


<a href="#">Magnesium Arsenide</a>		<a href="#">Pricing &gt;</a>
Linear Formula	Mg <sub>3</sub> As <sub>2</sub>	
Pubchem CID	25147473	
MDL Number	MFCD00049972	
EC No.	234-954-6	
IUPAC Name	magnesium bis(arsanidylidenemagnesium)	
Beilstein/Reaxys No.	N/A	
SMILES	[Mg]=[As][Mg][As]=[Mg]	
InchI Identifier	InChI=1S/2As.3Mg	
InchI Key	UZIGZGIMMXFFGH-UHFFFAOYSA-N	
Signal Word	Danger	
Hazard Statements	H301+H331	
Hazard Codes	T	
Precautionary Statements	P261-P301+P310-P304+P340-P311-P405-P501	
Risk Codes	N/A	
Safety Statements	N/A	
Transport Information	UN 1557 6.1/PG II	
GHS Pictograms	<a href="#">GHS06 Skull and Crossbones</a> 	

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## SAFETY DATA SHEET

Date Accessed: 04/20/2024

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### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #12044-49-4

**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

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## SECTION 2. HAZARDS IDENTIFICATION

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

GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H331 Toxic if inhaled.

Hazards not otherwise classified

No data available

GHS label elements

GHS label elements, including precautionary  
statements

Hazard pictograms



GHS06

Signal word

Danger

Hazard statements

H301+H331 Toxic if swallowed or if inhaled.

Precautionary statements

P261

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

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

P304+P340 IF INHALED: Remove person to fresh air  
and keep comfortable for breathing.

P311

Call a POISON CENTER/doctor/...

P405

Store locked up.

P501

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

WHMIS classification

D1A - Very toxic material causing immediate and  
serious toxic effects

D2A - Very toxic material causing other toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 3  
Flammability = 0  
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**

Substances  
CAS No. / Substance Name:  
12044-49-4 Magnesium arsenide  
Identification number(s):  
EC number:  
234-954-6  
Index number:  
033-002-00-5

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

Description of first aid measures  
General information  
Immediately remove any clothing soiled by the product.  
Remove breathing apparatus only after contaminated clothing has been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.  
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:  
Do not induce vomiting; immediately call for medical help.  
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:  
Toxic metal oxide fume  
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  
Environmental precautions:  
Do not allow material to be released to the environment without official permits.  
Methods and materials for containment and cleanup:  
Dispose of contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Prevention of secondary hazards:  
No special measures required.  
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.  
Open and handle container with care.  
Information about protection against explosions and

fires:

No data available

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Store under dry inert gas.

Keep container tightly sealed.

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

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:

Arsenic, elemental, and inorganic compounds (except arsine), as As  
mg/m<sup>3</sup>

ACGIH TLV 0.01; Carcinogen

Belgium TWA 0.2

Denmark TWA 0.05

Finland Carcinogen

France VME 0.2

Hungary TWA 0.5; Carcinogen

Ireland TWA 0.1; Carcinogen

Korea TLV 0.01; Carcinogen

Netherlands TWA 0.05; 0.1-STEL

Norway TWA 0.02

Poland TWA 0.1

Sweden NGV 0.03; Carcinogen

Switzerland TWA 0.1; Carcinogen

United Kingdom TWA 0.1; Carcinogen

USA PEL 0.5

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.  
Store protective clothing separately.  
Maintain an ergonomically appropriate working environment.  
Breathing equipment:  
Refer to 29CFR1910.1018 for regulations on respiratory protection required during exposure to inorganic arsenic.  
Use self-contained respiratory protective device in emergency situations.  
Protection of hands:  
Impervious gloves  
Inspect gloves prior to use.  
Suitability of gloves should be determined both by material and quality, the latter of which may vary by 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: Solid  
Color: Brown  
Odor: No data available  
Odor threshold: No data available.  
pH: N/A  
Melting point/Melting range: 800 °C (1472 °F)  
Boiling point/Boiling range: No data available  
Sublimation temperature / start: No data available  
Flash point: N/A  
Flammability (solid, gas)  
No data available.  
Ignition temperature: No data available  
Decomposition temperature: No data available  
Autoignition: No data available.  
Danger of explosion: Product does not present an explosion hazard.  
Explosion limits:  
Lower: No data available  
Upper: No data available  
Vapor pressure: N/A  
Density at 20 °C (68 °F): 3.148 g/cm<sup>3</sup> (26.27 lbs/gal)  
Relative density  
No data available.  
Vapor density  
N/A

