



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Aluminum Chloride

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1. Product and Company Identification

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Trade Name: Aluminum chloride, anhydrous  
Chemical Formula:  $AlCl_3$   
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.  
Street: 37 Ramland Road  
City: Orangeburg  
State: New York  
Zip Code: 10962  
Country: USA  
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)  
+1-703-527-3887 (International)

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2. Hazards Identification

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Signal Word:

Danger



Hazard Statements:

H314 Causes severe skin burns and eye damage

Precautionary Statements:

P260 Do not breathe dust/fume/gas/mist/vapours/spray

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off

immediately all contaminated clothing. Rinse skin with water/shower  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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.

HMIS Health Ratings (0-4):

Health: 3

Flammability: 0

Physical: 1

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3. Composition

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Chemical Family:

Salt

Additional Names:

Aluminum chloride, Aluminum trichloride

Aluminum chloride ( $AlCl_3$ ):

Percentage: 100 wt%

CAS #: 7446-70-0

EC #: 231-208-1

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#### 4. First Aid Procedures

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General Treatment:	Remove any contaminated clothing. Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	Causes severe skin burns. Causes serious eye damage.
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion:	Seek medical attention.
Skin:	Wash affected area with mild soap and water.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

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#### 5. Firefighting Measures

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Flammability:	Non-flammable
Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

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#### 6. Accidental Release Measures

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If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

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#### 7. Handling and Storage

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Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

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#### 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	2 mg/m <sup>3</sup> as Al, long-term value
Threshold Limit Value:	1 mg/m <sup>3</sup> as Al, long-term value, as respirable fraction
Special Equipment:	None
Respiratory Protection:	Use a respirator with type P100 (USA) or P3 (EN143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber, NBR 0.11mm thick.
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color	Yellow to gray
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Pungent
Water Solubility:	46.6 g/100 ml (30 °C)
Boiling Point:	120 °C
Melting Point:	190 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	2.44 g/cc
Molecular weight:	133.34 g/mol

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	Water, Bases.
Incompatible Conditions:	Light
Hazardous Decomposition Products:	Metal oxide fume, Hydrogen chloride (HCl)

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	Causes serious eye damage
Skin:	Causes severe skin burns
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	3450 mg/kg for rat by mouth
Carcinogen:	N/A

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## 12. Ecological Information

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Aquatic Toxicity:	Low
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Do not dispose material without proper governmental permits.

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## 13. Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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#### 14. Transportation Data

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Hazardous: Hazardous for transportation



Hazard Class: 8 Corrosive substances.  
Packing Group: II  
UN Number: UN1726  
Proper Shipping Name: Aluminum chloride, anhydrous  
Segregation group: Acids

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#### 15. Regulatory Information

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Sec 302 Extremely Hazardous: No  
Sec 304 Reportable Quantities: N/A  
Sec 313 Toxic Chemicals: No

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#### 16. Other Information

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This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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