



## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification

#### 1.1 Product identifiers

**Product Name :** Aluminium Chloride  
**Cat No.:** AC217460000; AC217460025; AC217460050; AC217461000;  
AC217465000  
**CAS No. :** 7446-70-0

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

**Recommended uses :** Laboratory chemicals.  
**Uses advised against:** Food, drug, pesticide or biocidal product use.

#### 1.3 Details of the supplier of the safety data sheet

**Company :** Krishna Solvechem Limited.  
B/503, Shayog, S. V. Road,  
Kandivali (West), Mumbai – 400067. India.

**Telephone :** +91-22-6123 0222

**Email :** exports@kscl.co.in

#### 1.4 Emergency telephone number

**Emergency Phone :** +91-8657457330

### SECTION 2: Hazards identification

#### 2.1 Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/Irritation	(Category 1 B)
Serious Eye Damage/Eye Irritation	(Category 1)
Specific target organ toxicity (single exposure)	(Category 3),
Target Organs - Respiratory system.	

#### 2.2 Label elements

**Pictogram :**



**Signal word**

Danger

**Hazard statement (s)**

Causes severe skin burns and eye damage  
May cause respiratory irritation

**Precautionary statement (s)**

**Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection Use only outdoors or in a well-ventilated area

**RESPONSE:**

Immediately call a POISON CENTER or doctor/physician

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**IF INHALED:**

Remove victim to fresh air and keep at rest in a position comfortable for breathing

**IF ON SKIN (or hair):**

Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse

**Ingestion**

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Storage:**

Store locked up

Store in a well-ventilated place. Keep container tightly closed

**Disposal:**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Reacts violently with water

**SECTION 3: Composition / information on ingredients**

Component	CAS-No	Weight %
Aluminum chloride	7446-70-0	>95

**SECTION 4: First aid measures****4.1 Description of first aid measures****General advice :**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.



<b>If inhalation :</b>	Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
<b>In case of skin contact :</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.
<b>In case of eye contact :</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.
<b>Ingestion :</b>	Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
<b>4.2 Most important symptoms and effects :</b>	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>4.3 Notes to Physician :</b>	Treat symptomatically

## SECTION 5: Firefigh effects

<b>5.1 Extinguishing media</b>	
<b>Suitable extinguishing media :</b>	CO 2, dry chemical, dry sand, alcohol-resistant foam.
<b>Unsuitable Extinguishing Media: :</b>	DO NOT USE WATER
<b>5.2 Flash Point :</b>	No information available.
<b>Method :</b>	No information available
<b>Explosion Limits:</b>	
<b>Upper</b>	No information available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available
<b>Specific Hazards Arising from the Chemical :</b>	The product causes burns of eyes, skin and mucous membranes. Reacts violently with water.
<b>Hazardous Combustion</b>	Hydrogen chloride. Hydrogen chloride gas.



**Products :**

**5.4 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. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA:**

Health	Flammability	Instability	Physical hazards
3	0	2	W

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

**6.2 Environmental precautions**

Do not flush into surface water or sanitary sewer system.

**6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Do not expose spill to water.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water. Handle under an inert atmosphere.

**7.2 Conditions for safe storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Keep away from water or moist air. Do not store in metal containers. Store under an inert atmosphere. Protect from moisture.

**SECTION 8: Exposure controls/personal protection**

**8.1 Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL (TWA)	NIOSH IDLH	Mexico
Aluminum Chloride		(Vacated) TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	

**Legend**



OSHA - Occupational Safety and Health Administration NIOSH IDLH:  
NIOSH - National Institute for Occupational Safety and Health

### Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

## 8.2 Exposure controls

### Personal protective equipment -

#### Eye / Face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### Skin protection and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Yellow, Form: Solid
b) Odour	Pungent
c) Odour Threshold	No data available
d) pH	2.4 100 g/L aq.sol
e) Melting point / freezing point	Melting point/range: 194 °C / 381.2 °F
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) Specific Gravity	2.440
n) Solubility	Water reactive
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) Molecular formula	Al Cl <sub>3</sub>
t) Molecular Weight	133.34

### SECTION 10: Stability and Reactivity

10.1 Reactive Hazard :	Yes
10.2 Chemical stability :	Stable under normal conditions
10.3 Possibility of hazardous reactions :	None under normal processing. Reacts violently with water.
10.4 Conditions to avoid :	Excess heat. Incompatible products. Exposure to moist air or water. Exposure to moisture.
10.5 Incompatible materials:	Water, Strong oxidizing agents, Alkali metals, Strong bases, Metals
10.6 Hazardous decomposition products :	Hydrogen chloride, Hydrogen chloride gas
10.7 Hazardous Polymerization	Hazardous polymerization does not occur.

