

Molybdenum Germanium Sputtering Target		Pricing >
Signal Word	N/A	
Hazard Statements	N/A	
Hazard Codes	N/A	
Risk Codes	N/A	
Safety Statements	N/A	
Transport Information	NONH for all modes of transport	

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SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #12025-18-2

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
Classification according to Regulation (EC) No 1272/2008
The substance is not classified as hazardous to health or the environment according to the CLP regulation.

Classification according to Directive 67/548/EEC or
Directive 1999/45/EC
Not applicable
Information concerning particular hazards for human
and environment:
No information known.
Hazards not otherwise classified
No information known.
Label elements
Labelling according to Regulation (EC) No 1272/2008
Not applicable
Hazard pictograms
Not applicable
Signal word
Not applicable
Hazard statements
Not applicable
WHMIS classification
Not controlled
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
Health (acute effects) = 0
Flammability = 0
Physical Hazard = 0
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Substances
CAS# Description:
7439-98-7 Molybdenum
7440-56-4 Germanium
Identification number(s):
EC number: 231-107-2

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information
No special measures required.
After inhalation
Seek medical treatment in case of complaints.
After skin contact
Generally the product does not irritate the skin.
After eye contact
Rinse opened eye for several minutes under running

water. If symptoms persist, consult a doctor.
After swallowing
If symptoms persist consult doctor.
Information for doctor
Most important symptoms and effects, both acute and delayed
No further relevant information available.
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
Suitable extinguishing agents
Special powder for metal fires. Do not use water.
For safety reasons unsuitable extinguishing agents
Water
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Molybdenum oxides
Advice for firefighters
Protective equipment:
No special measures required.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Not required.
Environmental precautions:
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
Methods and material for containment and cleaning up:
Pick up mechanically.
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.
Information about protection against explosions and fires:
No special measures required.
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:
Do not store together with acids.
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 further relevant information available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems:
No further data; see section 7.
Control parameters
Components with limit values that require monitoring at the workplace: 7439-98-7 Molybdenum (100.0%)
PEL (USA) Long-term value: 5* 15** mg/m³ as Mo;*soluble compds., **insol.compds.:total dust
TLV (USA) Long-term value: 10* 3** mg/m³ as Mo;
*inhalable fraction ** respirable fraction
EL (Canada) Long-term value: 3* 10** mg/m³ as Mo;
*respirable **inhalable
EV (Canada) Long-term value: 10* 3** 0.5*** mg/m³ metal,insol.compds.:*inh,**resp;sol.compds.:***resp
Additional information: No data
Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Not required.
Recommended filter device for short term use:
Use a respirator with type N95 (USA) or PE (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: Not required.
Material of gloves
Nitrile rubber, NBR
Penetration time of glove material (in minutes) 480
Glove thickness 0.11 mm
Eye protection: Safety glasses
Body protection: Protective work clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

General Information

Appearance:

Form: Solid in various forms

Odor: Not determined

Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: Not determined.

Boiling point/Boiling range: Not determined.

Sublimation temperature / start: Not determined

Flammability (solid, gaseous): Not determined.

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: Not applicable.

Density at 20 °C (68 °F): Not determined.

Relative density: Not determined.

Vapor density: Not applicable.

Evaporation rate: Not applicable.

Solubility in / Miscibility with Water: Not determined

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic: Not applicable.

kinematic: Not applicable

Other information

No further relevant information available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity

No information known.

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
Conditions to avoid
No further relevant information available.
Incompatible materials:
Acids
Oxidizing agents
Hazardous decomposition products:
Molybdenum oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: May cause irritation
Sensitization: No sensitizing effects known.
Germ cell mutagenicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.
Carcinogenicity:
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
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.
Carcinogenic categories
OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.

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 undiluted product or large quantities to reach ground water, water course or sewage system.

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

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.

SECTION 14. TRANSPORT INFORMATION

UN-Number

DOT, ADN, IMDG, IATA

Not applicable

UN proper shipping name

DOT, ADN, IMDG, IATA

Not applicable

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Class

Not applicable

Packing group

DOT, IMDG, IATA

Not applicable

Environmental hazards:

Not applicable.
Special precautions for user
Not applicable.
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":
-

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental
regulations/legislation specific for the substance or
mixture
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)
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.
REACH - Pre-registered substances
Substance is 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 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.
