

<a href="#">Barium Ethoxide</a>		<a href="#">Pricing &gt;</a>
<b>Linear Formula</b>	Ba(OC <sub>2</sub> H <sub>5</sub> ) <sub>2</sub>	
<b>Pubchem CID</b>	6451474	
<b>MDL Number</b>	MFCD00050488	
<b>EC No.</b>	220-829-3	
<b>IUPAC Name</b>	barium(2+); ethanolate	
<b>Beilstein/Reaxys No.</b>	N/A	
<b>SMILES</b>	CC[O-].CC[O-].[Ba+2]	
<b>Inchi Identifier</b>	InChI=1S/2C2H5O.Ba/c2*1-2-3;/h2*2H2,1H3;/q2*-1;+2	
<b>Inchi Key</b>	GYIWFHXWLCXGQO-UHFFFAOYSA-N	
<b>Signal Word</b>	N/A	
<b>Hazard Statements</b>	H225-H314-H318-H302-H332	
<b>Hazard Codes</b>	N/A	
<b>Risk Codes</b>	11-20/22-34	
<b>Safety Statements</b>	16-26-28-36/37/39-45	
<b>RTECS Number</b>	N/A	
<b>Transport Information</b>	UN3274 3/PG II	
<b>WGK Germany</b>	N/A	

GHS  
Pictograms

[GHS02 Flame](#)



[GHS05 Corrosive](#)



[GHS06 Skull and  
Crossbones](#)



[GHS07 Exclamation  
Point](#)



[GHS08 Health  
Hazard](#)



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## SAFETY DATA SHEET

Date Accessed: 05/21/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #2914-19-4

**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

## SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

GHS06 Skull and crossbones

Acute Tox. 3 H311 Toxic in contact with skin.

GHS08 Health hazard

STOT SE 2 H371 May cause damage to the eyes and the brain. Route of exposure: Oral and Inhalative, Dermal.

GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Hazards not otherwise classified No data available

GHS label elements, including precautionary statements



Hazard pictograms

GHS02 GHS05 GHS06 GHS08

Signal word Danger

Hazard-determining components of labeling:

Ethanol

Barium ethoxide

Hazard statements

H225 Highly flammable liquid and vapor.

H311 Toxic in contact with skin.

H332 Harmful if inhaled.

H314 Causes severe skin burns and eye damage.

H371 May cause damage to the eyes and the brain.

Route of exposure: Oral and Inhalative, Dermal.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P361 Take off immediately all contaminated clothing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

B2 - Flammable liquid

D2B - Toxic material causing other toxic effects

E - Corrosive material

Classification system

HMIS ratings (scale 0-4)  
(Hazardous Materials Identification System)  
HEALTH  
FIRE  
REACTIVITY  
3  
3  
1  
Health (acute effects) = 3  
Flammability = 3  
Physical Hazard = 1  
Other hazards  
Results of PBT and vPvB assessment  
PBT: N/A  
vPvB: N/A

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

Chemical characterization: Mixtures  
Dangerous components:  
64-17-5 Ethanol  
Flam. Liq. 1, H224; Acute Tox. 3, H311; STOT SE 2,  
H371; Acute Tox. 4, H332; Eye Irrit. 2A, H319  
90.0%  
2914-19-4 Barium ethoxide  
Skin Corr. 1B, H314; Eye Dam. 1, H318  
10.0%  
Additional information None known.

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

Description of first aid measures  
General information Immediately remove any clothing  
soiled by the product.  
If inhaled:  
Supply patient with fresh air. If not breathing, provide  
artificial respiration. Keep patient warm.  
Seek immediate medical advice.  
In case of skin contact:  
Immediately wash with soap and water; rinse  
thoroughly.  
Seek immediate medical advice.  
In case of eye contact:  
Rinse opened eye for several minutes under running  
water. Consult a physician.  
If swallowed:  
Seek medical treatment.  
Information for doctor  
Most important symptoms and effects, both acute and  
delayed

Causes severe skin burns.  
Causes serious eye damage.  
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 agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Special hazards arising from the substance or mixture  
If this product is involved in a fire, the following can be released:  
Carbon monoxide and carbon dioxide  
Barium oxide  
Advice for firefighters  
Protective equipment:  
Wear self-contained respirator.  
Wear fully protective impervious suit.

