

## SAFETY DATA SHEET

Creation Date 21-October-2003

Revision Date 24-December-2021

Revision Number 5

### 1. Identification

**Product Name** Lithium tri-tert-butoxyaluminumohydride

**Cat No. :** AC125160000; AC125160050; AC125160250; AC125161000;  
AC125165000

**CAS-No** 17476-04-9  
**Synonyms** Aluminate(1-), hydrotris(2-methyl-2-propanolato)-, lithium, ( beta-4)-

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

#### Details of the supplier of the safety data sheet

##### Company

**Importer/Distributor**  
Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Manufacturer**  
Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Emergency Telephone Number** For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

**WHMIS 2015 Classification** Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

<b>Flammable solids</b>	Category 1	
<b>Substances/mixtures which, in contact with water, emit flammable gases</b>	Category 1	Gas(es) = Hydrogen
<b>Skin Corrosion/Irritation</b>	Category 1 B	
<b>Serious Eye Damage/Eye Irritation</b>	Category 1	
<b>Specific target organ toxicity (single exposure)</b>	Category 3	
Target Organs - Respiratory system.		
<b>Physical Hazards Not Otherwise Classified</b>	Category 1	
Reacts violently with water		

#### Label Elements

**Signal Word**

Danger

### Hazard Statements

Flammable solid

In contact with water releases flammable gases which may ignite spontaneously

Causes severe skin burns and eye damage

May cause respiratory irritation

Reacts violently with water



### Precautionary Statements

#### Prevention

Do not allow contact with water

Keep container tightly closed

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Handle under inert gas. Protect from moisture

Ground/bond container and receiving equipment

Do not breathe dust/fumes/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

#### Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER/doctor

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages

Wash contaminated clothing before reuse

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

#### Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Store in a dry place. Store in a closed container

#### Disposal

Dispose of contents/container to an approved waste disposal plant

## 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Lithium tri-tert-butoxyaluminumhydride	17476-04-9	>93

## 4. First-aid measures

### Eye Contact

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

### Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

<b>Inhalation</b>	Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.
<b>Ingestion</b>	Do NOT induce vomiting. Call a physician immediately.
<b>Most important symptoms/effects</b>	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Dry chemical, soda ash, lime or sand. approved class D extinguishers.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

### Specific Hazards Arising from the Chemical

Contact with water liberates toxic gas. Water reactive. Combustible material. Produce flammable gases on contact with water. Containers may explode when heated.

### Hazardous Combustion Products

Hydrogen. Burning produces obnoxious and toxic fumes.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

<b>Health</b> 3	<b>Flammability</b> 3	<b>Instability</b> 2	<b>Physical hazards</b> W
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## 6. Accidental release measures

<b>Personal Precautions</b>	Ensure adequate ventilation. Use personal protective equipment as required.
<b>Environmental Precautions</b>	See Section 12 for additional Ecological Information.
<b>Methods for Containment and Clean Up</b>	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Sweep up and shovel into suitable containers for disposal.

## 7. Handling and storage

<b>Handling</b>	Ensure adequate ventilation. Wear personal protective equipment/face protection. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Handle product only in closed system or provide appropriate exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools.
<b>Storage.</b>	Flammables area. Corrosives area. Keep from any possible contact with water. Keep under nitrogen. Keep away from water or moist air. Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Water. Strong oxidizing agents.

Alcohols. Carbon dioxide (CO<sub>2</sub>). Acids.

## 8. Exposure controls / personal protection

### Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Engineering Measures

Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### **Eye Protection**

Goggles

#### **Hand Protection**

Protective gloves

Glove material	Breakthrough time	Glove thickness	Glove comments
Natural rubber	See manufacturers	-	Splash protection only
Nitrile rubber	recommendations		
Neoprene			
PVC			

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

### **Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Recommended Filter type:** Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

### Environmental exposure controls

No information available.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

<b>Physical State</b>	Powder Solid
<b>Appearance</b>	White
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting Point/Range</b>	No data available
<b>Boiling Point/Range</b>	No information available
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid,gas)</b>	No information available

**Flammability or explosive limits**

Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	No information available
Solubility	Reacts with water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	ca 319°C °C
Viscosity	Not applicable
Molecular Formula	C12 H28 Al Li O3
Molecular Weight	254.27

## 10. Stability and reactivity

<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Reacts violently with water. Moisture sensitive.
<b>Conditions to Avoid</b>	Protect from water. Incompatible products.
<b>Incompatible Materials</b>	Water, Strong oxidizing agents, Alcohols, Carbon dioxide (CO2), Acids
<b>Hazardous Decomposition Products</b>	Hydrogen, Burning produces obnoxious and toxic fumes
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	Reacts violently with water, liberating extremely flammable gases.

## 11. Toxicological information

**Acute Toxicity**

**Product Information** No acute toxicity information is available for this product

**Component Information**

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** Causes burns by all exposure routes

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Lithium tri-tert-butoxyaluminumhydride	17476-04-9	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

<b>Aspiration hazard</b>	No information available
<b>Symptoms / effects, both acute and delayed</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Lithium tri-tert-butoxyaluminumhydride	Not listed	Not listed	Not listed	19.1 mg/L 48h

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

**UN-No** UN1409  
**Proper Shipping Name** METAL HYDRIDES, WATER REACTIVE, N.O.S.  
**Hazard Class** 4.3  
**Packing Group** I

### TDG

**UN-No** UN1409  
**Proper Shipping Name** METAL HYDRIDES, WATER REACTIVE, N.O.S.  
**Hazard Class** 4.3  
**Packing Group** I

### IATA

**UN-No** UN1409  
**Proper Shipping Name** METAL HYDRIDES, WATER-REACTIVE, N.O.S.\*  
**Hazard Class** 4.3  
**Packing Group** I

### IMDG/IMO

**UN-No** UN1409  
**Proper Shipping Name** Metal hydrides, water-reactive, n.o.s.  
**Hazard Class** 4.3  
**Packing Group** I

## 15. Regulatory information

### International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Lithium tri-tert-butoxyaluminumhydride	17476-04-9	-	X	X	ACTIVE	241-490-8	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Lithium tri-tert-butoxyaluminumhydride	17476-04-9	-	2015-3-64 23	-	-	X	X	X	X

**Legend:**

X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances**IECSC** - Chinese Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**ENCS** - Japanese Existing and New Chemical Substances**AICS** - Australian Inventory of Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

**Other International Regulations****Authorisation/Restrictions according to EU REACH****Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Lithium tri-tert-butoxyaluminumhydride	17476-04-9	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Lithium tri-tert-butoxyaluminumhydride	17476-04-9	Not applicable	Not applicable	Not applicable	Not applicable

## 16. Other information

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**Revision Summary**

This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**