GHS Safety Data Sheet

SDS No.: NBO01PAEG Date Issued: 2004/10/20 Last updated: 2015/03/30

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

1.1 Product Information

Product name: Nb2O5 Niobium(V) oxide

| Product number: | Purity | Form | Size or Shape |
|-----------------|--------------|------------|-------------------------------------|
| NBO04PB | 99 %(2N) | powder | ca.1 μ m |
| NBO05PB | 99 %(2N) | powder | 2mm pass |
| NBO06PB | 99.9 % (3N) | powder | ca.1 μ m |
| NBO07PB | 99.9 % (3N) | powder | 425μ m pass |
| NBO08PB | 99.99 % (4N) | rod/tablet | ca.1 μ m |
| NBO03GB | 99.9 % (3N) | target | 2~5mm |
| _ | 99.9 % (3N) | rod/tablet | Φ10xt5, Φ20xt5, Various sizes |
| _ | 99.9 % (3N) | target | Φ101.6xt5, Φ152.4xt5, Various sizes |

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: Not classified Pyrophoric solids: Not classified Self-heating substances and mixtures: Not classified Substances and mixtures which, in contact with water, emit flammable gases: Not classified |

GHS Label:

Pictograms or symbols No data available

| Warning word: Not applicable | | |
|------------------------------|--|--|
| Hazard information | Description of precaution | |
| Not applicable | Wear protective gloves/protective clothing/eye protection/respiratory protection/face protection during handling. 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(V) oxide

Chemical formula: Nb₂O₅

Single Substance or Compound: Single substance

Composition: 100% CAS #: 1313-96-8 RTECS#: QU0500000

TSCA inventory: listed EINECS: 2152136

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: This product cannot catch fire. Use media appropriate for surrounding fire.

Fire fighting: The product is nonflammable.

Section 6. Accidental release measures

Personal Precautions: Workers should use protective wears to prevent contact with the spilt adhesive

and inhalation of its dusts.

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:

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.

Precautions to be taken in storage:

General precautions: Keep container or bottle tightly closed.

Store in a cool, dry place away from incompatible materials.

Section 8. Exposure controls / personal protection

Exposure guideline: ACGIH (2013): 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, face

shields, protective gloves.

(In case of dust generating work.)

Wear appropriate NIOSH/MSHA-approved respirator, air-supplied respirator,

safety goggles, face shields, protective gloves, protective clothing, apron,

including boots.

Physical and chemical properties Section 9.

Color and Form: White solid, odorless.

Chemical formula: Nb₂O₅ Formula weight: 265.8

1485±5 °C (under pressure) Melting point:

Boiling point: No data available

 $4.6~\mathrm{g/cm}$ Density: Water solubility Insoluble

non-flammable substance Flammable:

Oxidation: No data available

Section 10. Stability and reactivity

Stability: Stable in closed container.

Reactvity

Incompatibility: Lithium

Condition to avoid: No data available Hazardous decomposition products.: No data available

Toxicological information Section 11.

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

Ecological information Section 12.

Ecotoxicity:

Hazards to the aquatic environment

-acute toxicity: GHS: No data available -chronic toxicity: GHS: No data available GHS: No data available

Hazrdous to the ozone layer:

No Freon or Halon

Fish toxicity: No data available Degradability: No data available

Bioaccumulative potential: Nbbiological half-life 760 day,

Rate of absorption Oral=0.0001 Respiratory tract=0.25

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 classification: Non-hazards

UN number: None
HS code: 2825.90
Marine pollution: None

Precautions: Container should be transported in a secure position, in a well-ventilated

vehicle.

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.