

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name Aluminum Chloride  
CAS number 7446-70-0  
Synonyms Aluminum trichloride

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

Identified uses Laboratory chemicals

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

Company Lab Alley, LLC  
12501 Pauls Valley Road  
Austin, Texas 78737  
U.S.A.  
Telephone 512-668-9918  
Fax 512-886-4008

#### 1.4 Emergency telephone

Emergency Phone # US & Canada: 1-800-535-5053 INFOTRAC  
International 1-352-323-3500 INFOTRAC

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

|  |             |
|--|-------------|
| Skin Corrosion/Irritation                        | Category 1B |
| Serious eye damage/eye irritation                | Category 1  |
| Specific target organ toxicity (single exposure) | Category 3  |
| Target Organs - Respiratory system               |             |

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Causes severe skin burns and eye damage  
May cause respiratory irritation

Precautionary statements

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

Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse.

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

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.

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

Reacts violently with water.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

| Chemical name     | Common name and synonyms | CAS number | Concentration |
|-------------------|--------------------------|------------|---------------|
| Aluminum chloride | Aluminum trichloride     | 7746-40-0  | >95%          |

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

#### If inhaled

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>If swallowed</b>            | Immediate medical attention is required. DO NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.                      |

#### 4.2 Most important symptoms and effects, both acute and delayed

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

#### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Unsuitable extinguishing media** DO NOT USE WATER

#### 5.2 Specific hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Reacts violently with water.

#### 5.3 Special 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.

#### 5.4 Further information

**Flash Point** No information available

**Autoignition Temperature** No information available

##### Explosion limits

**Upper** No information available

**Lower** No information available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**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.

**6.4 Reference to other sections**

See section 2 for full list of hazard and precaution statements.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Precautions on 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.

**Hygiene measures**

Handle in accordance with good industrial hygiene practices.

**7.2 Conditions for safe storage, including any incompatibilities****Storage conditions**

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.

**Incompatibilities**

Water. Strong oxidizing agents. Alkali metals. Strong bases. Metals.

**SECTION 8: Exposure controls/personal protection****8.1 Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Component         | Type          | Value   |
|-------------------|---------------|---------|
| Aluminum chloride | (Vacated) TWA | 2 mg/m3 |

#### US. NIOSH: Pocket Guide to Chemical Hazards

| Component         | Type | Value   |
|-------------------|------|---------|
| Aluminum chloride | TWA  | 2 mg/m3 |

## 8.2 Exposure controls

### Appropriate engineering controls

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

### 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

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.

#### Control of environmental exposure

No information available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                 |                          |
|---------------------------------|--------------------------|
| Physical State                  | Solid                    |
| Appearance                      | Yellow                   |
| Odor                            | Pungent                  |
| Odor Threshold                  | No information available |
| pH                              | 2.4 100 g/L aq.sol       |
| Melting Point/Range             | 194 °C                   |
| Boiling Point/Range             | No information available |
| Evaporation Rate                | Not applicable           |
| Flammability (solid)            | No information available |
| Flammability or explosive limit | No data available        |
| Vapor Pressure                  | No information available |

|  |                          |
|--|--------------------------|
| Vapor Density                          | Not applicable           |
| Density                                | 2.44                     |
| Solubility                             | Water reactive           |
| Partition coefficient; n-octanol/water | No data available        |
| Autoignition Temp                      | No information available |
| Decomposition Temp                     | No information available |
| Viscosity                              | Not applicable           |
| Molecular Formula                      | Al Cl3                   |
| Molecular Weight                       | 133.34                   |
| VOC Content(%)                         | No information available |
| Oxidizing properties                   | No information available |

## 9.2 Other safety information

No information available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

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.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information, Component Information

#### Acute toxicity

| Component         | LD50 Oral  | LD50 Dermal | LC50 Inhalation |
|-------------------|------------|-------------|-----------------|
| Aluminum chloride | 3470 mg/kg | Not listed  | Not listed      |

#### Skin corrosion/irritation

Causes burns by all exposure routes

**Serious eye damage/eye irritation**

Causes burns by all exposure routes.

**Respiratory or skin sensitization**

Causes burns by all exposure routes.

**Germ cell mutagenicity**

No information available

**Carcinogenicity**

| Component         | CAS       | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------|-----------|------------|------------|------------|------------|------------|
| Aluminum chloride | 7746-70-0 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Specific target organ toxicity - single exposure**

Respiratory system

**Specific target organ toxicity - repeated exposure**

None known

**Reproductive toxicity**

No information available

**Chronic effects**

No information available

**11.2 Additional Information**

The toxicological properties have not been fully investigated.

**SECTION 12: Ecological information**

**12.1 Toxicity**

| Product           |      | Species         | Test Results   |
|-------------------|------|-----------------|----------------|
| Aluminum chloride | LC50 | Freshwater Fish | 27.1 mg/L, 97h |
|                   | EC50 | Water Flea      | 3.9 mg/L, 48h  |

**12.2 Persistence and degradability**

Persistence is unlikely based on information available.

**12.3 Bio accumulative potential**

No information available

**12.4 Mobility in soil**

Is not likely mobile in the environment.

**12.5 Results of PBT and vPvB assessment**

No information available

## 12.6 Endocrine disrupting properties

No information available

## 12.7 Other adverse effects

No information available

## SECTION 13: Disposal considerations

### 13.1 Waste Disposal 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

### DOT (US)

|                      |                              |
|----------------------|------------------------------|
| UN-no.               | UN1726                       |
| Proper Shipping Name | ALUMINUM CHLORIDE, ANHYDROUS |
| Hazard Class         | 8                            |
| Packing Group        | II                           |

### IMDG

|                      |                              |
|----------------------|------------------------------|
| UN-no.               | UN1726                       |
| Proper Shipping Name | ALUMINUM CHLORIDE, ANHYDROUS |
| Hazard Class         | 8                            |
| Packing Group        | II                           |

### IATA

|                      |                              |
|----------------------|------------------------------|
| UN-no.               | UN1726                       |
| Proper Shipping Name | ALUMINUM CHLORIDE, ANHYDROUS |
| Hazard Class         | 8                            |
| Packing Group        | II                           |

## SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**  
Not applicable

**CERCLA Hazardous Substance List (40 CFR 302.4)**  
Not applicable

**SARA 304 Emergency release notification**  
Not regulated

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**



Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous**

See section 2 for more information

**SARA 313 (TRI reporting)**

Not regulated

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

Not regulated

**US state regulations**

**US. Massachusetts RTK - Substance List**

Listed

**US. New Jersey Worker and Community Right-to-Know Act**

Listed

**US. Pennsylvania Worker and Community Right-to-Know Law**

Listed

**California Proposition 65**

Not listed

**SECTION 16: Other information**

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**SECTION 17: Disclaimer**

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