

Material Safety Data Sheet

Version 4.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Aluminum-tri-sec-butoxide

Product Number : 201073

Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd
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2. HAZARDS IDENTIFICATION

Emergency Overview

WHMIS Classification

B2 Flammable liquid
D1B

Flammable liquid
Toxic by ingestion
Toxic by skin absorption

GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.

Precautionary statement(s)

P280 Wear protective gloves/protective clothing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.

HMIS Classification

Health hazard: 2
Flammability: 3
Physical hazards: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin Toxic if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Aluminum sec-butoxide

Formula : $C_{12}H_{27}AlO_3$

Molecular Weight : 246.32 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Aluminium tri-sec-butanolate			
2269-22-9	218-871-2	-	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

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

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

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

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and 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). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

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

Conditions for safe storage

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 in cool place.

Store under inert gas. Hydrolyses readily. Air and moisture sensitive.

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

Handle with gloves.

Eye protection

Face shield and safety glasses

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
Colour	light yellow

Safety data

pH	no data available
Melting point	no data available
Boiling point	200 - 206 °C (392 - 403 °F) at 40 hPa (30 mmHg) - lit.
Flash point	26 °C (79 °F) - closed cup
Ignition temperature	406 °C (763 °F)
Lower explosion limit	1.7 %(V)
Upper explosion limit	9.8 %(V)
Density	0.967 g/cm ³ at 25 °C (77 °F)
Water solubility	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapours may form explosive mixture with air.

Conditions to avoid

Air Avoid moisture.
Heat, flames and sparks.

Materials to avoid

Strong acids, Strong oxidizing agents

Hazardous decomposition products

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

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 401 mg/kg

LD50 Dermal - rabbit - 402 mg/kg

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

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.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (GHS)

no data available

Specific target organ toxicity - repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	Toxic if swallowed.
Skin	Toxic if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

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

Additional Information

12. ECOLOGICAL INFORMATION**Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

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. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. 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**DOT (US)**

UN-Number: 1992 Class: 3 (6.1) Packing group: III
Proper shipping name: Flammable liquids, toxic, n.o.s. (Aluminium tri-sec-butanolate)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 1992 Class: 3 (6.1) Packing group: III EMS-No: F-E, S-D
Proper shipping name: FLAMMABLE LIQUID, TOXIC, N.O.S. (Aluminium tri-sec-butanolate)
Marine pollutant: No

IATA

UN-Number: 1992 Class: 3 (6.1) Packing group: III
Proper shipping name: Flammable liquid, toxic n.o.s. (Aluminium tri-sec-butanolate)
IATA Passenger: Not permitted for transport

15. REGULATORY INFORMATION**DSL Status**

All components of this product are on the Canadian DSL list.

WHMIS Classification

B2	Flammable liquid	Flammable liquid
D1B		Toxic by ingestion
		Toxic by skin absorption

16. OTHER INFORMATION**Further information**

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