



Indium Antimonide		Pricing >
Indium Antimonide Sputtering Target		Pricing >
Linear Formula	InSb	
Pubchem CID	3468413	
MDL Number	MFCD00016146	
EC No.	215-192-3	
IUPAC Name	indiganylidynestibane	
Beilstein/Reaxys No.	N/A	
SMILES	[In]#[Sb]	
InchI Identifier	InChI=1S/In.Sb	
InchI Key	WPYVAWXEWQSOGY-UHFFFAOYSA-N	
Signal Word	Warning	
Hazard Statements	H302-H332-H411	
Hazard Codes	Xi, N	
Precautionary Statements	P301+P330+P331-P312-P264-P261-P304+P340-P273-P391-P501	
Risk Codes	R20/22, R51/53	
Safety Statements	S61	
RTECS Number	NL1105000	
Transport Information	UN 1549 6.1/PG III	
WGK Germany	2	
GHS Pictograms	GHS07 Exclamation Point  GHS09 Environment 	

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SAFETY DATA SHEET

Date Accessed: 04/25/2024

Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #1312-41-0

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

Hazard pictograms



GHS07

Signal word

Warning

Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements

P301 + P330 + P331 - IF SWALLOWED: rinse mouth.

Do NOT induce vomiting

P312 - Call a POISON CENTER or doctor/ physician
if you feel unwell

P264 - Wash face, hands and any exposed skin
thoroughly after handling

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

P304 + P340 - IF INHALED: Remove to fresh air and
keep at rest in a position comfortable for breathing

P273 - Avoid release to the environment

P391 - Collect spillage

P501 - Dispose of contents/ container to an approved
waste disposal plant

WHMIS classification

D1B - Toxic material causing immediate and serious
toxic effects

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

Health (acute effects) = 2

Flammability = 0

Physical Hazard = 0

Other hazards

Results of PBT and vPvB assessment

PBT:

N/A
vPvB:
N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
CAS No. / Substance Name:
1312-41-0 Indium antimonide
Identification number(s):
EC number:
215-192-3
Index number:
051-003-00-9

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

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents
Special powder for metal fires. 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.

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.

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:
Store away from oxidizing agents.
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

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:

Antimony and antimony compounds

mg/m³

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-STEEL

Japan OEL 0.1; 2B Carcinogen

Korea TLV 0.5

Ireland TWA 0.5

Netherlands MAC-TGG 0.5

Norway TWA 0.5

Poland TWA 0.5; 1.5-STEEL

Russia TWA 0.2; 0.5-STEEL

Sweden NGV 0.5

Switzerland MAK-W 0.5

United Nations TWA 0.5

USA PEL 0.5

Indium and compounds

mg/m³

ACGIH TLV 0.1(In)

Belgium TWA 0.1

Denmark TWA 0.1(In)

Finland TWA 0.1

Netherlands MAC-TGG 0.1

Norway TWA 0.1

Switzerland MAK-W 0.1

United Kingdom TWA 0.1(In); 0.3(In)-STEEL

OSHA PEL TWA 0.1

1312-41-0 Indium antimonide (100.0%)

REL (USA) Long-term value: 0.1 mg/m³
as In

TLV (USA) Long-term value: 0.1 mg/m³
as In

EL (Canada) Long-term value: 0.1 mg/m³
as In

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.
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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:

Form: Solid

Color: Silver grey

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 500 dec °C (932 dec °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): 5.75 g/cm³ (47.984 lbs/gal)

Relative density

No data available.

Vapor density

N/A
Evaporation rate
N/A
Solubility in Water (H₂O): Insoluble
Partition coefficient (n-octanol/water): No data available.
Viscosity:
Dynamic: N/A
Kinematic: N/A
Other information
No data available

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

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:
Exposure to indium compounds may cause pain in the joints and bones, tooth decay, nervous and gastrointestinal disorders, heart pain and general debility.
Experiments with animals also indicate that indium may cause reduced food and water consumption with weight loss, pulmonary edema, pneumonia, blood, liver and kidney damage, leg paralysis and damage to the brain, heart, adrenals and spleen.
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.

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 product to reach groundwater, water courses, or sewage systems.
Do not allow material to be released to the environment without official permits.
Toxic for aquatic organisms
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

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.

SECTION 14. TRANSPORT INFORMATION

UN-Number
DOT, IMDG, IATA
UN1549
UN proper shipping name
DOT
Antimony compounds, inorganic, solid, n.o.s. (Indium
antimonide)
IMDG, IATA
ANTIMONY COMPOUND, INORGANIC, SOLID,
N.O.S. (Indium 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. (Indium antimonide), 6.1, III

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
GHS07 GHS09
Signal word
Warning
Hazard statements
H302+H332 Harmful if swallowed or if inhaled.
H411 - Toxic to aquatic life with long lasting effects
Precautionary statements
P301 + P330 + P331 - IF SWALLOWED: rinse mouth.
Do NOT induce vomiting
P312 - Call a POISON CENTER or doctor/ physician
if you feel unwell
P264 - Wash face, hands and any exposed skin
thoroughly after handling
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/
spray
P304 + P340 - IF INHALED: Remove to fresh air and
keep at rest in a position comfortable for breathing
P273 - Avoid release to the environment
P391 - Collect spillage
P501 - Dispose of contents/ container to an approved
waste disposal plant
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)
1312-41-0 Indium 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.

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
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