

<a href="#">Lithium Hydride</a>		<a href="#">Pricing &gt;</a>
<b>Signal Word</b>	Danger	
<b>Hazard Statements</b>	H260-H301-H314	
<b>Hazard Codes</b>	F,C, T	
<b>Precautionary Statements</b>	P223-P231 + P232- P280-P301 + P310-P370 + P378-P422	
<b>Risk Codes</b>	14-34	
<b>Safety Statements</b>	16-26-27-36/37/39	
<b>RTECS Number</b>	OJ6300000	
<b>Transport Information</b>	UN 1414 4.3/PG 1	
<b>WGK Germany</b>	2	
<b>GHS Pictograms</b>	<a href="#">GHS02 Flame</a>  <a href="#">GHS05 Corrosive</a>  <a href="#">GHS06 Skull and Crossbones</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 #7580-67-8

**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

Water-react. 1 H260 In contact with water releases  
flammable gases which may ignite spontaneously.

GHS06 Skull and crossbones

Acute Tox. 3

H301 Toxic if swallowed.

GHS05 Corrosion

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

Eye Dam. 1

H318 Causes serious eye damage.

Hazards not otherwise classified

No information known.

Label elements

GHS label elements

The product is classified and labeled in accordance  
with 29 CFR 1910 (OSHA HCS)

Hazard pictogram



GHS02 GHS05 GHS06

Signal word: Danger

Hazard statements

H260 In contact with water releases flammable gases  
which may ignite spontaneously.

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

Precautionary statements

P231+P232 Handle under inert gas. Protect from  
moisture.

P301+P310 IF SWALLOWED: Immediately call a  
POISON CENTER/ doctor/...

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

B6 - Reactive flammable material

D1A - Very toxic material causing immediate and serious toxic effects

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

3

Health (acute effects) = 3

Flammability = 3

Physical Hazard = 3

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

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

Chemical characterization: Substances

CAS# Description:

7580-67-8 Lithium hydride

Identification number(s):

EC number:

231-484-3

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

Description of first aid measures

General information

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation

Supply fresh air. If required, provide arti

ficial respiration. Keep patient warm.  
Seek immediate medical advice.  
After skin contact  
Immediately wash with water and soap and rinse thoroughly.  
Seek immediate medical advice.  
After eye contact  
Rinse opened eye for several minutes under running water. Then consult a doctor.  
After swallowing  
Do not induce vomiting; immediately call for medical help.  
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 further relevant information available.

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## **SECTION 5. FIREFIGHTING MEASURES**

Description of first aid measures  
General information  
Immediately remove any clothing soiled by the product.  
In case of irregular breathing or respiratory arrest provide artificial respiration.  
After inhalation  
Supply fresh air. If required, provide artificial respiration. Keep patient warm.  
Seek immediate medical advice.  
After skin contact  
Immediately wash with water and soap and rinse thoroughly.  
Seek immediate medical advice.  
After eye contact  
Rinse opened eye for several minutes under running water. Then consult a doctor.  
After swallowing  
Do not induce vomiting; immediately call for medical help.  
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 further relevant information available.

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

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Environmental precautions:

Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:

Use neutralizing agent.

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

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.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from air.

Store away from water/moisture.

Do not store together with acids.

Store away from oxidizing agents.

Store away from alcohols.

Further information about storage conditions:  
Store under dry inert gas.  
This product is moisture sensitive.  
This product is air sensitive.  
Protect from humidity and water.  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
Specific end use(s)  
No further relevant information 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:  
7580-67-8 Lithium hydride (100.0%)  
PEL (USA)  
Long-term value: 0.025 mg/m<sup>3</sup>  
REL (USA)  
Long-term value: 0.025 mg/m<sup>3</sup>  
TLV (USA)  
Long-term value: 0.025 mg/m<sup>3</sup>  
EL (Canada) Long-term value: 0.025 mg/m<sup>3</sup>  
EV (Canada) Long-term value: 0.025 mg/m<sup>3</sup>  
Additional information:  
No data  
Exposure controls  
Personal protective equipment  
General protective and hygienic measures  
The usual precautionary measures for handling chemicals should be followed.  
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.  
Recommended filter device for short term use:  
Use a respirator with type P100 (USA) or P3 (EN 143) 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.  
Protection of hands:  
Impervious gloves  
Check protective gloves prior to each use for their proper condition.  
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.  
Material of gloves  
Nitrile rubber, NBR  
Penetration time of glove material (in minutes)  
Not determined  
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  
General Information  
Appearance:  
Form:  
Powder  
Color:  
White to grey  
Odor:  
Odorless  
Odor threshold:  
Not determined.  
pH-value:  
Not applicable.  
Change in condition  
Melting point/Melting range:  
688 °C (1270 °F)  
Boiling point/Boiling range:  
Not determined  
Sublimation temperature / start:  
Not determined  
Flammability (solid, gaseous)  
Contact with water liberates extremely flammable gases.  
Ignition temperature:  
Not determined  
Decomposition temperature:  
Not determined  
Auto igniting:  
Not determined.  
Danger of explosion:  
Not determined.  
Explosion limits:

