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

ProductName : Lithium tri- *tert* -butoxyaluminum hydride solution

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment
Highly flammable. Reacts violently with water. May form explosive peroxides. Causes burns.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C12H28AlLiO3

CAS-No.	EC-No.		Classification	Concentration
Lithium aluminum-tri-tert-butoxyhydride				
17476-04-9	241-490-8	-	F, C, R11 - R14 - R34	>= 25 - <= 30 %
Tetrahydrofuran				
109-99-9	203-726-8	-	F, Xi, R11 - R19 - R36/37	>= 70 %

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.

Store under inert gas. Dry residue is explosive. Test for peroxide formation periodically and before distillation.

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
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	-17 °C - closed cup
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Density	0,904 g/cm3
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
Oxidizing agents, Oxygen, Alcohols, Reacts violently with water.

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Lithium oxides, 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

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.

Signs and Symptoms of Exposure

Central nervous system depression, Cough, chest pain, Difficulty in breathing, Exposure to high airborne concentrations can cause anesthetic effects., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eyes	Causes eye burns.
Ingestion	May be harmful if swallowed. Causes burns.
Target Organs	Central nervous system, Liver, Kidney,

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: 3399 Class: 4.3 (3) Packing group: I
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Lithium aluminum-tri-tert-butoxyhydride, Tetrahydrofuran)

IMDG
UN-Number: 3399 Class: 4.3 (3) Packing group: I EMS-No: F-G, S-N
Proper shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE (Lithium aluminum-tri-tert-butoxyhydride, Tetrahydrofuran)
Marine pollutant: No

IATA
UN-Number: 3399 Class: 4.3 (3) Packing group: I
Proper shipping name: Organometallic substance, liquid, water-reactive, flammable (Lithium aluminum-tri-tert-butoxyhydride, Tetrahydrofuran)
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION

Labelling according to EC Directives

Hazard symbols

F	Highly flammable
C	Corrosive

R-phrase(s)

R11	Highly flammable.
R14	Reacts violently with water.
R19	May form explosive peroxides.
R34	Causes burns.

S-phrase(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).

Hazardous components which must be listed on the label:

17476-04-9	Lithium aluminum-tri-tert-butoxyhydride

16. OTHER INFORMATION

Text of R-phrases mentioned in Section 3

R11	Highly flammable.
R14	Reacts violently with water.
R19	May form explosive peroxides.
R34	Causes burns.
R36/37	Irritating to eyes and respiratory system.

Further 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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