SAFETY DATA SHEET

Version: v1
Revision Date: 2023-07-24
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SECTION 1:Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	: Aluminum chloride hexahydrate
Product Number	: A112511
Brand	: aladdin
CAS-No.	: 7784-13-6

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

Identified uses	: Laboratory chemicals,Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company	: Shanghai Aladdin Biochemical Tech Co.,Ltd
Address	: 36 Xinjinqiao Road, Shanghai
Telephone	: 400-620-6333
Fax	: no data available

1.4 Emergency telephone number

Emergency Phone	: 0532-83889090

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Skin corrosion (Sub-category 1B), H314

Serious eye damage (Category 1), H318

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H303	May be harmful if swallowed
H314	Causes severe skin burns and eye damage

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and …] thoroughly after handling.

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P310	Immediately call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/... if you feel unwell.
P363	Wash contaminated clothing before reuse.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Aluminum chloride, hexahydrate; aluminum trichloride hexahydrate, aluminum trichloride hexahydrate, crystalline aluminum trichloride
Formula : AlCl3H12O6
Molecular weight : 241.43
CAS No. : 7784-13-6
EC-NO. : 231-208-1

Component	Classification	Concentration
Aluminum chloride hexahydrate		
	no data available	99.99% metals basis

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
Consult a physician. Show this material safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.3 Advice for firefighters

如必要的话,戴自给式呼吸器去救火。

5.4 Further information

水喷雾可用来冷却未打开的容器。

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep the container tightly closed and store in a dry and ventilated place. Sensitive to humidity.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection,use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN(EU).

Control of environmental exposure

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	form: Crystals color: White to Off-White
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	100°C
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	no data available
n) Water solubility	Soluble in water (477 mg/ml at 20 °C), alcohol, ether, glycerol, propylene glycol, benzophenone, benzene, nitrobenzene, carbon tetrachloride, and chloroform.
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Violent reactions possible with: alkenes Alcohols Alkali metals Alkaline earth metals Ethylene oxide halogen oxides Oxidizing agents organic nitro compounds phenols Bases

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Metals

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 3.311 mg/kg

Remarks: (RTECS) Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach., Nausea, Vomiting Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

LD50 Dermal - Rabbit - > 2.000 mg/kg

Remarks: (RTECS) (anhydrous substance) The value is given in analogy to the following substances: aluminium(III) chloride, anhydrous

Skin corrosion/irritation

Skin - In vitro study Result: Corrosive (OECD Test Guideline 435) Remarks: The value is given in analogy to the following substances: aluminium(III) chloride, anhydrous

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Sensitisation test: - Guinea pig Result: negative (OECD Test Guideline 406) Remarks: The value is given in analogy to the following substances: aluminium(III) chloride, anhydrous

Germ cell mutagenicity

Test Type: Mammal Test system: lymphocyte Remarks: DNA damage

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

Cough, Shortness of breath, Headache, Nausea, Vomiting To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. The following applies to aluminium compounds

in general: After swallowing: only slightly absorbable via the gastrointestinal tract. Serious disorders in man (from about 4000 mg aluminium up): phosphate metabolism, calcium metabolism. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 36,6 mg/l - 96 h

Remarks: (External MSDS)

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 27,3 mg/l - 48 h

Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 0,57 mg/l - 96 h

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

May be harmful to aquatic organisms due to the shift of the pH. Avoid release to the environment. Biological effects: Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. The following may develop after reaction of the product with water: Hydrogen chloride gas Discharge into the environment must be avoided.

SECTION 13:

13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 1759	Packing group: II	Class: 8
Proper shipping name: CORROSIVE SOLID, N.O.S. (aluminum chloride hexahydrate)	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: no		

IMDG

UN number: 1759	Packing group: II	EMS-No: no data available
Proper shipping name: CORROSIVE SOLID, N.O.S. (aluminum chloride hexahydrate)		

IATA

UN number: 1759	Packing group: II	Class: 8
Proper shipping name: CORROSIVE SOLID, N.O.S. (aluminum chloride hexahydrate)		

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Further information

 The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Aladdin Co. Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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