

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Aluminum Sulfate Solution
CAS number	10043-01-3
Synonyms	ALUM.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory Chemicals
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Irritating to eyes	Category 2
Corrosive to Metals	Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

May be harmful if swallowed. Causes eye irritation. May be corrosive to metals.

Precautionary statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, and eye protection. Keep only in original container.

Response

If swallowed: Call a poison center or doctor if you unwell. Rinse mouth. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

Storage

Store in corrosive resistant container or container with resistant inner liner.

Disposal

Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): May be D002 under §261.22 (a)(2) due to the rate of corrosion of metal.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No information available.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Water	H ₂ O	7732-18-5	>50%
Aluminum Sulfate	Papermaker's alum	10043-01-3	<50%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled

If adverse effects occur, remove to fresh air and observe. If not breathing, give artificial respiration. Seek immediate medical attention/advice.

In case of skin contact	Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
In case of eye contact	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor/physician if irritation continues.
If swallowed	If a large amount is swallowed, get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye damage. May cause skin irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Aluminum Sulfate will not burn. Use extinguished measures that are appropriate to local circumstances and the surrounding environment. Small Fire: Move containers from fire area if you can do it without risk. Avoid inhalation of material of combustion by-products. Stay upwind and keep out of low areas. Large Fire: Same procedures as for small fires.
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Unsuitable extinguishing media	No information available.
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5.2 Specific hazards arising from the substance or mixture

Negligible fire hazard. Hazardous Decomposition Products: Oxides of sulfur.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Do not release runoff from fire control methods to sewers or waterways.

5.4 Further information

Flash Point	No information available.
Autoignition Temperature	No information available.

Explosion limits

Upper	No information available
Lower	No information available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

NFPA

Health	Flammability	Instability	Physical hazards
1	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protection recommended in Section 8. Keep unnecessary people away, isolate hazard area and deny entry.

6.2 Environmental precautions

Do not release into sewers or waterways. For spills in excess of allowable limits (RQ) notify the National Response Center (800) 424-8802; refer to SARA Title III, Section 313 40 CFR 372, and CERCLA 40 CFR 302 for detailed instructions concerning reporting requirements. Notify Local Emergency Planning Committee (LEPC) and State Emergency Response Commission (SERC) for a release greater than or equal to Reportable Quantities (RQ). Refer to U.S. SARA Section 304. See Section 12 for additional Ecological Information.

6.3 Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Avoid contact with skin, eyes or clothing. Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling. Store and handle in accordance with all current regulations and standards.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed and store in a cool, dry and well-ventilated place. Store with acids. See original container for storage recommendations. Store away from incompatible materials.

Incompatibilities

Alkalis, metals. Alkalis (bases): violent reaction. Metals: may be corrosive in the presence of moisture.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Aluminum Sulfate	TWA	15 mg/m ³

US. ACGIH Threshold Limit Values

No information available.

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Aluminum Sulfate	TWA	10 mg/m ³

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. Maintain eye wash fountain and quick-drench facilities in work area.

Personal protective equipment

Eye/face protection

Wear chemical tight goggles and full face shield.

Skin and body protection

Wear appropriate chemical resistant clothing including chemical resistant gloves.

Respiratory protection

Seek professional advice prior to respirator selection and use. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. WARNING!: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless to clear amber to clear light green
Odor	No information available
Odor Threshold	No information available
pH	2.0 - 2.4
Melting Point/Range	±1.3 @ 15.5 °C
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No data available.
Lower	No data available.
Vapor Pressure	Similar to water
Vapor Density	Similar to water
Density	2.4
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	Not flammable
Decomposition Temp	± 1400 °F
Viscosity	5-25 centipose
Molecular Formula	Al ₂ (SO ₄) ₃
Molecular Weight	342.15
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Not reactive under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Protect from freezing. Keep separated from incompatible substances.

10.5 Incompatible materials

Alkalis, metals, alkalis (bases): violent reaction. Metals: May be corrosive in the presence of moisture.

10.6 Hazardous decomposition products

Thermal oxidative decomposition of Aluminum Sulfate occurs at temperatures greater than 1400 °F and can product sulfur oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Aluminum Sulfate	1930 mg/kg (rat)	-	-
Water	> 90 mL/kg (rat)	-	-

Skin corrosion/irritation

May cause skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

This product does not contain any carinogens or potential carcinogens as listed by OSHA, IARC or NTF

Specific target organ toxicity - single exposure

No information available.

Specific target organ toxicity - repeated exposure

No information available.

Reproductive toxicity

No information available.

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information**12.1 Toxicity**

Product		Species	Test Results
Aluminum Sulfate	LC50	Carassius auratus	100 mg/L 96h
	LC50	Gambusia affinis	37 mg/L 96h
	EC50	Daphnia magna	136 mg/L 15 min

12.2 Persistence and degradability

No information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN-No	UN3264
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Hazard Class	8
Packing Group	III

IMDG

UN-No	UN3264
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Hazard Class	8
Packing Group	III

IATA

UN-No	UN3264
Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Hazard Class	8
Packing Group	III

SECTION 15: Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
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TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous

Listed, Acute Health Hazard, Chronic Health Hazard.

SARA 313 (TRI reporting)

Not listed.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Listed, 5000 lb, Hazardous Substances.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed

US state regulations

US. Massachusetts RTK - Substance List

Listed.

US. New Jersey Worker and Community Right-to-Know Act

Listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Listed.

California Proposition 65

Not listed

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.