Lower:  
Not determined  
Upper:  
Not determined  
Vapor pressure at 20 °C (68 °F):  
0 hPa  
Density at 20 °C (68 °F):  
0.78 g/cm<sup>3</sup> (6.509 lbs/gal)  
Relative density  
Not determined.  
Vapor density  
Not applicable.  
Evaporation rate  
Not applicable.  
Solubility in / Miscibility with  
Water:  
Reacts violently  
Contact with water releases flammable gases  
Alcohols:  
Reacts  
Partition coefficient (n-octanol/water):  
Not determined.  
Viscosity:  
dynamic:  
Not applicable.  
kinematic:  
Not applicable.  
Other information  
No further relevant information available.

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

Reactivity  
Reacts violently with water.  
In contact with water releases flammable gases which may ignite spontaneously.  
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  
Contact with water releases flammable gases  
Reacts violently with water  
Conditions to avoid  
No further relevant information available.  
Incompatible materials:  
Acids  
Air  
Oxidizing agents  
Alcohols  
Water/moisture



Hazardous decomposition products:

Hydrogen

Lithium oxide

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity:

Toxic if swallowed.

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 this substance.

LD/LC50 values that are relevant for classification:

Oral LD50 77.5 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:

No effects known.

Carcinogenicity:

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity:

No effects known.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

No effects known.

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.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

Aquatic toxicity:  
No further relevant information available.  
Persistence and degradability  
No further relevant information available.  
Bioaccumulative potential  
No further relevant information available.  
Mobility in soil  
No further relevant information available.  
Additional ecological information:  
General notes:  
Do not allow product to reach ground water, water  
course or sewage system.  
Danger to drinking water if even small quantities leak  
into the ground.  
Avoid transfer into the environment.  
Results of PBT and vPvB assessment  
PBT:  
Not applicable.  
vPvB:  
Not applicable.  
Other adverse effects  
No further relevant information available.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Recommendation  
Consult state, local or national 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  
UN1414  
UN proper shipping name  
DOT  
Lithium hydride  
IMDG, IATA  
LITHIUM HYDRIDE  
Transport hazard class(es)  
DOT  
Class  
4.3 Substances which, in contact with water, emit  
flammable gases.  
Label

4.3  
Class  
4.3 (W2) Substances which, in contact with water,  
emit flammable gases  
Label  
4.3  
IMDG, IATA  
Class  
4.3 Substances which, in contact with water, emit  
flammable gases.  
Label  
4.3  
Packing group  
DOT, IMDG, IATA  
I  
Environmental hazards:  
Not applicable.  
Special precautions for user  
Warning: Substances which, in contact with water,  
emit flammable gases  
EMS Number:  
F-G,S-N  
Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code  
Not applicable.  
Transport/Additional information:  
DOT  
Marine Pollutant (DOT):  
No  
UN "Model Regulation":  
UN1414, Lithium hydride, 4.3, I

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental  
regulations/legislation specific for the substance or  
mixture  
GHS label elements  
The product is classified and labeled in accordance  
with 29 CFR 1910 (OSHA HCS)  
Hazard pictograms  
GHS02  
GHS05  
GHS06  
Signal word  
Danger  
Hazard statements  
H260 In contact with water releases flammable gases  
which may ignite spontaneously.  
H301 Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.  
Precautionary statements

P231+P232

Handle under inert gas. Protect from moisture.

P301+P310

IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...

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

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

SARA Section 313 (specific toxic chemical listings)

Substance is not listed.

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 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.

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