

Antimony Selenide		Pricing >
Antimony Selenide Sputtering Target		Pricing >
Linear Formula	Sb ₂ Se ₃	
Pubchem CID	6391662	
MDL Number	MFCD00016319	
EC No.	215-256-0	
IUPAC Name	selenium; selenoxoantimony	
Beilstein/Reaxys No.	N/A	
SMILES	[SbH3+3].[SbH3+3].[Se-2].[Se-2].[Se-2]	
Inchl Identifier	InChI=1S/2Sb. 3Se/q2*+3;3*-2	
Inchl Key	WWUNXXBCFXOXHC-UHFFFAOYSA-N	
Signal Word	Danger	
Hazard Statements	H301-H311-H315-H319-H331-H335	
Hazard Codes	T	
Risk Codes	26-36/37/39-45	
Safety Statements	26-36/37/39-45	
RTECS Number	N/A	
Transport Information	UN 1549 6.1/PG 3	
WGK Germany	3	

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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 #1315-05-5

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

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

GHS06 Skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.

Acute Tox. 2 H330 Fatal if inhaled.

GHS08 Health hazard

STOT RE 2 H373 May cause damage to the central nervous system, the liver and the digestive system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.

Hazards not otherwise classified

No data available

GHS label elements

GHS label elements, including precautionary statements

Hazard pictograms



GHS06 GHS08

Signal word

Danger

Hazard statements

H300+H330 Fatal if swallowed or if inhaled.

H373

May cause damage to the central nervous system, the liver and the digestive system through prolonged or repeated exposure.

Route of exposure: Oral, Inhalative.

Precautionary statements

P260

Do not breathe dust/fume/gas/mist/vapors/spray.

P284

[In case of inadequate ventilation] wear respiratory protection.

P301+P310 IF SWALLOWED: Immediately call a

POISON CENTER/ doctor/...
P320
Specific treatment is urgent (see on this label).
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
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
Health (acute effects) = 2
Flammability = 0
Physical Hazard = 1
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:
1315-05-5 Antimony(III) selenide
Identification number(s):
EC number: 215-256-0
Index number: 034-002-00-8

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

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents
Carbon dioxide, extinguishing powder or water spray.
Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Hydrogen selenide
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.

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:

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:

1315-05-5 Antimony(III) selenide (100.0%)

PEL (USA)

Long-term value: 0.2 mg/m³

as Se

REL (USA)

Long-term value: 0.2 mg/m³

as Se

TLV (USA)

Long-term value: 0.2 mg/m³

as Se

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

as Se

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:

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.

Penetration time of glove material (in minutes)

No data available

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: Grey

Odor: No data available

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 611 °C (1132 °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): 5.843 g/cm³ (48.76 lbs/gal)
Relative density
No data available.
Vapor density
N/A
Evaporation rate
N/A
Solubility in Water (H₂O): No data available
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
Hydrogen selenide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Fatal if inhaled.
Fatal 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:
May cause damage to the central nervous system, the liver and the digestive system through prolonged or repeated exposure. Route of exposure: Oral, Inhalative.
Specific target organ system toxicity - single exposure:
No effects known.
Aspiration hazard:
No effects known.
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:
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

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

UN3077

UN proper shipping name

DOT

Environmentally hazardous substances, solid, n.o.s.

(Antimony(III) selenide)

IMDG, IATA

ENVIRONMENTALLY HAZARDOUS SUBSTANCE,

SOLID, N.O.S. (Antimony(III) selenide)

Transport hazard class(es)

DOT, IMDG

Class

9 Miscellaneous dangerous substances and articles.

Label

9

Class

9 (M7) Miscellaneous dangerous substances and articles

Label

9

IATA

Class

9 Miscellaneous dangerous substances and articles.

Label

9

Packing group

DOT, IMDG, IATA

III

Environmental hazards:

Special marking (ADR):
Symbol (fish and tree)
Special marking (IATA):
Symbol (fish and tree)
Special precautions for user
Warning: Miscellaneous dangerous substances and articles
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":
UN3077, Environmentally hazardous substances, solid, n.o.s. (Antimony(III) selenide), 9, 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
GHS06
GHS08
Signal word
Danger
Hazard statements
H300+H330 Fatal if swallowed or if inhaled.
H373
May cause damage to the central nervous system, the liver and the digestive system through prolonged or repeated exposure.
Route of exposure: Oral, Inhalative.
Precautionary statements
P260
Do not breathe dust/fume/gas/mist/vapors/spray.
P284
[In case of inadequate ventilation] wear respiratory protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...
P320
Specific treatment is urgent (see on this label).
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)

1315-05-5 Antimony(III) selenide

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.

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.