

GHS Safety Data Sheet

SDS No. : MOE02PAEG

Date Issued: 2013/06/25

Section 1. Identification of the substance or mixture and of the supplier

1.1 Product Information

Product name: **Mo Molybdenum, Powder**

Product number:	Purity	Size (μ m) or Shape
MOE11PB	99 %(2N)	150~300
MOE08PB	99.8%(2N8)	150 pass
MOE09PB	99.8%(2N8)	63 pass
MOE03PB	99.9%(3N)up	ca.3
MOE04PB	99.9%(3N)up	ca.1.5
MOE05PB	99.9%(3N)up	ca.0.7
MOE06PB	99.99 % (4N)up	ca.2~3

1.2 Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd

1. 1-28, 5-chome, Chiyoda, Sakado-shi, Saitama Japan 350-0284

Phone: +81-49-284-1511 Fax: +81-49-284-1351

Emergency Phone : +81-49-284-1511

Section 2. Hazards identification

GHS Classification

Health Hazards	Environmental Hazards	Physical Hazards
Specific target organ toxicity, single exposure : Category 3	No data available	No data available

GHS Label: W



Pictograms or symbols

Warning word: **DANGER**

Hazard information

May cause respiratory irritation

Description of precaution

Wear protective gloves/protective clothing/eye protection/respiratory protection/ face protection during handling.
 Avoid breathing dust/ fume/ vapors. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling.
 Use only outdoors or in well-ventilated area.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 Call a POISON CENTER or doctor/physician if you feel unwell.
 Protect from sunlight. Store in a cool, dry and well-ventilated place.
 Keep container tightly closed.
 Dispose of contents/ container in accordance with local/national regulations.

Additional hazard information :

Ignited by heat, sparks or flames. Flammable solid.

With respect to additional hazard information, see Section 11.

Section 3. Composition / information on ingredients

Chemical or common name: Molybdenum
 Chemical formula: Mo
 Single Substance or Compound: Single substance
 Composition: 100%

CAS #: 7439-98-7
RTECS#: QA4680000
TSCA inventory: listed
EINECS: 2311072

Section 4. First aid measures

Eye contact: Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

Skin contact: Promptly flush contaminated skin with soap or mild detergent and water. Contact physician if irritation continues.

Inhalation: Remove the exposed person immediately and provide fresh air. Get medical attention.

Ingestion: Rinse mouth and throat with water. Get medical attention immediately.

Section 5. Fire fighting measures

Extinguishing media: Dry sand, dry sodium chloride based extinguishers or other Class D fire -extinguishing materials.
DO NOT use water, foam or carbon dioxide.

Fire fighting: This material is flammable solid.
Remove containers to safe place if possible.
Self-contained breathing apparatus and full protective clothing should be used, if the material is involved in fire.
May re-ignite after fire is extinguished.

Explosion hazards:
Dust explosion: Fine powder forms explosive mixtures in air.

Specific hazards arising from the chemical:
In case of fire, liberates toxic gases/ fume.

Section 6. Accidental release measures

Personal Precautions: Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its dusts/ fume.

Environmental hazard precautions:
Shut off leak if without risk.
Prevent flow out to river, etc. so as not to badly affect.

Method for containment and cleaning up:
Remove all sources of ignition.
Indoor leakage: Ventilate as much as possible until the cleaning is completed.
Outdoor leakage: Work from the windward and evacuate the leeward crowd.
Cover with inert material (e.g. vermiculite, sand, earth or other suitable absorbent), then gather up and pack in closed container as much as possible.
Carefully collect remnant and move to a safe place.

Section 7. Handling and storage

Precautions to be taken in handling:

Safe handling: Handling worker wears suitable protective clothing, and use local ventilation equipment.
Keep away from heat, sparks and naked flame.
Electrically ground all equipment when handling this material and use only

non-sparking tools.

Use explosion-proof electrical/ventilating/lighting equipment.

Precautions to be taken in storage:

General precautions: Store in a cool, dry place away from incompatible materials.
Keep container or bottle tightly closed.
Keep away from any heat, sparks, and flames.

Section 8. Exposure controls / personal protection

Exposure guideline: ACGIH (2012): Molybdenum, Metal and insoluble compounds (as Mo)
TLV-TWA 10 mg/m³(inhalable particles),
3 mg/m³(respirable particles)
OSHA (2006) : Molybdenum, insoluble compound (as Mo)
PEL-TWA 15 mg/m³ (Total dust)

Facility measures: Local ventilation of closed work room or total proper ventilation to prevent inhalation.

Protective ware: Wear appropriate NIOSH/MSHA-approved respirator, safety goggles, face shields, protective gloves.

Section 9. Physical and chemical properties

Color and Form: Silver-white metal
Chemical formula: Mo
Atomic weight: 95.94
Melting point: 2620 °C
Boiling point: 4610 °C
Density: 10.22 g/cm³
Water solubility: Insoluble
Flammable: Flammable substance
Oxidation: None

Section 10. Stability and reactivity

Stability : Stable in closed container.
Reactivity
Incompatibility : Strong oxidizing agents
Condition to avoid : Heat, all sources of ignition.
Hazardous decomposition products : Molybdenum oxides

Section 11. Toxicological information

Acute toxicity(Oral,Dermal) : GHS : No data available
Acute toxicity (inhalation: dust, mist) : GHS : Not classified.; Falls below the lowest level.
Mo inhalation rat 25-30mg/L/1hr(25mg/L/1hr = 6.3mg/L/4hr)
Change of the state was not admitted (ACGIH(2003), other)

Skin corrosive / irritation: GHS : No data available
Serious eyes damage / eye irritation: GHS : No data available
Respiratory sensitization: GHS : No data available
Skin sensitization: GHS : No data available
Germ cell mutagenicity: GHS : No data available
Carcinogenicity: GHS : No data available
Reproductive toxicity: GHS : No data available

Specific target organ toxicity

— single exposure: GHS : Category 3 ; May cause respiratory irritation.

Specific target organ toxicity

— repeated exposure: GHS : No data available

Aspiration hazard:

GHS : No data available

Other cautions: Mechanical stimulation by dust affects eyes, skin and respiratory system

Section 12. Ecological information

Ecotoxicity:

Hazards to the aquatic environment

— acute toxicity: GHS : No data available

— chronic toxicity: GHS : No data available

Hazardous the ozone layer: GHS : No data available

No Freon or Halon

Fish toxicity:

No data available

Degradability:

No data available

Bioaccumulative potential:

Mo: biological half-life 5 day,

Rate of absorption Oral= 0.8 Respiratory tract= 0.65

Mobility in soil:

No data available

Section 13. Disposal considerations

Disposal method:

User of the product should contract with the local government or licensed 'Industrial Waste Haulers' for disposal of waste.

Section 14. Transport information

UN number: 3089

IATA shipping name: Metal powder, flammable, n.o.s.

IATA classification: Hazardous Class 4.1 (Flammable solids)

IATA packing group: II (MOE03PB, MOE04PB, MOE05PB, MOE06PB)

III (MOE08PB, MOE09PB, MOE11PB)

HS code: 8102.10

Marine pollution: None

Section 15. Regulatory information

TSCA inventory : listed.

Please refer to any other local / national measures that may be relevant.

Section 16. Other information

The information described above is believed to be correct. However, Kojundo Chemical Lab. makes no representation, warranty nor guarantee of any kind with respect to the information on this data sheet or any use of the product based upon this information.