

# Safety Data Sheet

## Aluminum Chloride, 6-Hydrate

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Aluminum Chloride, 6-Hydrate  
**Recommended Use:** Science education applications  
**Synonyms:** Aluminum (III) Chloride, Hexahydrate; Aluminum Trichloride, Hexahydrate  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**WARNING**



Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. Harmful to aquatic life.

**GHS Classification:**

Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3, Hazardous to the aquatic environment - Acute Category 3, Acute Toxicity - Oral Category 5

### Section 3 Composition / Information on Ingredients

| <u>Chemical Name</u>                 | <u>CAS #</u> | <u>%</u> |
|--------------------------------------|--------------|----------|
| Aluminum Chloride, 6-Hydrate 95-100% | 7784-13-6    | 100      |

### Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
**Skin Contact:** IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5 Firefighting Procedures

**Extinguishing Media:** Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** N/A  
**Hazardous Combustion Products:** Hydrogen chloride, Aluminum oxide dust,

### Section 6 Spill or Leak Procedures

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## Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. Isolate area. Keep unnecessary personnel away. Avoid the generation of dusts during clean-up. Do not flush to sewer.

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

## Section 7 Handling and Storage

**Handling:** Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust.

**Storage:** Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep container tightly closed in a cool, well-ventilated place.

**Storage Code:** Green - general chemical storage

## Section 8 Protection Information

| <u>Chemical Name</u> | <u>ACGIH</u> | <u>OSHA PEL</u> |              |               |
|----------------------|--------------|-----------------|--------------|---------------|
|                      | <u>(TWA)</u> | <u>(STEL)</u>   | <u>(TWA)</u> | <u>(STEL)</u> |
| No data available    | N/A          | N/A             | N/A          | N/A           |

### Control Parameters

**Engineering Measures:** No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.

**Respiratory Protection:** No respiratory protection required under normal conditions of use. Respiratory protection may be required in addition to ventilation depending upon conditions of use.

**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.

**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

**Gloves:** Nitrile

## Section 9 Physical Data

|  |  |
|--|--|
| <b>Formula:</b> AlCl <sub>3</sub> ·6H <sub>2</sub> O | <b>Vapor Pressure:</b> 1 hPa (1 mmHg) at 100 °C (212 °F) |
| <b>Molecular Weight:</b> 241.43                      | <b>Evaporation Rate (BuAc=1):</b> N/A                    |
| <b>Appearance:</b> Crystalline Solid                 | <b>Vapor Density (Air=1):</b> N/A                        |
| <b>Odor:</b> No data available                       | <b>Specific Gravity:</b> 2.4                             |
| <b>Odor Threshold:</b> No data available             | <b>Solubility in Water:</b> Soluble                      |
| <b>pH:</b> 2.5 - 3.5 at 20 °C                        | <b>Log Pow (calculated):</b> No data available           |
| <b>Melting Point:</b> No data available              | <b>Autoignition Temperature:</b> No data available       |
| <b>Boiling Point:</b> No data available              | <b>Decomposition Temperature:</b> No data available      |
| <b>Flash Point:</b> No data available                | <b>Viscosity:</b> No data available                      |
| <b>Flammable Limits in Air:</b> N/A                  | <b>Percent Volatile by Volume:</b> 0%                    |

## Section 10 Reactivity Data

**Reactivity:** No data available

**Chemical Stability:** Stable under normal conditions.

**Conditions to Avoid:** None known.

**Incompatible Materials:** Strong acids

**Hazardous Decomposition Products:** Aluminum oxide dust,, Hydrogen chloride

**Hazardous Polymerization:** Will not occur

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## Section 11

## Toxicity Data

**Routes of Entry:** Inhalation, ingestion, eye or skin contact.  
**Symptoms (Acute):** N/A  
**Delayed Effects:** No data available

### Acute Toxicity:

| Chemical Name                        | CAS Number | Oral LD50  | Dermal LD50    | Inhalation LC50 |
|--------------------------------------|------------|--|----------------|-----------------|
| Aluminum Chloride, 6-Hydrate 95-100% | 7784-13-6  | Oral LD50 Mouse<br>1990 mg/kg<br>Oral LD50 Rat<br>3311 mg/kg | Not determined | Not determined  |

### Carcinogenicity:

| Chemical Name     | CAS Number | IARC       | NTP        | OSHA       |
|-------------------|------------|------------|------------|------------|
| No data available | 7784-13-6  | Not listed | Not listed | Not listed |

### Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** No evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** No evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** See Section 2  
**Chronic:** Tests on laboratory animals indicate material may produce adverse mutagenic and reproductive effects., Not listed as a carcinogen by IARC, NTP or OSHA.

## Section 12

## Ecological Data

**Overview:** Slight ecological hazard. In high concentrations, this product may be dangerous to plants and/or wildlife. Components of this product are hazardous to wildlife and aquatic life.  
**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

| Chemical Name | CAS Number | Eco Toxicity |
|---------------|------------|--------------|
| N/A           | 7784-13-6  |              |

## Section 13

## Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.  
**Waste Disposal Code(s):** Not Determined

## Section 14

## Transport Information

| Ground - DOT Proper Shipping Name: | Air - IATA Proper Shipping Name:         |
|------------------------------------|--|
| N/A                                | Not regulated for air transport by IATA. |

## Section 15

## Regulatory Information

**TSCA Status:** A component (or components) of this product is not listed on the TSCA Inventory of Existing Chemical Substances. Product is for research and development use only.

| Chemical Name     | CAS Number | § 313 Name | § 304 RQ | CERCLA RQ | § 302 TPQ | CAA 112(2) TQ |
|-------------------|------------|------------|----------|-----------|-----------|---------------|
| No data available | 7784-13-6  | No         | No       | No        | No        | No            |

## Section 16

## Additional Information

# Safety Data Sheet

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

## Glossary

|        |   |      |   |
|--------|---|------|---|
| ACGIH  | American Conference of Governmental Industrial Hygienists             | NTP  | National Toxicology Program                   |
| CAS    | Chemical Abstract Service Number                                      | OSHA | Occupational Safety and Health Administration |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | PEL  | Permissible Exposure Limit                    |
| DOT    | U.S. Department of Transportation                                     | ppm  | Parts per million                             |
| IARC   | International Agency for Research on Cancer                           | RCRA | Resource Conservation and Recovery Act        |
| N/A    | Not Available   | SARA | Superfund Amendments and Reauthorization Act  |
|        |   | TLV  | Threshold Limit Value                         |
|        |   | TSCA | Toxic Substances Control Act                  |
|        |   | IDLH | Immediately dangerous to life and health      |