SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION

Product Name: Lanthanated Molybdenum Shot

Product Number: All applicable American Elements product codes, e.g. LA-MO-02-SHO , LA-MO-025-SHO , LA-MO-03-SHO , LA-MO-035-SHO , LA-MO-04-SHO , LA-MO-05-SHO

CAS #:

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:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
The substance is not classified according to the Globally Harmonized System (GHS).
Classification according to Directive 67/548/EEC or Directive 1999/45/EC N/A
Information concerning particular hazards for human and environment: N/A
Label elements
Labelling according to EU guidelines:
Observe the general safety regulations when handling chemicals
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)
Health (acute effects) = 0
Flammability = 0
Reactivity = 0
Other hazards
Results of PBT and vPvB assessment
PBT: N/A
vPvB: N/A

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances
Molybdenum metal (CAS #7439-98-) - 99.7 - 98%
Lanthum(III) Oxide (CAS #1312-81-8) - 0.3-2.0%

SECTION 4. FIRST AID MEASURES

Description of first aid measures
General information No special measures required.
If inhaled: Seek medical treatment in case of complaints.
In case of skin contact: Generally the product does not irritate the skin.
In case of eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
If swallowed:
Seek medical treatment.

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.
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 material to be released to the environment without official permits.
Methods and materials for containment and cleanup: Pick up mechanically.
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.
No special precautions are necessary if used correctly.
Information about protection against explosions and fires: No special measures required.
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: Not required.

Further information about storage conditions: None.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Additional information about design of technical systems: No further data; see item 7.
Control parameters
Components with limit values that require monitoring at the workplace:
Molybdenum and compounds (as Mo)
mg/m3
ACGIH TLV 5
Austria MAK 15
Belgium TWA 5
Denmark TWA 5
Finland TWA 5
France VME 5
Germany MAK 5
Netherlands MAC-TGG 5
Sweden NGV 10 (total dust)
5 (respirable dust)
Switzerland TWA 5
United Kingdom TWA 10; 20-STEL
USA PEL 5
Additional information: No data
Exposure controls
Personal protective equipment
Follow typical protective and hygienic practices for handling chemicals.
Breathing equipment: Not required.
Protection of hands: Not required.
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 in various forms
Color: Grey
Odor: Odorless
Odor threshold: No data available.
pH: N/A
Melting point/Melting range: 2610°C (4730 °F)
Boiling point/Boiling range: 5560°C (10040 °F)
Sublimation temperature / start: No data available
Flash point: N/A
Flammability (solid, gas) Product is not flammable.
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 at 3102°C (5616 °F): 1.33 hPa (1 mm Hg)

Density at 20°C (68 °F): 10.22 g/cm^3 (85.286 lbs/gal)
Relative density No data available.
Vapor density N/A
Evaporation rate N/A
Solubility in / Miscibility with
Water: Insoluble
Segregation coefficient (n-octonol/water): No data available.
Viscosity:
Dynamic: N/A
Kinematic: N/A
Other information No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity
Chemical stability
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
Hazardous decomposition products: No dangerous decomposition products known

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity:
Primary irritant effect:
on the skin: No irritant effect.
Sensitization: No sensitizing effects known.
Subacute to chronic toxicity:
Acute molybdenum poisoning may cause severe gastrointestinal irritation, diarrhea, coma and death from cardiac failure.
Chronic molybdenum poisoning in laboratory animals has caused loss of weight, anorexia, anemia, deficient lactation, male sterility, osteoporosis and bone joint abnormalities.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity
Acquatic toxicity: No data available
Persistence and degradability No data available
Behavior in environmental systems:
Bioaccumulative potential No data available
Mobility in soil No data available
Additional ecological information:

Do not allow material to be released to the environment without official permits.
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

Not a hazardous material for transportation.
DOT regulations:
Hazard class: None
Land transport ADR/RID (cross-border)
ADR/RID class: None
Maritime transport IMDG:
IMDG Class: None
Marine pollutant: No
Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: None
Special precautions for user N/A
Transport/Additional information: Not dangerous according to the above specifications.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code N/A

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Product related hazard informations:
Observe the general safety regulations when handling chemicals
National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
Information about limitation of use: For use only by technically qualified individuals.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 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

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