Safety Data Sheet · OSHA HCS 2024

Aluminum Sulfate Hydrate ACS Grade

ACS Grade

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-12	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Aluminum Sulfate Hydrate ACS Grade
Grade	ACS Grade
CAS Number	7784-31-8
Chemical Formula	Al2(SO4)3 * 18H2O
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Recommended Use	Industrial / laboratory chemical. See Section 7.
Restrictions on Use	No restrictions identified beyond the conditions of safe use in Sections 7 and 8.

2 Hazard Identification



Corrosive

Classification

Corrosive to metals, Category 1

Serious eye damage/eye irritation, Category 1

Hazardous to the aquatic environment, long-term hazard, Category 3 †

† GHS environmental hazard class; not adopted under OSHA HCS (29 CFR 1910.1200).

Signal Word

Danger

Hazard Statements

H290 May be corrosive to metals

H318 Causes serious eye damage

H412 Harmful to aquatic life with long lasting effects

Precautionary Statements

P234 Keep only in original packaging.

P264 Wash hands and face thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves, protective clothing, and eye/face protection.

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.

P313 Get medical advice or attention.

P390 Absorb spillage to prevent material damage.

P406 Store in a corrosion resistant container with a resistant inner liner.

P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Aluminum Sulfate Hydrate	7784-31-8	Al2H36O30S3	99.5-100% (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects Eye contact causes serious eye damage: pain, redness and corneal injury, which may be permanent.

Immediate Medical Attention and Special Treatment Immediate medical attention is required after eye contact; eye damage may continue after exposure ends.

5 Fire-Fighting Measures

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical, or CO2. Use measures appropriate to local circumstances.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical Fire may release corrosive and toxic gases. Containers may rupture when heated.

Protective Equipment Wear self-contained breathing apparatus and full protective clothing.

Hazardous Combustion Products Sulfur oxides (sulfur dioxide, sulfur trioxide) and aluminum oxide on thermal decomposition.

6 Accidental Release Measures

Personal Precautions Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions Prevent leakage or spillage from entering drains, sewers, or waterways.

Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.
Specific Storage Precautions	Keep containers tightly closed in a dry, cool, well-ventilated place away from direct sunlight and heat; the material is hygroscopic. Store in corrosion-resistant containers.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
OSHA PEL	2 mg/m³ TWA (Al)
NIOSH REL	2 mg/m³ TWA (Al)

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.
Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.
Respiratory Protection	Use NIOSH-approved respirator if exposure limits are exceeded or irritation occurs.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	White crystalline powder, granular texture
Odor	Odorless
Odor Threshold	No data available
pH	No data available
Melting Point / Freezing Point	86°C (186.8°F)
Boiling Point	Not applicable (decomposes)
Flash Point	None (non-flammable)
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative Density	No data available
Solubility	Soluble in water

Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Particle Characteristics	No data available
Form	Solid
Density	0.9 - 0.91 g/cc

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	May be corrosive to metals.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Contact with moisture or water (forms an acidic solution); temperatures above 650 °C (1202 °F).
Incompatible Materials	Strong oxidizing agents; strong bases and alkalis (may react violently); moisture; most common metals in the presence of moisture.
Hazardous Decomposition Products	Sulfur oxides (sulfur dioxide, sulfur trioxide) and aluminum oxide on thermal decomposition.

11 Toxicological Information

See Section 2 for GHS hazard classification.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Eye contact causes serious eye damage: pain, redness and corneal injury, which may be permanent.
Delayed and Chronic Effects	No delayed or chronic effects identified beyond the classification in Section 2.
Numerical Measures of Toxicity	No data available

Carcinogen Classification

Agency	Status
IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Aquatic Hazard	H412 Harmful to aquatic life with long lasting effects
Ecotoxicity	Classified as hazardous to the aquatic environment (see Section 2); no product-specific ecotoxicity test data on file. Avoid release to the environment.
Persistence & Degradability	Not Available

Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

If discarded, this material may be a corrosive hazardous waste (EPA RCRA D002, 40 CFR 261.22): aqueous with pH ≤ 2 or ≥ 12.5, or a liquid that corrodes steel at more than 6.35 mm per year. The waste generator must make the final hazardous-waste determination.

14 Transport Information

Not regulated for transport under US DOT 49 CFR Subchapter C, IMDG, or IATA DGR in packages holding less than the reportable quantity below.

Hazardous substance (49 CFR 171.8)	A single package holding 5,000 lb (2,270 kg) or more of this product contains the reportable quantity (RQ) of a hazardous substance and is regulated as a hazardous material.
Reportable quantity (49 CFR 172.101 Appendix A)	Aluminum sulfate — RQ 5,000 lb (2,270 kg)
Shipping description (package at or above the RQ)	UN3077, Environmentally hazardous substance, solid, n.o.s. (Aluminum sulfate), 9, III, RQ

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Not listed
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Not listed

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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