

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

ProductName : Diethylaluminum chloride solution

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Highly flammable. Reacts violently with water, liberating extremely flammable gases. Spontaneously flammable in air. Causes burns. 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. Vapours may cause drowsiness and dizziness.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C4H10AlCl

CAS-No.	EC-No.		Classification	Concentration
Diethylaluminium chloride 96-10-6	202-477-2	-	F, C, R14/15 - R17 - R34	25 %
Toluene 108-88-3	203-625-9	-	F, Xn, Repr.Cat.3, R11 - R38 - R48/20 - R63 - R65 - R67	75 %

For the full text of the R-phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

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.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide (CO2) Dry powder

Extinguishing media which shall not be used for safety reasons

Water

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush with water.

7. HANDLING AND STORAGE

Handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Handle and store under inert gas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face 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 full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

Tightly fitting safety goggles. Faceshield (8-inch minimum).

Skin and body protection

Wear protective clothing.

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form liquid

Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	-18 °C - closed cup
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	0,887 g/mL at 25 °C
Water solubility	no data available

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks. Exposure to moisture.

Materials to avoid

Bases, Oxidizing agents, Strong oxidizing agents, Oxygen, acids, Reacts violently with water.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Aluminum oxide

Hazardous reactions

Reacts violently with water.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

no data available

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Toluene)

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., 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

Potential Health Effects

Inhalation	Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Vapours may cause drowsiness and dizziness.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	May be harmful if swallowed. Causes burns. Aspiration hazard if swallowed - can enter lungs and cause damage.

Target Organs Bladder, Liver, Kidney, Brain.,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

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

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 3394 Class: 4.2 (4.3) Packing group: I
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE (Diethylaluminium chloride, Toluene)

IMDG

UN-Number: 3394 Class: 4.2 (4.3) Packing group: I EMS-No: F-G, S-M
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE (Toluene, Diethylaluminium chloride)
Marine pollutant: No

IATA

UN-Number: 3394 Class: 4.2 (4.3)
Proper shipping name: Organometallic substance, liquid, pyrophoric, water-reactive (Toluene, Diethylaluminium chloride)
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION

Labelling according to EC Directives

Hazard symbols

F	Highly flammable
C	Corrosive

R-phrases(s)

R11	Highly flammable.
R14/15	Reacts violently with water, liberating extremely flammable gases.
R17	Spontaneously flammable in air.
R34	Causes burns.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63	Possible risk of harm to the unborn child.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

S-phrases(s)

S16	Keep away from sources of ignition - No smoking.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S62	If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Hazardous components which must be listed on the label:

108-88-3	Toluene
96-10-6	Diethylaluminium chloride

16. OTHER INFORMATION

Text of R-phrases mentioned in Section 3

R11	Highly flammable.
R14/15	Reacts violently with water, liberating extremely flammable gases.
R17	Spontaneously flammable in air.
R34	Causes burns.
R38	Irritating to skin.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63	Possible risk of harm to the unborn child.
R65	Harmful: may cause lung damage if swallowed.
R67	Vapours may cause drowsiness and dizziness.

Further information

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



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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.