



|   |  |                              |
|---|--|------------------------------|
| <a href="#">Aluminum Calcium Isopropoxide</a> |  | <a href="#">Pricing &gt;</a> |
| Linear Formula                                | $2(C_{12}H_{26}O_4Al) \cdot Ca$  |                              |
| Pubchem CID                                   | 16715765   |                              |
| MDL Number                                    | MFCD00143586   |                              |
| EC No.  | N/A  |                              |
| IUPAC Name                                    | calcium; tetra(propan-2-yloxy)alumanuide   |                              |
| SMILES  | <chem>CC(C)O[Al-](OC(C)C)(OC(C)C)OC(C)C.CC(C)O[Al-](OC(C)C)(OC(C)C)OC(C)C.[Ca+2]</chem>  |                              |
| Inchl Identifier                              | InChI=1S/8C3H7O.2Al.Ca/c8*1-3(2)4;;;/h8*3H,1-2H3;;;/q8*-1;2*+3;+2  |                              |
| Inchl Key                                     | UUJQYNSOHZQRLI-UHFFFAOYSA-N  |                              |
| Signal Word                                   | Danger   |                              |
| Hazard Statements                             | H225-H315-H319-H336  |                              |
| Hazard Codes                                  | F, Xi  |                              |
| Risk Codes                                    | N/A  |                              |
| Safety Statements                             | N/A  |                              |
| Transport Information                         | UN1219 3/PGII  |                              |
| GHS Pictograms                                | <a href="#">GHS07 Exclamation Point</a><br><br><a href="#">GHS02 Flame</a><br> |                              |

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## SAFETY DATA SHEET

Date Accessed: 05/03/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #23275-27-6

**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 in  
accordance with 29 CFR 1910 (OSHA HCS)

GHS02 Flame

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

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Hazards not otherwise classified No data available

GHS label elements, including precautionary  
statements



Hazard pictograms

GHS02 GHS07

Signal word Danger

Hazard statements

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

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

P261 Avoid breathing  
dust/fume/gas/mist/vapors/spray.

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.

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  
Classification system  
HMIS ratings (scale 0-4)  
(Hazardous Materials Identification System)  
Health (acute effects) = 2  
Flammability = 2  
Physical Hazard = 2  
Other hazards  
Results of PBT and vPvB assessment  
PBT: N/A  
vPvB: N/A

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

Substances  
CAS No. / Substance Name:  
23275-27-6 Aluminum calcium isopropoxide, 10% w/v  
in isopropanol

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

Description of first aid measures  
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:  
No data available  
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 CO<sub>2</sub>, sand,

extinguishing powder. Do not use water.  
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  
Metal oxide fume  
Flammable gases/vapors  
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 material to be released to the environment without official permits.  
Methods and materials for containment and cleanup:  
Keep away from ignition sources.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
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 oxidizing agents.  
Store away from water/moisture.  
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:  
Isopropyl alcohol (2-Propanol)  
ppm  
ACGIH TLV 400; 500-STEL  
Austria MAK 400  
Belgium TWA 400; 500-STEL  
Denmark TWA 200  
France VLE 400  
Germany MAK 400  
Ireland TWA 400; 500-STEL (skin)  
Japan TWA 400-STEL  
Korea TWA 400; 500-STEL  
Netherlands MAC-TGG 400 (skin)  
Norway TWA 100  
Poland TWA 900; 1200-STEL  
Russia TWA 400-STEL  
Sweden NGV 150; 250-STEL  
Switzerland MAK-W 400  
United Kingdom TWA 400; 500-STEL  
OSHA PEL 400  
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.  
Avoid contact with the eyes and skin.  
Maintain an ergonomically appropriate working environment.  
Breathing equipment: Use suitable respirator when high concentrations are present.  
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: Safety glasses  
Body protection: Protective work clothing.

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

Information on basic physical and chemical properties

Appearance:

Form: Solution

Color: Brown

Odor: Alcohol-like

Odor threshold: No data available.

pH: No data available.

Melting point/Melting range: No data available

Boiling point/Boiling range: No data available

Sublimation temperature / start: No data available

Flash point: 12 °C (54 °F) (i-PrOH)

Flammability (solid, gas) No data available.

Ignition temperature: No data available

Decomposition temperature: No data available

Autoignition: No data available.

Danger of explosion: Product is not explosive.

However, formation of explosive air/vapor mixtures is possible.

Explosion limits:

Lower: No data available

Upper: No data available

Vapor pressure: No data available

Density: No data available

Relative density No data available.

Vapor density No data available.

Evaporation rate No data available.

Solubility in / Miscibility with

Water: Reacts

Partition coefficient (n-octanol/water): No data available.

Viscosity:

Dynamic: No data available.

Kinematic: No data available.

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 No dangerous reactions known

Conditions to avoid No data available

Incompatible materials:

Oxidizing agents

Water/moisture

Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity: No effects known.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: Causes skin irritation.

Eye irritation or corrosion: Causes serious eye irritation.

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: No effects known.

Carcinogenicity:

IARC-3: Not classifiable as to carcinogenicity to humans.

ACGIH A4: Not classifiable as a human carcinogen:

Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure:

May cause drowsiness or dizziness.

May cause respiratory irritation.

Aspiration hazard: No effects known.

Subacute to chronic toxicity:

Aluminum may be implicated in Alzheimers disease.

Inhalation of aluminum containing dusts may cause pulmonary disease.

The toxicity of calcium compounds is generally due to the anion.

2-Propanol (isopropyl alcohol) may act as a local

irritant and in high concentrations as a narcotic with symptoms such as headache, nausea, dizziness, vomiting, mental depression, anesthesia, and coma. Similar symptoms may be caused by ingestion. It can cause corneal burns on contact with the eyes and has caused teratogenic, mutagenic and reproductive effects in laboratory animals.  
Subacute to chronic toxicity: No effects known.  
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

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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 material to be released to the environment without official permits.

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 UN1219

UN proper shipping name

DOT Isopropanol (Isopropyl alcohol)

IMDG, IATA ISOPROPANOL (ISOPROPYL)



ALCOHOL)  
Transport hazard class(es)  
DOT  
Class 3 Flammable liquids.  
Label 3  
Class 3 (F1) Flammable liquids  
Label 3  
IMDG, IATA  
Class 3 Flammable liquids.  
Label 3  
Packing group  
DOT, IMDG, IATA II  
Environmental hazards: N/A  
Special precautions for user Warning: Flammable liquids  
EMS Number: F-E,S-D  
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": UN1219, Isopropanol (Isopropyl alcohol), 3, 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 GHS07  
Signal word Danger  
Hazard statements  
H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
Precautionary statements  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
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.  
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.

SARA Section 313 (specific toxic chemical listings)

23275-27-6 Aluminum calcium isopropoxide, 10% w/v in isopropanol

California Proposition 65

Prop 65 - Chemicals known to cause cancer

Substance is not listed.

Prop 65 - Developmental toxicity Substance is not listed.

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male Substance is not 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.

Substance is not 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.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not 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

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