| | |
|---|---|
| Lithium Tetrachloroaluminate | Pricing > |
| Lithium Tetrachloroaluminate Sputtering Target | Pricing > |

| | |
|---|---|
| **Linear Formula** | $LiAlCl_4$ |
| **Pubchem CID** | 166981 |
| **MDL Number** | MFCD00061440 |
| **EC No.** | 237-850-9 |
| **IUPAC Name** | aluminum lithium tetrachloride |
| **Beilstein/Reaxys No.** | N/A |
| **SMILES** | [Li+].Cl[Al-](Cl)(Cl)Cl |
| **InchI Identifier** | InChI=1S/Al.4ClH.Li/h;4*1H;/q+3;;;;;+1/p-4 |
| **InchI Key** | AQLRWYUVWAYZFO-UHFFFAOYSA-J |

| | |
|---|---|
| **Signal Word** | Danger |
| **Hazard Statements** | H302 + H312-H314-H332 |
| **Hazard Codes** | C |
| **Precautionary Statements** | P260-P280-P310-P303+P361+P353-P305+P351+P338-P301+P330+P331-P405-P501 |
| **Risk Codes** | N/A |
| **Safety Statements** | N/A |
| **Transport Information** | UN 3260 8 / PG II |
| **GHS Pictograms** | **GHS05 Corrosive**  **GHS07 Exclamation Point**  |

Create Printable PDF

# SAFETY DATA SHEET

**Date Accessed:** 05/19/2024
**Date Revised:** 01/15/2022

---

## SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #14024-11-4

**Relevant identified uses of the substance:**
Scientific research and development

Supplier details:
American Elements
10884 Weyburn Ave.

Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351

Emergency telephone number:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

---

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Oral(Category 4), H302
Acute toxicity, Inhalation(Category 4), H332
Acute toxicity, Dermal(Category 4), H312
Skin corrosion(Category 1B), H314
Serious eye damage(Category 1), H318
GHS Label elements, including precautionary statements
Pictogram

Signal word
Danger
Hazard statement(s)
H302 + H312 + H332
Harmful if swallowed, in contact with skin or if inhaled
H314
Causes severe skin burns and eye damage.
Precautionary statement(s)
P260
Do not breathe dust or mist.
P264
Wash skin thoroughly after handling.
P270
Do not eat, drink or smoke when using this product.
P271
Use only outdoors or in a well-ventilated area.
P280
Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P301 + P330 + P331
IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/

shower.
P304 + P340
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310
Immediately call a POISON CENTER or doctor/ physician.
P322
Specific measures (see supplemental first aid instructions on this label).
P363
Wash contaminated clothing before reuse.
P405
Store locked up.
P501
Dispose of contents/ container to an approved waste disposal plant.
Hazards not otherwise classified (HNOC) or not covered by GHS
Reacts violently with water.

---

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
Formula: AlCl4Li
Molecular Weight: 175.73 g/mol
CAS-No.: 14024-11-4
EC-No.: 237-850-9

---

## SECTION 4. FIRST AID MEASURES

Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
Move out of dangerous area.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15

minutes and consult a physician.
Continue rinsing eyes during transport to hospital.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
Rinse mouth with water. Consult a physician.
Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11
Indication of any immediate medical attention and special treatment needed
no data available

---

## SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing media
Dry powder
Special hazards arising from the substance or mixture
Hydrogen chloride gas, Lithium oxides, Aluminum oxide
Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Further information
no data available

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing Vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.
Environmental precautions
Do not let product enter drains.
Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.
Reference to other sections
For disposal see section 13.

---

## SECTION 7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.
Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
Never allow product to get in contact with water during storage.
Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated

---

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Components with workplace control parameters
Contains no substances with occupational exposure limit values.
Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment
Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection
Complete suit protecting against chemicals, Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges

as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Do not let product enter drains.

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties
Appearance
Form: Solid
Odor
no data available
Odor Threshold
no data available
pH
no data available
Melting point/freezing point
no data available
Initial boiling point and boiling range
no data available
Flash point
not applicable
EVaporation rate
no data available
Flammability (solid, gas)
no data available
Upper/lower flammability or explosive limits
no data available
Vapor pressure
no data available
Vapor density
no data available
Relative density
no data available
Water solubility
no data available
Partition coefficient: n-octanol/water
no data available
Auto-ignition temperature
no data available
Decomposition temperature
no data available
Viscosity
no data available
Explosive properties
no data available
Oxidizing properties
no data available

Other safety information
no data available

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity
Reacts violently with water.
Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
Reacts violently with water.
Conditions to avoid
Exposure to moisture.
Incompatible materials
Water, Strong oxidizing agents, Alcohols
Hazardous decomposition products
Other decomposition products-no data available
In the event of fire: see section 5

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity
no data available
Inhalation: no data available
Dermal: no data available
no data available
Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitisation
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
IARC:
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity
no data available
no data available
Specific target organ toxicity -single exposure
no data available
Specific target organ toxicity -repeated exposure
no data available
Aspiration hazard
no data available
Additional Information
RTECS: Not available
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea
Stomach-Irregularities-Based on Human Evidence
Stomach-Irregularities-Based on Human Evidence

---

## SECTION 12. ECOLOGICAL INFORMATION

Toxicity
no data available
Persistence and degradability
no data available
Bioaccumulative potential
no data available
Mobility in soil
no data available
Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects
no data available

---

## SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company.
Contact a licensed professional waste disposal service to dispose of this material.
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped

with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

---

## SECTION 14. TRANSPORT INFORMATION

DOT (US)
UN number: 3260
Class: 8
Packing group: II
Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s.(Lithium tetrachloroaluminate)
Reportable Quantity(RQ):
Marine pollutant: No
Poison Inhalation Hazard: No
IMDG
UN number: 3260
Class: 8
Packing group: II
EMS-No: F-A, S-B
Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.(Lithium tetrachloroaluminate)
Marine pollutant: No
IATA
UN number: 3260
Class: 8
Packing group: II
Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s.(Lithium tetrachloroaluminate)

---

## SECTION 15. REGULATORY INFORMATION

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302
SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard
Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components
Lithium tetrachloroaluminate
CAS-No.
14024-11-4

New Jersey Right To Know Components
Lithium tetrachloroaluminate
CAS-No.
14024-11-4
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. 