



1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product name : Aluminum(III) Chloride
Product code : A1831

Manufacturer or supplier's details

Company : Tokyo Chemical Industry (India) Pvt. Ltd.
Address : Building 189, MN Park, Genome Valley, Turkapally, Hyderabad, Telangana - 500078 India
Telephone : +91-44-2262 0909
Telefax : N/A
E-mail address : Sales-IN@TCIchemicals.com
Emergency telephone number : +91-44-2262 0909

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin corrosion, Sub-category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Germ cell mutagenicity, Category 2	H341: Suspected of causing genetic defects.
Reproductive toxicity, Category 2	H361: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - repeated exposure, Category 2, Nervous system	H373: May cause damage to organs through prolonged or repeated exposure.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :
H314 Causes severe skin burns and eye damage.
H341 Suspected of causing genetic defects.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs (Nervous system) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P391 Collect spillage.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance name : Aluminum(III) Chloride
Index-No. : 013-003-00-7
EC-No. : 231-208-1

Components

Chemical name	CAS RN EC-No.	Concentration (% w/w)	M-Factor, SCL, ATE
Aluminum(III) Chloride	7446-70-0 231-208-1	>= 90 - <= 100	

4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled : Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor/ physician.

In case of skin contact : Take off all contaminated clothing immediately.
If on skin, rinse well with water.
Get medical advice/ attention.

In case of eye contact : Rinse with plenty of water.
If easy to do, remove contact lens, if worn.
Immediately call a POISON CENTER or doctor/ physician.

If swallowed : Immediately call a POISON CENTER or doctor/ physician.
Rinse mouth.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

None known.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media : Dry powder, Dry sand, Carbon dioxide (CO2)
Unsuitable extinguishing media : Water

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : No information available.

5.3 Advice for firefighters

Special protective equipment for firefighters : Use personal protective equipment.
Specific extinguishing methods : Use extinguishing measures that are appropriate to local circum-

stances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

6.2 Environmental precautions

Environmental precautions : Should not be released into the environment.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Pick up and arrange disposal without creating dust.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Technical measures : Prevent dispersion of dust.

Local/Total ventilation : Ensure adequate ventilation.
Handle product only in closed system or provide appropriate exhaust ventilation at machinery.
Use a local exhaust ventilation.

Advice on safe handling : Avoid contact with skin, eyes and clothing.
Wear personal protective equipment.
Wash hands and face thoroughly after handling.
Open drum carefully as content may be under pressure.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed. Store in a cool and shaded area. Protect from moisture. Keep under inert gas. Store locked up.

Storage class (TRGS 510) : 8A

7.3 Specific end use(s)

Specific use(s) : No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Install a closed system or local exhaust.
Also install safety shower and eye bath.

Personal protective equipment

Eye/face protection : Safety glasses, Safety goggles, Face-shield
Hand protection : Impervious gloves
Skin and body protection : Impervious protective clothing
Respiratory protection : Dustproof gas mask
Self-contained breathing apparatus

*Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	: Solid form
Colour	: white - yellow
Odour	: No data available
Odour Threshold	: No data available
Melting point/freezing point	: No data available
Boiling point/boiling range	: No data available
Flammability	: No data available
Upper explosion limit/Upper flammability limit	: No data available
Lower explosion limit/Lower flammability limit	: No data available
Flash point	: No data available (Calculated value: >60°C)
Auto-ignition point	: No data available
Decomposition temperature	: No data available
pH	: 2,4 (20 °C) Concentration: 100 g/m/l (as aqueous solution)
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: Solvent: Nitrobenzene very soluble Solvent: Benzene soluble Solvent: Chloroform soluble
Partition coefficient: n-octanol/water (log value)	: No data available
Vapour pressure	: 0,1 kPa (100 °C)
Relative density	: No data available
Relative vapour density	: No data available
Particle characteristics	: No data available

9.2 Other information

Molecular weight	: 133,33 g/mol
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10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	: Decomposes in contact with water and liberates toxic gases.
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10.4 Conditions to avoid

Conditions to avoid	: Exposure to moisture,
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10.5 Incompatible materials

Materials to avoid : Oxidizing agents,
water,

10.6 Hazardous decomposition products

Hydrogen chloride gas, Metal oxides

11. TOXICOLOGICAL INFORMATION**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity****Product:**

Acute oral toxicity : Assessment: The component/mixture is minimally toxic after single ingestion.