### SECTION 11: Toxicological information

<b>11.1 Information on toxicological effects</b>	
<b>Acute toxicity:</b>	Component – Aluminium Chloride LD50 Oral – LD50= 3470 mg/kg (Rat) LD50 Dermal - LD50> 2g/kg (Rabbit) LC50 Inhalation – Not listed
<b>Toxicologically Synergistic Products:</b>	No information available
<b><u>Delayed and immediate effects as well as chronic effects from short and long-term exposure</u></b>	
<b>Irritation :</b>	Causes burns by all exposure routes
<b>Sensitization:</b>	No information available



**Carcinogenicity :**

The table below indicates whether each agency has Any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Aluminum chloride	7446-70-0	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects:**

No information available.

**Reproductive Effects:**

No information available.

**Developmental Effects :**

No information available.

**Teratogenicity:**

No information available.

**STOT - single exposure :**

Respiratory system

**STOT - repeated exposure:**

None known

**Aspiration hazard :**

No information available

**Symptoms / effects,both acute and delayed:**

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Endocrine Disruptor Information :**

No information available

**Other Adverse Effects :**

The toxicological properties have not been fully investigated.

**SECTION 12: Ecological information**

**12.1 Ecotoxicity**

The product contains following substances which are hazardous for the environment. Contains a substance which is: Toxic to aquatic organisms. Reacts with water so no ecotoxicity data for the substance is available.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Aluminum chloride	Not listed	Gambusia affinis: LC50=27.1 mg/L 97h	Not listed	EC50: 3.9 mg/L 48h EC50: 27.3 mg/L 48h

**12.2 Persistence and degradability:**

Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation**

No information available

**12.3 Mobility:**

Is not likely mobile in the environment.



### SECTION 13: Disposal considerations

**13.1 Waste treatment 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

**14.1 UN number :** ADR/RID: 1726  
IMDG: 1726  
IATA: 1726

**14.2 UN proper shipping name**

**ADR/RID :** ALUMINUM CHLORIDE

**IMDG :** ALUMINUM CHLORIDE

**IATA :** ALUMINUM CHLORIDE

**14.3 Transport hazard class(es)** ADR/RID: 8 IMDG: 8 IATA: 8

**14.4 Packaging group:** ADR/RID: II IMDG: II IATA: II

### SECTION 15: Regulatory information

**15.1 United states of America Inventory:**

Component	CAS-No	TSCA	TSCA Inventory notification Active/Inactive	TSCA - EPA Regulatory Flags
Aluminum chloride	7446-70-0	X	ACTIVE	-

**Legend:**

**TSCA -** Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** -Notices of Export:- Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Aluminum chloride	7446-70-0	X	-	231-208-1	X	X	X	X	KE-01045

**U.S. Federal Regulations**





<b>SARA 313</b>	Not applicable
<b>SARA 311/312 Hazard Categories</b>	See section 2 for more information
<b>CWA (Clean Water Act)</b>	Not applicable
<b>Clean Air Act</b>	Not applicable
<b>OSHA - Occupational Safety and Health Administration</b>	Not applicable
<b>California Proposition 65</b>	This product does not contain any Proposition 65 chemicals.

**15.2 U.S. State Right-to-Know Regulations:**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Aluminum chloride	x	x	x	x	x

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** - This product contains the following DHS chemicals:

**Legend** - amount STQs = Screening Threshold Quantities, APA = A placarded amount

Component	DHS Chemical Facility Anti-Terrorism Standard
Aluminum chloride	APA

**Other International Regulations**

**Mexico – Grade** No information available

**SECTION 16: Other information**

<b>16.1 Prepared By:</b>	Krishna Solvechem Ltd
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**Revision Summary:**

**This document has been updated to comply with the US OSHA Haz Com 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).**

**16.2 Disclaimer:**

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.