

## GHS Safety Data Sheet

SDS No. : MOI02PAEG

Date Issued : 2015/11/30

Last updated : 2022/01/05

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

#### Product Information

Product name: MoTe<sub>2</sub> Molybdenum telluride

| Product number: | Purity    | Form   | Size or Shape                 |
|-----------------|-----------|--------|-------------------------------|
| MOI11PB         | 99.9%(3N) | powder | —                             |
| —               | 3N        | target | Various shapes, Various sizes |

#### Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd.

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

Recommended uses and restrictions on use: For research purposes

### Section 2. Hazards identification

#### GHS Classification

| Health Hazards   | Environmental Hazards | Physical Hazards  |
|--|-----------------------|---|
| Acute toxicity(Oral) : Category 4<br>Acute toxicity(Inhalation) : Category 4 | No data available     | <b>Flammable solids : Not classified</b><br><b>Pyrophoric solids : Not classified</b><br><b>Self-heating substances and mixtures : Not classified</b> |

GHS Label: W



Pictograms or symbols:

Warning word: **WARNING**

| Hazard information                                       | Description of precaution  |
|--|--|
| <b>Harmful if swallowed</b><br><b>Harmful if inhaled</b> | Avoid breathing dust/mist/fume. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling.<br>Use only outdoors or in well-ventilated area.<br>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.<br>Rinse mouth.<br>Call a POISON CENTER or doctor/physician if you feel unwell.<br>Dispose of contents/ container in accordance with local/national regulations. |

### Section 3. Composition / information on ingredients

Chemical or common name: Molybdenum(IV) telluride  
 Synonyms: Molybdenum ditelluride  
 Chemical formula: MoTe<sub>2</sub>  
 Single Substance or Compound: Single substance  
 Composition: 100%  
 CAS #: 12058-20-7  
 RTECS#: Not listed



High Purity Materials

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TSCA inventory : Listed  
 EINECS: 2350284

#### 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: Use media appropriate for surrounding fire.  
 This product is poorly flammable.

Fire fighting: Self-contained breathing apparatus and full protective clothing should be used, if the material is involved in fire.

#### Section 6. Accidental release measures

Personal Precautions:  
 Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/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:  
 Avoid unnecessary contacts with spills.  
 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 DOT-approved waste 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.  
 Avoid prolonged or repeated exposure.

##### Precautions to be taken in storage:

General precautions: Store the material in a sealed container.  
 Store in a cool, dry, well ventilated and dark place away from incompatible materials.

#### Section 8. Exposure controls / personal protection

| Exposure guideline: | Chemical Name                          | ACGIH(2019) TLV       | OSHA(2006) PEL        |
|---------------------|--|-----------------------|-----------------------|
|                     |  | TWA mg/m <sup>3</sup> | TWA mg/m <sup>3</sup> |
|                     | Molybdenum insoluble compounds (as Mo) | 10(I),3(R)            | 15(T)                 |
|                     | Tellurium compounds (as Te)            | 0.1                   | 0.1                   |

I: Inhalable fraction R: Respirable fraction T: 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

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### Section 9. Physical and chemical properties

Appearance: Gray solid  
Chemical formula: MoTe<sub>2</sub>  
Formula weight: 351.1  
Density: 7.7 g/cm<sup>3</sup>  
Flammability: No data available  
Oxidation: None

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### Section 10. Stability and reactivity

Stability: Stable in closed container at room temperature.  
Reactivity  
Incompatibility: Oxidizing agents  
Condition to avoid ; No data available

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### Section 11. Toxicological information

Acute toxicity(Oral): GHS : Category 4 ; Harmful if swallowed  
Acute toxicity(Inhalation): GHS : Category 4 ; Harmful if inhaled  
Skin corrosive / irritation: GHS : No data available  
Serious eye damage / 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  
    – repeated exposure: GHS : No data available  
Aspiration hazard: GHS : No data available

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### Section 12. Ecological information

Ecotoxicity:  
Hazardous to the aquatic environment  
    – acute toxicity: GHS : No data available  
    – chronic toxicity: GHS : No data available  
Hazardous to the ozone layer: GHS : No data available  
    No Freon or Halon  
Fish toxicity: No data available  
Degradability: No data available  
Bioaccumulative potential: No data available  
Mobility in soil: No data available

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### 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.

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### Section 14. Transport information

UN number: 3284  
IATA shipping name: TELLURIUM COMPOUND, N.O.S.



IATA classification: Class 6.1 (toxic substances)  
IATA packing group: III  
HS code: 2842.90  
Marine pollution: None

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### **Section 15. Regulatory information**

TSCA inventory: Listed.

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

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### **Section 16. Other information**

This SDS is for provision of information, and it does not represent a guarantee the properties or safeties of the product.

The information herein is based on the references we could obtained and the present state of our knowledge, however, this SDS does not always cover all information about the product. Some new information or amendments may be added afterwards.

Prior to use, please investigate the laws and regulations of the organization, area and country where the product is to be used. The information is intended to ordinary usage, in case of special handling, sufficient care should be taken.



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