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

Personal precautions, protective equipment and emergency procedures  
Use personal protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Keep away from ignition sources  
Environmental precautions: Do not allow product to enter drains, sewage systems, or other water courses.  
Methods and materials for containment and cleanup:  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose of contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Prevention of secondary hazards: Keep away from ignition sources.  
Reference to other sections  
See Section 7 for information on safe handling  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

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

### Handling

Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

Keep ignition sources away.

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and

receptacles: Store in a cool location.

Information about storage in one common storage facility:

Store away from water/moisture.

Store away from oxidizing agents.

Further information about storage conditions:

Store under dry inert gas.

This product is moisture sensitive.

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

Protect from humidity and water.

Specific end use(s) No data available

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

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

64-17-5 Ethanol (90.0%)

PEL (USA) Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppm

REL (USA) Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppm

TLV (USA) Short-term value: 1880 mg/m<sup>3</sup>, 1000 ppm

EV (Canada) Long-term value: 1.900 mg/m<sup>3</sup>, 1.000 ppm

Additional information: No data

Exposure controls

Personal protective equipment

Follow typical protective and hygienic practices for handling chemicals.

Keep away from foodstuffs, beverages and feed.  
Remove all soiled and contaminated clothing immediately.  
Wash hands before breaks and at the end of work.  
Do not inhale dust / smoke / mist.  
Avoid contact with the eyes and skin.  
Maintain an ergonomically appropriate working environment.  
Breathing equipment: Use suitable respirator when high concentrations are present.  
Recommended filter device for short term use:  
Use a respirator with organic vapor/acid gas cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).  
Protection of hands:  
Impervious gloves  
Inspect gloves prior to use.  
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.  
Eye protection:  
Tightly sealed goggles  
Full face protection  
Body protection: Protective work clothing.

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

Information on basic physical and chemical properties  
Appearance:  
Form: Liquid  
Color: Yellow  
Odor: Not determined  
Odor threshold: Not determined.  
pH: Not determined.  
Melting point/Melting range: Not determined  
Boiling point/Boiling range: Not determined  
Sublimation temperature / start: Not determined  
Flash point: 14 °C (57 °F) (Ethanol)  
Flammability (solid, gas) Not determined.  
Ignition temperature: Not determined  
Decomposition temperature: Not determined  
Autoignition: Product is not selfigniting.  
Danger of explosion: Product is not explosive.  
However, formation of explosive air/vapor mixtures is possible.  
Explosion limits:  
Lower: 3.3 Vol %  
Upper: 24.5 Vol %

Vapor pressure: Not determined  
Density: Not determined  
Relative density Not determined.  
Vapor density Not determined.  
Evaporation rate Not determined.  
Solubility in / Miscibility with  
Water: Not miscible or difficult to mix  
Partition coefficient (n-octanol/water): Not determined.  
Viscosity:  
Dynamic: Not determined.  
Kinematic: Not determined.  
Solvent content:  
Organic solvents: 0.0 %  
Other information No data available

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

Reactivity No data available  
Chemical stability Stable under recommended storage conditions.  
Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.  
Possibility of hazardous reactions Reacts with strong oxidizing agents  
Conditions to avoid No data available  
Incompatible materials:  
Water/moisture  
Oxidizing agents  
Hazardous decomposition products:  
Carbon monoxide and carbon dioxide  
Barium oxide

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity:  
Harmful if inhaled.  
Harmful if swallowed.  
Toxic in contact with skin.  
Danger through skin absorption.  
Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.  
LD/LC50 values that are relevant for classification:  
64-17-5 Ethanol  
Oral LD50 7060 mg/kg (rat)



