Hazard: 0

Special: COR

(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	ACGIH - American Conference of Industrial Hygienists
BCF - Bioconcentration Factor	AIHA - American Industrial Hygiene Association
EC50 - Effective concentration, 50%	BEI - Biological Exposure Indices
IDHL - Immediately Dangerous to Life and Health	CAS - Chemical Abstracts Service
Kg - Kilogram	DOT - US Department of Transportation
l - Liter	EPA - US Environmental Protection Agency
lb. - Pound	GHS - Globally Harmonized System of Classification and Labelling of Chemicals
LC50 - Lethal Concentration, 50%	IARC - International Agency for Research on Cancer
LD50 - Lethal Dose, 50%	IATA - International Air Transport Association
mg - milligram	IBC - Intermediate Bulk Container
ml - milliliter	IMDG - International Maritime Dangerous Goods
N/A - Not Applicable	NIOSH - National Institute for Occupational Safety and Health
N/D - Not Determined	NTP - National Toxicology Program
PEL - Permissible Exposure Limit	OSHA - US Occupational Health and Safety Administration
REL - Recommended Exposure Limit	SARA - US EPA Superfund Amendments and Reauthorization Act
STEL - Short-term Exposure Limit	TSCA - US EPA Toxic Substances Control Act
TWA - Time weighted average	UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

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