

GHS Material Safety Data Sheet

MSDS No. : NBE02PAEG

Date Issued: 2010/10/25

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

1.1 Product Information

Product name: Nb Niobium powder

Product number:	Purity	Size
NBE01PB	99.9% (3N)	300 μ m pass
NBE02PB	99.9% (3N)	75 μ m pass
NBE05PB	99.9% (3N)	75-150 μ m

1.2 Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd.

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Section 2. Hazards identification

GHS Classification

Health Hazards	Environmental Hazards	Physical Hazards
No data available	No data available	Flammable solids : Category 2

GHS Label: F



Pictograms or symbols

Warning word: Warning

Hazard information	Description of precaution
Flammable solid	Keep away from heat/sparks/open flames/hot surfaces. -No smoking. Use explosion-proof electrical/ventilating/lighting/ equipment. Wear protective gloves/protective clothing/ eye protection/ respiratory protection / face protection during handling. Avoid breathing dust/fume. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling. In case of fire: Use dry sand, dry sodium chloride based extinguishers or other Class D fire-extinguishing materials for extinction. Call a POISON CENTER or doctor/physician if you feel unwell. Dispose of contents/ container in accordance with local / national regulations.

Additional hazard information :

With respect to additional hazard information, see Section 11.

Section 3. Composition / information on ingredients

Chemical or common name:	Niobium
Chemical formula:	Nb
Single Substance or Compound:	Single substance
Composition:	100%
CAS#:	7440-03-1
RTECS#:	QT9900000
TSCA inventory :	listed
EINECS:	2311135

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

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:	Eliminate all ignition sources(no smoking, flares, sparks or flames in immediate area). Indoor leakage: Ventilate as much as possible until the cleaning is completed. Outdoor leakage: Work from the windward and evacuate the leeward crowd. Gather up, 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: Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen.
 Keep away from heat, sparks and naked flame.
 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 (2008): No data available.
 OSHA (2006) : No data available.

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, protective gloves.

Section 9. Physical and chemical properties

Color and Form: Gray solid

Chemical formula: Nb

Atomic weight: 92.91

Melting point: 2468

Boiling point: 4742

Density: 8.57 g/cm³

Solubility: Water : Insoluble
 Dissoluble : Hydrofluoric acid
 Insoluble : Hydrochloric acid, sulfuric acid, nitric acid, aqua regia, alkaline solution.

Flammable: Flammable substance

Oxidation: None

Section 10. Stability and reactivity

Stability: Stable in closed container.

Reactivity

Incompatibility: Strong acids, strong oxidizing agents, halogens, oxygen

Condition to avoid: No data available.

Section 11. Toxicological information

Acute toxicity: GHS : No data available.

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 : No data available.
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.
Hazards to the aquatic environment —chronic toxicity:	GHS ; No data available.
Fish toxicity:	No data available.
Degradability:	No data available.
Bioaccumulative potential:	Biological half-life 760 day, Rate of absorption oral = 0.0001 , Respiratory tract = 0.25
Ozone layer:	No Freon or Halon.

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:	
HS code:	8112.92
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.