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

Components:**Aluminum(III) Chloride:**

Acute oral toxicity : LD50 (Rat): 3.450 mg/kg
Assessment: The component/mixture is minimally toxic after single ingestion.

Acute dermal toxicity : LD50 (Rabbit): > 2 g/kg
Assessment: The substance or mixture has no acute dermal toxicity

Acute toxicity (other routes of administration) : LD50 (Rat): 333 mg/kg
Application Route: Intraperitoneal injection

Skin corrosion/irritation**Product:**

Result : Causes burns.

Components:**Aluminum(III) Chloride:**

Result : Causes burns.

Serious eye damage/eye irritation**Product:**

Result : Irreversible effects on the eye

Components:**Aluminum(III) Chloride:**

Result : Irreversible effects on the eye

Respiratory or skin sensitisation : No information available.

Germ cell mutagenicity**Product:**

Germ cell mutagenicity- Assessment : Suspected of inducing heritable mutations in the germ cells of humans.

Components:**Aluminum(III) Chloride:**

Germ cell mutagenicity- Assessment : Suspected of inducing heritable mutations in the germ cells of humans.

Carcinogenicity : No information available.

Reproductive toxicity**Product:**

Reproductive toxicity - Assessment : Suspected human reproductive toxicant

Components:**Aluminum(III) Chloride:**

Reproductive toxicity - Assessment : Suspected human reproductive toxicant

STOT - single exposure : No information available.

STOT - repeated exposure**Product:**

Target Organs : Nervous system
Assessment : May cause damage to organs through prolonged or repeated exposure.

Components:**Aluminum(III) Chloride:**

Target Organs : Nervous system
Assessment : May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity : No information available.

Aspiration hazard : No information available.

RTECS No. : BD0525000 (Aluminum(III) Chloride)

11.2 Information on other hazards**Endocrine disrupting properties****Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12. ECOLOGICAL INFORMATION**12.1 Toxicity****Product:****Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Components:**Aluminum(III) Chloride:**

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0,57 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 3,9 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0,46 mg/l Exposure time: 96 h

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Very toxic to aquatic life with long lasting effects.

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**Product:**

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
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12.6 Endocrine disrupting properties**Product:**

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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12.7 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Product	:	Disposal in accordance with local and national regulations. Entrust disposal to a licensed waste disposal company.
Contaminated packaging	:	Disposal in accordance with local and national regulations. Before disposal of used container, remove contents completely.

14. TRANSPORT INFORMATION**14.1 UN number or ID number**

ADR	:	UN 1726
IMDG	:	UN 1726
IATA	:	UN 1726

14.2 UN proper shipping name

ADR : ALUMINIUM CHLORIDE, ANHYDROUS
IMDG : ALUMINIUM CHLORIDE, ANHYDROUS
IATA : Aluminium chloride, anhydrous

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADR	: 8	
IMDG	: 8	
IATA	: 8	

14.4 Packing group

ADR
Packing group : II
Classification Code : C2
Hazard Identification Number : 80
Tunnel restriction code : (E)

IMDG
Packing group : II
EmS Code : F-A, S-B

IATA (Cargo)
Packing instruction (cargo aircraft) : 863
Packing instruction (LQ) : Y844
Packing group : II

IATA (Passenger)
Packing instruction (passenger aircraft) : 859
Packing instruction (LQ) : Y844
Packing group : II

14.5 Environmental hazards

ADR
Environmentally hazardous : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Water hazard class (Germany) : WGK 1 slightly hazardous to water
Classification according to AwSV, Annex 1 (5.2)

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

The components of this product are reported in the following inventories:

CH BAGREG	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
AICS	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

16. OTHER INFORMATION

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Con-

centration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

This SDS was prepared sincerely based on the information obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling operations, sufficient care should be taken, in addition to the safety measures suitable for the given situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

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