Evaporation rate  
N/A  
Solubility in Water (H<sub>2</sub>O): No data available  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
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  
Hazardous decomposition products:  
Toxic metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects  
Acute toxicity:  
Toxic if inhaled.  
Toxic if swallowed.  
LD/LC50 values that are relevant for classification:  
No data  
Skin irritation or corrosion:  
Irritant to skin and mucous membranes.  
Eye irritation or corrosion:  
Irritating effect.  
Sensitization:  
No sensitizing effects known.  
Germ cell mutagenicity:  
No effects known.  
Carcinogenicity:  
EPA-A: human carcinogen: sufficient evidence from epidemiologic studies to support a causal association between exposure and cancer.  
IARC-1: Carcinogenic to humans: sufficient evidence

of carcinogenicity.

ACGIH A1: Confirmed human carcinogen: Agent is carcinogenic to humans based on epidemiologic studies of, or convincing clinical evidence in, exposed humans.

NTP-K: Known to be carcinogenic: sufficient evidence from human studies.

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:

Inhalation of magnesium compounds may cause metal fume fever.

Metallic magnesium which perforates the skin may cause local lesions. Some magnesium salts have produced muscle weakness, cardiac arrhythmias, respiratory effects and changes in blood chemistry following ingestion.

Acute arsenic poisoning from ingestion results in marked irritation of the stomach and intestines with nausea, vomiting and diarrhea. In severe cases, the vomitus and stools are bloody and the patient goes into collapse and shock with weak, rapid pulse, cold sweats, coma and death.

Chronic arsenic poisoning may cause disturbances of the digestive system such as loss of appetite, cramps, nausea, constipation or diarrhea.

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

Ecotoxicological effects:

Remark:



Very toxic for aquatic organisms  
Additional ecological information:  
Do not allow material to be released to the environment without official permits.  
Do not allow product to reach groundwater, water courses, or sewage systems, even in small quantities.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
May cause long lasting harmful effects to aquatic life.  
Avoid transfer into the environment.  
Very toxic for aquatic organisms  
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  
UN1557  
UN proper shipping name  
DOT  
Arsenic compounds, solid, n.o.s. (Magnesium arsenide)  
IMDG, IATA  
ARSENIC COMPOUND, SOLID, N.O.S. (Magnesium arsenide)  
Transport hazard class(es)  
DOT  
Class  
6.1 Toxic substances.  
Label  
6.1  
Class  
6.1 (T5) Toxic substances

Label  
6.1  
IMDG, IATA  
Class  
6.1 Toxic substances.  
Label  
6.1  
Packing group  
DOT, IMDG, IATA  
II  
Environmental hazards:  
Environmentally hazardous substance, solid  
Special precautions for user  
Warning: Toxic substances  
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":  
UN1557, Arsenic compounds, solid, n.o.s.  
(Magnesium arsenide), 6.1, II

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## **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental  
regulations/legislation specific for the substance or  
mixture  
GHS GHS label elements, including precautionary  
statements  
Hazard pictograms  
GHS06  
Signal word  
Danger  
Hazard statements  
H301+H331 Toxic if swallowed or if inhaled.  
Precautionary statements  
P261  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
P301+P310 IF SWALLOWED: Immediately call a  
POISON CENTER/ doctor/...  
P304+P340 IF INHALED: Remove person to fresh air  
and keep comfortable for breathing.  
P311  
Call a POISON CENTER/doctor/...  
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.

This product contains a chemical known to the state of California to cause cancer and/or reproductive toxicity.

All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).  
SARA Section 313 (specific toxic chemical listings)  
12044-49-4 Magnesium arsenide

#### California Proposition 65

Prop 65 - Chemicals known to cause cancer  
12044-49-4 Magnesium arsenide

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.

This product contains arsenic and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

Other regulations, limitations and prohibitive regulations

Refer to 29CFR1910.1018 for regulations concerning inorganic arsenic.

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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