SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Molybdenum Silicon Alloy

Product Code: MO-SI-05

CAS Number: N/A

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
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.
Hazard 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
Identification number(s):
EC number: 231-107-2

7440-21-3 Silicon
Identification number(s):
EC number: 231-130-8

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
Silicon 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

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
Silicon 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):
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
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