


[Lithium bis\(oxalato\)borate](#)

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<b>Linear Formula</b>	LiB(C <sub>2</sub> O <sub>4</sub> ) <sub>2</sub>
<b>Pubchem CID</b>	23677815
<b>MDL Number</b>	MFCD07776904
<b>EC No.</b>	456-990-3
<b>IUPAC Name</b>	lithium; 1,4,6,9-tetraoxa-5-boranuidaspiro[4.4]nonane-2,3,7,8-tetrone
<b>SMILES</b>	[Li+].[B-]12(OC(=O)C(=O)O1)OC(=O)C(=O)O2
<b>Inchl Identifier</b>	InChI=1S/C4BO8.Li/c6-1-2(7)11-5(10-1)12-3(8)4(9)13-5;/q-1;+1
<b>Inchl Key</b>	NVQAYVUCVASGDK-UHFFFAOYSA-N
<b>Signal Word</b>	Warning
<b>Hazard Statements</b>	H315-H319-H335
<b>Hazard Codes</b>	Xi
<b>Precautionary Statements</b>	P261-P264-P271-P280-P302+P352-P304+P340-P305+P351+P338-P312-P321-P332+P313-P337+P313-P362-P403+P233-P405-P501
<b>Risk Codes</b>	36/37/38
<b>Safety Statements</b>	26
<b>RTECS Number</b>	N/A
<b>Transport Information</b>	NONH for all modes of transport
<b>WGK Germany</b>	3
<b>GHS Pictograms</b>	<a href="#">GHS07 Exclamation Point</a> 

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## SAFETY DATA SHEET

Date Accessed: 05/04/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #244761-29-3

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritation(Category 2), H315

Eye irritation(Category 2A), H319

Specific target organ toxicity -single exposure(Category 3), Respiratory system, H335

GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary statement(s)

P261

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264

Wash skin thoroughly after handling.

P271

Use only outdoors or in a well-ventilated area.

P280

Wear protective gloves/ eye protection/ face protection.

P302 + P352

IF ON SKIN: Wash with plenty of soap and water.

P304 + P340

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338

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

P312

Call a POISON CENTER or doctor/ physician if you feel unwell.

P321

Specific treatment (see supplemental first aid instructions on this label).

P332 + P313

If skin irritation occurs: Get medical advice/ attention.

P337 + P313

If eye irritation persists: Get medical advice/ attention.  
P362  
Take off contaminated clothing and wash before reuse.  
P403 + P233  
Store in a well-ventilated place. Keep container tightly closed.  
P405  
Store locked up.  
P501  
Dispose of contents/ container to an approved waste disposal plant.  
Hazards not otherwise classified (HNOC) or not covered by GHS-none

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances  
Synonyms: Lithium bis(oxalate)borate  
Lithium bis(ethanedioate)borate  
LiBOB  
Formula:  $C_4BLiO_8$   
Molecular weight: 193.79 g/mol  
CAS-No.: 244761-29-3

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### **SECTION 4. FIRST AID MEASURES**

Description of 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  
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.  
Most important symptoms and effects, both acute and delayed  
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed  
No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media  
Suitable extinguishing media  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Special hazards arising from the substance or mixture  
Carbon oxides, Borane/boron oxides, Lithium oxides  
Advice for firefighters  
Wear self-contained breathing apparatus for firefighting if necessary.  
Further information  
No data available

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.  
Environmental precautions  
Do not let product enter drains.  
Methods and materials for containment and cleaning up  
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.  
Reference to other sections  
For disposal see section 13.

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## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling  
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed.  
For precautions see section 2.  
Conditions for safe storage, including any incompatibilities  
Keep container tightly closed in a dry and well-ventilated place.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Information on basic physical and chemical properties

Appearance

Form: powder

Odour  
No data available  
Odour Threshold  
No data available  
pH  
No data available  
Melting point/freezing point  
Melting point/range: > 300 °C (> 572 °F)  
Initial boiling point and boiling range  
No data available  
Flash point  
No data available  
Evaporation rate  
No data available  
Flammability (solid, gas)  
No data available  
Upper/lower flammability or explosive limits  
No data available  
Vapour pressure  
No data available  
Vapour density  
No data available  
Relative density  
No data available  
Water solubility  
No data available  
Partition coefficient: n-octanol/water  
No data available  
Auto-ignition temperature  
No data available  
Decomposition temperature  
No data available  
Viscosity  
No data available  
Explosive properties  
No data available  
Oxidizing properties  
No data available  
Other safety information  
No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity  
No data available  
Chemical stability  
Stable under recommended storage conditions.  
Possibility of hazardous reactions  
No data available  
Conditions to avoid  
No data available  
Incompatible materials  
Strong oxidizing agents, Strong acids

Hazardous decomposition products  
Other decomposition products-No data available  
In the event of fire: see section 5

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

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.

ACGIH:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity -single exposure

Inhalation-May cause respiratory irritation.

Specific target organ toxicity -repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

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

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical  
safety assessment not required/not conducted

Other adverse effects

No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a  
licensed disposal company.

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

Contaminated packaging

Dispose of as unused product.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

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## **SECTION 15. REGULATORY INFORMATION**

SARA 302 Components

No chemicals in this material are subject to the  
reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical  
components with known CAS numbers that exceed  
the threshold (De Minimis) reporting levels  
established by SARA Title III, Section 313.



SARA 311/312 Hazards  
Acute Health Hazard  
Massachusetts Right To Know Components  
No components are subject to the Massachusetts  
Right to Know Act.  
Pennsylvania Right To Know Components  
Borate(1-), bis[ethanedioato(2-)-  
.kappa.O1,.kappa.O2]-, lithium (1:1), (T-4)-  
CAS-No.  
244761-29-3  
Revision Date  
New Jersey Right To Know Components  
Borate(1-), bis[ethanedioato(2-)-  
.kappa.O1,.kappa.O2]-, lithium (1:1), (T-4)-  
CAS-No.  
244761-29-3  
Revision Date  
California Prop. 65 Components  
This product does not contain any chemicals known to  
State of California to cause cancer, birth defects, or  
any other reproductive harm.

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No.  
1907/2006 (REACH). 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. American Elements shall not be held  
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