

**SIGMA-ALDRICH****Material Safety Data Sheet**

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 Version 1.50

Section 1 - Product and Company Information

Product Name	Ethylaluminum dichloride, 1.0M solution in hexanes			
Product Number	251615			
Brand	Aldrich Chemical			
Company Address	Sigma-Aldrich			
City, State, Zip, Country	3050 Spruce Street			
Technical Phone:	SAINT LOUIS, MO 63103 US			
Fax:	800-325-5832	Emergency Phone:	314-776-6555	
	800-325-5052			

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
ETHYALUMINUM DICHLORIDE SOLUTION, ~1M IN HEXANE	None	Yes		
ETHYALUMINUM DICHLORIDE	563-43-9			
HEXANES	None			
MIXTURE OF HEXANE ISOMERS (NOT INCLUDING N-HEXANE)	None			
Formula	C2H5AlCl2			
Synonyms				

Section 3 - Hazards Identification**Emergency Overview**

Flammable (USA) Highly Flammable (EU) Corrosive.

Highly flammable. Causes burns. Also harmful: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Target organ(s): Nerves. Kidneys.

HMIS Rating

Health: 3* Flammability: 3

Reactivity: 3

Special Hazard(s): Water reactive

NFPA Rating

Health: 3 Flammability: 3

Reactivity: 3

Special Hazard(s): Water reactive

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures**Oral Exposure**

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures**Flammable Hazards**

Yes

Explosion Hazards

Vapor may travel considerable distance to source of ignition and flash back.

Container explosion may occur under fire conditions.

Conditions of Flammability

Reacts with water to liberate flammable and/or explosive gas.

Flash Point:

-9 °F

-23 °C

Autoignition Temp:

N/A

Flammability: Yes

Extinguishing Media**Suitable**

Dry chemical powder.

Unsuitable

Do not use water.

Firefighting**Protective Equipment**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Flammable liquid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures**Procedure to be Followed in Case of Leak or Spill**

Shut off all sources of ignition. Evacuate area.

Procedure(s) of Personal Precaution(s)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up

Cover with dry-ice, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage**Handling****User Exposure**

Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

**Storage
Suitable**

Keep tightly closed. Keep away from heat, sparks, and open flame. Handle and store under nitrogen.

Incompatible Materials

Do not allow contact with water

Special Requirements

Handle and store under inert gas. Air sensitive.

Section 8 - Exposure Controls / PPE**Engineering Controls**

Safety shower and eye bath. Use nonsparking tools. Use only in a chemical fume hood.

Personal Protective Equipment**Respiratory**

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate, use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a fullface supplied air respirator.

Hand

Wear heavy rubber gloves.

Eye

Chemical safety goggles.

Other

Faceshield (8-inch minimum). Rubber apron.

General Hygiene Measures

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties**Appearance****Physical State**

Liquid

Molecular Weight 126.95 AMU

pH N/A

BP/BP Range N/A

MP/MP Range N/A

Freezing Point N/A

Vapor Pressure 5 mmHg 60 °C

Vapor Density N/A

Saturated Vapor Conc. N/A

SG/Density 0.729 g/cm³

Bulk Density N/A

Odor Threshold N/A

Volatile% N/A

VOC Content N/A

Water Content N/A

Solvent Content N/A

Evaporation Rate N/A

Viscosity N/A

Partition Coefficient N/A

Decomposition Temp. N/A

Flash Point °F -9 °F

Flash Point °C -23 °C

Method: closed cup
Method: closed cup

Explosion Limits N/A

Flammability N/A
Autoignition Temp N/A
Solubility N/A

N/A = not available

Section 10 - Stability and Reactivity**Stability**

Stable

Stable.

Materials to Avoid

Oxygen, Oxidizing agents, Acids, Bases, Alcohols, Reacts violently with water.

Hazardous Decomposition Products**Hazardous Decomposition Products**

Hydrogen chloride gas, Carbon monoxide, Carbon dioxide, Aluminum oxide

Hazardous Polymerization**Hazardous Polymerization**

Will not occur.

Section 11 - Toxicological Information**Route of Exposure****Skin Contact**

Causes burns.

Skin Absorption

May be harmful if absorbed through the skin.

Eye Contact

Causes burns.

Inhalation

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion

May be harmful if swallowed.

Target Organ(s) or System(s)

Nerves. Kidneys.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasms, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Warning: contains n-hexane (CAS#110-54-3) a suspected neurotoxin.

RTECS Number: N/A

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations**Appropriate Method of Disposal of Substance or Preparation**

Contact a licensed professional waste disposal service to dispose of this material.

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Organometallic substance, liquid, pyrophoric, waterreactive
UN#: 3394
Class: 4.2
Packing Group: Packing Group I
Hazard Label: Spontaneously combustible
Hazard Label: Dangerous when wet.
PIH: Not PIH

IATA

Proper Shipping Name: Organometallic substance, liquid, pyrophoric, waterreactive
IATA UN Number: 3394
Hazard Class: 4.2
Packing Group: I
Not Allowed - Aircraft: FORBIDDEN
Not Allowed - Aircraft: FORBIDDEN

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: F C N

Indication of Danger

Highly Flammable. Corrosive. Dangerous for the environment.

Risk Statements R: 11 14/15 34 48/20 51/53 62 65 67

Highly flammable. Reacts violently with water, liberating extremely flammable gases. Causes burns. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause longterm adverse effects in the aquatic environment. Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Safety Statements S: 16 26 36/37/39 43 45 61 62

Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of fire, use dry powder. Never use water. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/safety data sheets. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

US Classification and Label Text

Indication of Danger

Flammable (USA) Highly Flammable (EU). Corrosive.

Risk Statements

Highly flammable. Causes burns. Also harmful: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause longterm adverse effects in the aquatic environment. Possible risk of impaired fertility. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Safety Statements

Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Statements

Target organ(s): Nerves. Kidneys.

United States Regulatory Information

SARA Listed: Yes

Notes: This product is or contains a component that is subject to SARA313 reporting requirements.

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

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. Sigma-Aldrich Inc., 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. Copyright 2010 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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