Skin irritation or corrosion: Causes severe skin burns.  
Eye irritation or corrosion: Causes serious eye damage.  
Sensitization: No sensitizing effects known.  
Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.  
Carcinogenicity:  
ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s),  
or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans.  
Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.  
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product.  
Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.  
Specific target organ system toxicity - repeated exposure: No effects known.  
Specific target organ system toxicity - single exposure: May cause damage to the eyes and the brain. Route of exposure: Oral and Inhalative, Dermal.  
Aspiration hazard: No effects known.  
Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.  
Additional toxicological information:  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Corrosive

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## **SECTION 12. ECOLOGICAL INFORMATION**

### **Toxicity**

Aquatic toxicity: No data available

Persistence and degradability No data available

Bioaccumulative potential No data available

Mobility in soil No data available

### **Additional ecological information:**

Do not allow undiluted product or large quantities to reach groundwater, water courses, or sewage

systems.  
Avoid transfer into the environment.  
Results of PBT and vPvB assessment  
PBT: N/A  
vPvB: N/A  
Other adverse effects No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Recommendation Consult official regulations to  
ensure proper disposal.  
Uncleaned packagings:  
Recommendation: Disposal must be made according  
to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

UN-Number  
DOT, IMDG, IATA UN3274  
UN proper shipping name  
DOT Alcoholates solution, n.o.s. (Ethanol solutions,  
Barium ethoxide)  
IMDG ALCOHOLATES SOLUTION, N.O.S.  
(ETHANOL SOLUTION (ETHYL ALCOHOL  
SOLUTION), Barium ethoxide)  
IATA ALCOHOLATES SOLUTION, N.O.S.  
(ETHANOL SOLUTION, Barium ethoxide)  
Transport hazard class(es)  
DOT  
Class 3 Flammable liquids.  
Label 3+8  
Class 3 (FC) Flammable liquids  
Label 3+8  
IMDG, IATA  
Class 3 Flammable liquids.  
Label 3+8  
Packing group  
DOT, IMDG, IATA II  
Environmental hazards:  
Marine pollutant (IMDG): No  
Special precautions for user Warning: Flammable  
liquids  
EMS Number: F-E,S-C  
Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code N/A  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT): No  
UN "Model Regulation": UN3274, Alcoholates

solution, n.o.s. (Ethanol solutions (Ethyl alcohol solutions),  
Barium ethoxide), 3 (8), II

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture

GHS label elements, including precautionary statements

Hazard pictograms

GHS02 GHS05 GHS06 GHS08

Signal word Danger

Hazard-determining components of labeling:

Ethanol

Barium ethoxide

Hazard statements

H225 Highly flammable liquid and vapor.

H311 Toxic in contact with skin.

H332 Harmful if inhaled.

H314 Causes severe skin burns and eye damage.

H371 May cause damage to the eyes and the brain.

Route of exposure: Oral and Inhalative, Dermal.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P361 Take off immediately all contaminated clothing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted

to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA.

This

product must not be used for commercial purposes or in formulations for commercial purposes.

Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

SARA Section 313 (specific toxic chemical listings)  
None of the ingredients are listed.  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer  
None of the ingredients are listed.  
Prop 65 - Developmental toxicity  
None of the ingredients are listed.  
Prop 65 - Developmental toxicity, female  
None of the ingredients are listed.  
Prop 65 - Developmental toxicity, male  
None of the ingredients are listed.  
Information about limitation of use: For use only by  
technically qualified individuals.  
Other regulations, limitations and prohibitive  
regulations  
Substance of Very High Concern (SVHC) according to  
the REACH Regulations (EC) No. 1907/2006.  
None of the ingredients are listed.  
The conditions of restrictions according to Article 67  
and Annex XVII of the Regulation (EC) No 1907/2006  
(REACH) for the manufacturing, placing on the  
market and use must be observed.  
None of the ingredients is listed.  
Annex XIV of the REACH Regulations (requiring  
Authorisation for use)  
None of the ingredients is listed.  
Chemical safety assessment: A Chemical Safety  
Assessment has not been carried out.

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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 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. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.