

<a href="#">Gallium Antimonide</a>	<a href="#">Pricing &gt;</a>
<a href="#">Gallium Antimonide Nanoparticles / Nanopowder</a>	<a href="#">Pricing &gt;</a>
<a href="#">Gallium Antimonide Single Crystal Substrate</a>	<a href="#">Pricing &gt;</a>
<a href="#">Gallium Antimonide Sputtering Target</a>	<a href="#">Pricing &gt;</a>
<a href="#">Gallium Antimonide Wafer</a>	<a href="#">Pricing &gt;</a>

<b>Linear Formula</b>	GaSb
<b>Pubchem CID</b>	4227894
<b>MDL Number</b>	MFCD00016101
<b>EC No.</b>	235-058-8
<b>IUPAC Name</b>	gallanylidyneantibane
<b>Beilstein/Reaxys No.</b>	N/A
<b>SMILES</b>	[Ga]#[Sb]
<b>Inchi Identifier</b>	InChI=1S/Ga.Sb
<b>Inchi Key</b>	VTGARNNDLOTBET-UHFFFAOYSA-N

<b>Signal Word</b>	Warning
<b>Hazard Statements</b>	H302-H332-H411
<b>Hazard Codes</b>	Xn,N
<b>Risk Codes</b>	20/22-51/53
<b>Safety Statements</b>	61
<b>RTECS Number</b>	N/A
<b>Transport Information</b>	UN 1549 6.1/PG 3
<b>WGK Germany</b>	2

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## SAFETY DATA SHEET

Date Accessed: 04/26/2024

Date Revised: 01/15/2022

### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #12064-03-8

**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)

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

Hazards not otherwise classified No data available

GHS label elements, including precautionary  
statements

Hazard pictograms



GHS07

Signal word Warning

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

Precautionary statements

P261 Avoid breathing

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

P264 Wash thoroughly after handling.

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

P301+P312 IF SWALLOWED: Call a POISON  
CENTER/doctor/if you feel unwell.

P312 Call a POISON CENTER/doctor/if you feel  
unwell.

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

WHMIS classification

D1B - Toxic material causing immediate and serious  
toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

## REACTIVITY

3

0

1

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:

12064-03-8 Gallium antimonide

Identification number(s):

EC number: 235-058-8

Index number: 051-003-00-9

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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:  
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  
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: 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: No data available  
Further information about storage conditions:  
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**

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:

Antimony and antimony compounds

mg/m<sup>3</sup>

ACGIH TLV 0.5

Austria MAK 0.5

Belgium TWA 0.5

Denmark TWA 0.5

Finland TWA 0.5

France VME 0.5

Germany MAK 0.5 (total dust)

Hungary TWA 0.5-STEL

Japan OEL 0.1; 2B Carcinogen

Korea TLV 0.5

Netherlands MAC-TGG 0.5

Norway TWA 0.5

Poland TWA 0.5; 1.5-STEL

Russia TWA 0.2; 0.5-STEL

Sweden NGV 0.5

Switzerland MAK-W 0.5

United Nations TWA 0.5

USA PEL 0.5

12064-03-8 Gallium antimonide (100.0%)

PEL (USA) Long-term value: 0.5 mg/m<sup>3</sup>  
as Sb

REL (USA) Long-term value: 0.5 mg/m<sup>3</sup>  
as Sb

TLV (USA) Long-term value: 0.5 mg/m<sup>3</sup>  
as Sb

EL (Canada) Long-term value: 0.5 mg/m<sup>3</sup>  
as Sb

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.

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: Chunks or solid in various forms

Color: Grey

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 710 °C (1310 °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: No data available

Relative density No data available.

Vapor density N/A

Evaporation rate N/A

Solubility in / Miscibility with

Water: Insoluble

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:

Bases

Oxidizing agents

No data available

Hazardous decomposition products: Toxic metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity:

Harmful if inhaled.

Harmful 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: 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:

Antimony compounds may cause metallic taste, gastrointestinal disturbances, vomiting, diarrhea, dizziness and systemic poisoning. Chronic exposure may cause

liver and kidney damage. Dermatitis and eczematous skin eruptions may result from skin contact.

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: Toxic for aquatic organisms  
Additional ecological information:  
Do not allow material to be released to the environment without official permits.  
Toxic for aquatic organisms  
Do not allow product to reach groundwater, water courses, or sewage systems.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic to aquatic life.  
May cause long lasting harmful effects to aquatic life.  
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 UN1549  
UN proper shipping name  
DOT Antimony compounds, inorganic, solid, n.o.s. (Gallium antimonide)  
IMDG, IATA ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S. (Gallium antimonide)  
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 III  
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": UN1549, Antimony  
compounds, inorganic, solid, n.o.s. (Gallium  
antimonide), 6.1, III

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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  
GHS07  
Signal word Warning  
Hazard statements  
H302+H332 Harmful if swallowed or if inhaled.  
Precautionary statements  
P261 Avoid breathing  
dust/fume/gas/mist/vapors/spray.  
P264 Wash thoroughly after handling.  
P304+P340 IF INHALED: Remove person to fresh air  
and keep comfortable for breathing.  
P301+P312 IF SWALLOWED: Call a POISON  
CENTER/doctor/if you feel unwell.  
P312 Call a POISON CENTER/doctor/if you feel  
unwell.  
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 Domestic Substances List (DSL).  
SARA Section 313 (specific toxic chemical listings)  
12064-03-8 Gallium antimonide  
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.

This product contains antimony 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

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.