

Safety Data Sheet: Aluminum Chloride Hexahydrate

1. Identification

Product	Aluminum Chloride Hexahydrate; CAS 7784-13-6; EC 231-208-1
Use	Professional hydrated aluminium-salt and industrial formulation.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Aluminum Chloride Hexahydrate. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Skin irritation Category 2; eye irritation Category 2; single-exposure respiratory irritation Category 3 in the selected crystalline reference.
Signal word / symbols	Warning; GHS07
Hazard statements	H315: causes skin irritation. H319: causes serious eye irritation. H335: may cause respiratory irritation.
Prevention	Use adequate ventilation; avoid inhaling dust. Prevent skin and eye contact. Wear suitable chemical-resistant gloves and eye protection. Wash after handling; keep food and drink out of the work area.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Aluminum chloride hexahydrate, CAS 7784-13-6. The selected crystalline substance reference lists 100%; commercial supply assay >95.0%. No delivered-lot impurity recipe is asserted.
Supply grade	Assay >95.0%
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant.
Inhalation	Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to dust.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Seek medical advice for persistent irritation.
Eyes	Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Seek medical advice if irritation persists.
Ingestion	Rinse the mouth. Do not induce vomiting. Give nothing by mouth to an unconscious person. Obtain medical advice.
Effects / treatment	Skin and eye contact and airborne dust can cause irritation. Seek medical advice after exposure or persistent symptoms. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	The reference is noncombustible but can release irritating fumes during overheating. Avoid water on the material in a fire; use dry media appropriate for the surrounding incident. Firefighters need full protection and breathing apparatus.
Hazards	Heating can produce hydrogen chloride and aluminium-containing fumes.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personal protection	Restrict access and use ventilation and suitable PPE; avoid raising dust.
Containment	Collect carefully into labelled compatible containers. Keep oxidizers away from organic or combustible absorbents and contamination.
Environment	Prevent drainage and uncontrolled release; use an approved disposal route.

7. Handling and Storage

Handling	Control crystal and powder dust with suitable ventilation. Wear chemical-resistant gloves, close-fitting goggles and protective clothing. Avoid inhalation, ingestion and direct contact; keep eyewash facilities available.
Storage	Keep tightly closed in a cool, dry, ventilated area. Protect against moisture ingress and excessive heat; segregate from bases and incompatible alkaline materials.
Incompatibilities	Bases and incompatible alkaline materials; excessive heat.

8. Exposure Controls / Personal Protection

Exposure limits	Reference NIOSH TWA 2 mg/m ³ . Apply local requirements and effective airborne dust control.
Engineering controls	Use local extraction where dust can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	Light-yellow to white crystals
Formula / molecular weight	AlCl ₃ ·6H ₂ O / 241.43 g/mol
Form	Light-yellow to white crystals
Density, supply	2.39 g/cm ³
Water solubility	Soluble
Thermal transition, supply	Approximately 100°C; decomposition possible
Other properties	Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred.

10. Stability and Reactivity

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	Bases and incompatible alkaline materials; excessive heat.
Decomposition	Heating can produce hydrogen chloride and aluminium-containing fumes.

11. Toxicological Information

Exposure effects	Skin and eye contact and airborne dust can cause irritation. Seek medical advice after exposure or persistent symptoms.
Reference classification	Skin irritation Category 2; eye irritation Category 2; single-exposure respiratory irritation Category 3 in the selected crystalline reference.
Data limits	Reference rat oral LD ₅₀ 3,311 mg/kg for the hydrate. Irritation classification is retained; no quantitative chronic or reproductive assessment is established for the supplied grade.

12. Ecological Information

Environmental effects	Prevent uncontrolled releases. Soluble aluminium salts can enter the aqueous environment; quantitative aquatic endpoints for the delivered hydrate grade are not established.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Non-dangerous goods
UN number	Not assigned
Shipping name	Not regulated as dangerous goods
Class / packing group	DOT / TDG, IMDG and IATA: non-dangerous goods in the selected crystalline substance reference; no assigned UN number or packing group. This reference does not certify a delivered consignment.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Aluminum Chloride Hexahydrate; CAS 7784-13-6; EC 231-208-1
HS reference	282732; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished formulation.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H315: causes skin irritation. H319: causes serious eye irritation. H335: may cause respiratory irritation.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.1; prepared 2026-10-07. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

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