

GHS Safety Data Sheet

SDS No. : MNO03PAEG

Date Issued: 2017/12/04

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

1.1 Product Information

Product name: **Mn₂O₃ Manganese(III) oxide**

| Product number: | Purity | Form | Size or Shape |
|-----------------|-----------|------------|-------------------------------------|
| MNO04PB | 99.9%(3N) | powder | — |
| — | 3N | rod/tablet | φ 10×t5 φ 20×t5 Various sizes |
| | 3N | target | φ 101.6×t5 φ 152.4×t5 Various sizes |

1.2 Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd
 1-28, 5-chome, Chiyoda, Sakado-shi, Saitama Japan 350-0284
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Section 2. Hazards identification

GHS Classification

| Health Hazards | Environmental Hazards | Physical Hazards |
|---|-----------------------|---|
| Skin corrosion/ irritation: Category 2 Serious eye damage/eye irritation : Category 2 Specific target organ toxicity, single exposure: Category 3 | 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 Oxidizing solids : Not classified |

GHS Label : W

Pictograms or symbols



Warning word: WARNING

| Hazard information | Description of precaution |
|---|--|
| Causes skin irritation Causes serious eye irritation. May cause respiratory irritation | Wear protective gloves/protective clothing/eye protection /respiratory protection/face protection during handling. Avoid breathing dust/mist/gas/fume/vapours/spray. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling. Take off the contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Remove immediately all contaminated clothing and rinse skin with water/shower. Then wash skin with plenty of soap and water. If skin irritation occurs, get medical advice/attention. 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. Store locked up. 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

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|-------------------------------|---|
| Chemical or common name: | Manganese(III) oxide |
| Synonyms: | Dimanganese trioxide, Manganese sesquioxide, Manganic oxide |
| Chemical formula: | Mn ₂ O ₃ |
| Single Substance or Compound: | Single substance |
| Composition: | 100% |
| CAS #: | 1317-34-6 |
| RTECS#: | OP0915000 |
| TSCA inventory: | listed |
| EINECS: | 2152644 |

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: | The product is nonflammable. Use media appropriate for surrounding fire. |
| Fire fighting: | Wear self contained breathing apparatus and protective clothing for fire fighting if necessary. In case of fire, the product may liberate irritating gases/ fume. |

Section 6. Accidental release measures

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

| | |
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| 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: | Store in a cool, dry place away from incompatible materials. Keep container or bottle tightly closed. |

Section 8. Exposure controls / personal protection

Exposure guideline:

| Chemical Name | ACGIH(2013) TLV-TWA mg/m ³ | OSHA(2006) PEL-TWA mg/m ³ |
|-----------------------------|--|---|
| Manganese compounds (as Mn) | 0.02 (R), 0.1(I) | 5 (fume) |

R:Respirable fraction I: Inhalable fraction C:Ceiling limit

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, including boots.

Section 9. Physical and chemical properties

| | |
|-------------------|---------------------------------------|
| Color and Form: | Black solid |
| Chemical formula: | Mn ₂ O ₃ |
| Formula weight: | 157.9 |
| Melting point: | 1080 °C(decomposes, liberates oxygen) |
| Density: | 4.50 g/cm ³ |
| Water solubility | Insoluble |
| Flammable: | Non-flammable substance |
| Oxidation: | None |

Section 10. Stability and reactivity

Stability: Stable in sealed container at room temperature.

Reactivity:

Condition to avoid: No data available

Incompatibility: No data available

Section 11. Toxicological information

| | |
|---|---|
| Acute toxicity : | GHS : No data available |
| Skin corrosive / irritation: | GHS : Category 2 ; Causes skin irritation |
| Serious eyes damage / eye irritation: | GHS : Category 2 ; Causes serious eye irritation |
| 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 |

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: | No data available |
| 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 classification: | Non-hazards |
| UN number: | None |
| HS code: | 2820.90 |
| 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.