

## 1 - Product and Company Information

ProductName ETHYLALUMINUM DICHLORIDE, 25 WT. %  
(1.8M ) SOLUTION IN TOLUENE

## 2 - Hazards Identification

### SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Highly flammable. Toxic by inhalation, in contact with skin and if swallowed. Causes burns. Contact with water liberates extremely flammable gases.

## 3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I
ETHYLALUMINUM DICHLORIDE, 25 WT. % (1.8M)SOLUTION IN TOLUENE	None	None	None

Ingredient Name	Percent	CAS #	EC no	Annex I
ETHYLALUMINUM DICHLORIDE 25	563-43-9	209-248-6		None

Symbols: F-C

R-Phrases: 14/15-17-34

Reacts violently with water, liberating extremely flammable gases. Spontaneously flammable in air. Causes burns.

TOLUENE 75 108-88-3 203-625-9 601-021-00-3

Repr. Cat.3

Symbols: F-Xn

R-Phrases: 11-38-48/20-63-65-67

Highly flammable. Irritating to skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

Formula C<sub>2</sub>H<sub>5</sub>AlCl<sub>2</sub>

Molecular Weight 126.95 AMU

## 4 - First Aid Measures

### AFTER INHALATION

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

### AFTER EYE CONTACT

Assure adequate flushing of the eyes by separating the eyelids with fingers.

### AFTER INGESTION

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

## 5 - Fire Fighting Measures

### CONDITIONS OF FLAMMABILITY

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

### EXTINGUISHING MEDIA

Suitable: Dry chemical powder.

Unsuitable: Do not use water.

### SPECIAL RISKS

Specific Hazard(s): Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back.

Emits toxic fumes under fire conditions.

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

### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

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

## 6 - Accidental Release Measures

### PERSONAL PRECAUTION PROCEDURES 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-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.

## 7 - Handling and Storage

### HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing.

### STORAGE

Conditions of Storage: Keep tightly closed. Keep away from heat, sparks, and open flame. Store in a cool dry place. Handle and store under nitrogen.

Incompatible Materials: Do not allow contact with water

SPECIAL REQUIREMENTS: Handle and store under inert gas.

## 8 - Exposure Controls / Personal Protection

### ENGINEERING CONTROLS

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

### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: 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 full-face particle respirator type N99 (US) or type P2 (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.

Hand Protection: Wear heavy rubber gloves.

Eye Protection: Chemical safety goggles.

Special Protective Measures: Faceshield (8-inch minimum). Rubber apron.

## 9 - Physical and Chemical Properties

pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Flash Point	4 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	5 mmHg	60 °C
SG/Density	0.927 g/cm <sup>3</sup>	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

## 10 - Stability and Reactivity

### STABILITY

Reactions to Avoid: Reacts violently with:

Materials to Avoid: Water, Oxygen, Oxidizing agents, Acids, Bases, Alcohols.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Hydrogen chloride gas Carbon monoxide, Carbon dioxide, Aluminum oxide.

## 11 - Toxicological Information

### SIGNS AND SYMPTOMS OF EXPOSURE

Inhalation studies on toluene have demonstrated the development of inflammatory and ulcerous lesions of the penis, prepuce, and

scrotum in animals. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath,

headache, nausea, and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical

pneumonitis, and pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper

respiratory tract, eyes, and skin.

### ROUTE OF EXPOSURE

Multiple Routes: Harmful if swallowed, inhaled, or absorbed through skin.

### TARGET ORGAN INFORMATION

Bladder. Kidneys. Liver. Brain.

### CONDITIONS AGGRAVATED BY EXPOSURE

May cause nervous system disturbances.

## 12 - Ecological Information

No data available.

## 13 - Disposal Considerations

### SUBSTANCE DISPOSAL

Under an inert atmosphere, cautiously add the material to dry butanol in an appropriate solvent. The chemical reaction may be

vigorous and/or exothermic. Provisions must be made for the venting of large volumes of highly flammable hydrogen and/or

hydrocarbon gases. Neutralize the solution with aqueous acid.

Filter off any solid residues for disposal as hazardous waste.

Burn the liquid portion in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local

environmental regulations.

## 14 - Transport Information

### RID/ADR

UN#: 3399

Class: 4.3

PG: I

Subrisk: 3

Proper Shipping Name: Organometallic substance, liquid, water-reactive, flammable

### IMDG

UN#: 3399

Class: 4.3

PG: I

Subrisk: 3

Proper Shipping Name: Organometallic substance, liquid, water-reactive, flammable

Marine Pollutant: No

Severe Marine Pollutant: No

Technical Name: Required

### IATA

UN#: 3399

Class: 4.3

PG: I

Subrisk: 3

Proper Shipping Name: Organometallic substance,

liquid, water-reactive, flammable

Inhalation Reaching Group I: No

Technical Name: Required

## 15 - Regulatory Information

### CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: F-T

Highly Flammable. Toxic.

R-PHRASES: 11-23/24/25-15-34

Highly flammable. Toxic by inhalation, in contact with skin and if swallowed. Contact with water liberates extremely flammable

gases. Causes burns.

S-PHRASES: 16-26-36/37/39-45

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 accident or if you feel

unwell, seek medical advice immediately (show the label where possible).

Caution: Substance not yet fully tested (EU).

## 16 - Other Information

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. Lookchem 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.



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