

## MATERIAL SAFETY DATA SHEET

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Version 1.9

## Section 1 - Product and Company Information

Product Name ALANE-N-METHYLPYRROLIDINE COMPLEX,  
ELECTRONIC GRADE  
Product Number 597880  
Brand ALDRICH

Company Sigma-Aldrich  
Address 3050 Spruce Street  
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832  
Fax: 800-325-5052  
Emergency Phone: 314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
ALANE-N-METHYLPYRROLIDINE	126084-10-4	No

Formula C<sub>5</sub>H<sub>14</sub>AlN

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Pyrophoric (USA) Highly Flammable (EU). Corrosive.  
Reacts violently with water, liberating extremely flammable gases.  
Spontaneously flammable in air. Harmful if swallowed. Causes burns.

## HMIS RATING

HEALTH: 4  
FLAMMABILITY: 4  
REACTIVITY: 4

## NFPA RATING

HEALTH: 4  
FLAMMABILITY: 4  
REACTIVITY: 4

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.

## 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.

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### Section 5 - Fire Fighting Measures

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#### FLAMMABLE HAZARDS

Flammable Hazards: Yes  
Pyrophoric/Autoignition: Yes

#### CONDITIONS OF FLAMMABILITY

Catches fire if exposed to air.

#### FLASH POINT

N/A

#### AUTOIGNITION TEMP

N/A

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam. Carbon dioxide, dry chemical powder, or appropriate foam.  
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): Pyrophoric material. Emits toxic fumes under fire conditions.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

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

#### METHODS FOR CLEANING UP

Avoid raising dust. Cover with dry-lime, 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.

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### Section 7 - Handling and Storage

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#### HANDLING

User Exposure: Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Avoid prolonged or repeated exposure.

## STORAGE

Suitable: Keep container closed. Keep away from heat, sparks, and open flame. Store at: 0-4°C  
Store at 2-8°C

## SPECIAL REQUIREMENTS

Air and moisture sensitive. Handle and store under nitrogen.

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## Section 8 - Exposure Controls / PPE

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### 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). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

Other: Faceshield (8-inch minimum).

### GENERAL HYGIENE MEASURES

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

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## Section 9 - Physical/Chemical Properties

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Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
Molecular Weight	115,1600 AMU	
pH	N/A	
BP/BP Range	40,000. - 45,000 °C	0,100 mmHg
MP/MP Range	25,000. - 30,000 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
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	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	

Optical Rotation            N/A  
Miscellaneous Data        N/A  
Solubility                    N/A

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Unstable.

Conditions to Avoid: Catches fire if exposed to air. Do not allow water to enter container because of violent reaction.

Materials to Avoid: Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Aluminum oxide.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## Section 11 - Toxicological Information

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### ROUTE OF EXPOSURE

Skin Contact: Causes burns.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes burns.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

### 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 spasm, 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. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## Section 12 - Ecological Information

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No data available.

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## Section 13 - Disposal Considerations

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### 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.

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## Section 14 - Transport Information

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DOT

Proper Shipping Name: Organometallic substance, solid,  
pyrophoric  
UN#: 3391  
Class: 4.2  
Packing Group: Packing Group I  
Hazard Label: Spontaneously combustible  
PIH: Not PIH

#### IATA

Proper Shipping Name: Organometallic substance, solid,  
pyrophoric  
IATA UN Number: 3391  
Hazard Class: 4.2  
Packing Group: I

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#### Section 15 - Regulatory Information

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##### EU ADDITIONAL CLASSIFICATION

Symbol of Danger: F-C  
Indication of Danger: Highly Flammable. Corrosive.  
R: 14/15-17-22-34  
Risk Statements: Reacts violently with water, liberating  
extremely flammable gases. Spontaneously flammable in air.  
Harmful if swallowed. Causes burns.  
S: 6-16-26-36/37/39-43-45  
Safety Statements: Keep under nitrogen. 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).

##### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Pyrophoric (USA) Highly Flammable (EU).  
Corrosive.  
Risk Statements: Reacts violently with water, liberating  
extremely flammable gases. Spontaneously flammable in air.  
Harmful if swallowed. Causes burns.  
Safety Statements: Keep under nitrogen. 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).

##### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

##### 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: No  
NDSL: No

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#### Section 16 - Other Information

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##### 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.