

Safety Data Sheet (SDS)

Manganese(II) Oxide (MnO)

SECTION 1: Identification

- **1.1 Product Identifier**
 - **Product Name:** Manganese(II) Oxide (MnO)
 - **CAS No.:** 1344-43-0
 - **Synonyms:** Manganous oxide, Manganese monoxide
- **1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**
 - **Identified Uses:** Scavenger for steel smelting, chemical synthesis, industrial catalyst, feed additive.
- **1.3 Details of the Supplier of the Safety Data Sheet**
 - **Company Name:** BTLnewmaterial
 - **Address:** Room 706, No. 154, Wuyi East Road, Niezhou Residential Committee, Caizichi Sub-district Office, Leiyang City, Hengyang City, Hunan Province, China
 - **Email:** lixifirm@outlook.com
 - **Phone/WhatsApp:** +8618273793022
 - **Website:** manganesesupply.com
- **1.4 Emergency Telephone Number**
 - **Emergency Phone:** +8618273793022 (24h)

SECTION 2: Hazards Identification

- **2.1 Classification of the Substance or Mixture**

- **GHS Classification:** Not classified as a hazardous substance or mixture according to GHS. (Note: Manganese compounds may be classified for specific target organ toxicity – repeated exposure, Category 2).
 - **2.2 GHS Label Elements, Including Precautionary Statements**
 - **Pictogram:** None required.
 - **Signal Word:** Warning (if applicable for STOT-RE).
 - **Hazard Statements:** H373: May cause damage to organs (brain/nervous system) through prolonged or repeated exposure (inhalation).
 - **Precautionary Statements:**
 - P260: Do not breathe dust/fume.
 - P280: Wear protective gloves/eye protection.
 - P314: Get medical advice/attention if you feel unwell.
 - **2.3 Other Hazards**
 - None known.
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SECTION 3: Composition/Information on Ingredients

- **3.1 Substances**
 - **Chemical Name:** Manganese(II) oxide
 - **Formula:** MnO
 - **CAS No.:** 1344-43-0
 - **Purity:** $\geq 36.0\%$ (as Mn content)
 - **Impurities:** As ≤ 5 ppm, Pb ≤ 10 ppm, Cd ≤ 5 ppm.
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SECTION 4: First Aid Measures

- **4.1 Description of First Aid Measures**
 - **Inhalation:** Remove person to fresh air. If not breathing, give artificial respiration. Consult a physician.
 - **Skin Contact:** Wash off with soap and plenty of water. Consult a physician.
 - **Eye Contact:** Flush eyes with water as a precaution.

- **Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
 - **4.2 Most Important Symptoms and Effects, Both Acute and Delayed**
 - The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.
 - **4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed**
 - No data available.
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SECTION 5: Firefighting Measures

- **5.1 Extinguishing Media**
 - Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
 - **5.2 Special Hazards Arising from the Substance or Mixture**
 - Manganese/manganese oxides.
 - **5.3 Advice for Firefighters**
 - Wear self-contained breathing apparatus for firefighting if necessary.
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SECTION 6: Accidental Release Measures

- **6.1 Personal Precautions, Protective Equipment and Emergency Procedures**
 - Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
 - **6.2 Environmental Precautions**
 - Do not let product enter drains.
 - **6.3 Methods and Materials for Containment and Cleaning Up**
 - Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
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SECTION 7: Handling and Storage

- **7.1 Precautions for Safe Handling**

- Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
 - **7.2 Conditions for Safe Storage, Including Any Incompatibilities**
 - Store in a cool, dry place. Keep container tightly closed in a dry and well-ventilated place. Incompatible with strong acids and oxidizing agents.
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SECTION 8: Exposure Controls/Personal Protection

- **8.1 Control Parameters**
 - **Occupational Exposure Limits:** TWA (Mn): 0.2 mg/m³ (ACGIH).
 - **8.2 Exposure Controls**
 - **Appropriate Engineering Controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
 - **Personal Protective Equipment:**
 - **Eye/Face Protection:** Safety glasses with side-shields.
 - **Skin Protection:** Handle with gloves.
 - **Body Protection:** Complete suit protecting against chemicals.
 - **Respiratory Protection:** For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.
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SECTION 9: Physical and Chemical Properties

- **9.1 Information on Basic Physical and Chemical Properties**
 - **Appearance:** Green to grayish-green powder
 - **Odor:** Odorless
 - **pH:** No data available (insoluble in water)
 - **Melting Point:** 1,842 °C (3,348 °F)
 - **Boiling Point:** No data available
 - **Flash Point:** Not applicable
 - **Density:** 5.43 g/cm³
 - **Solubility:** Insoluble in water; soluble in acids.

- **Partition Coefficient:** No data available
 - **Auto-ignition Temperature:** No data available
 - **Decomposition Temperature:** No data available
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SECTION 10: Stability and Reactivity

- **10.1 Reactivity:** No data available.
 - **10.2 Chemical Stability:** Stable under recommended storage conditions.
 - **10.3 Possibility of Hazardous Reactions:** No data available.
 - **10.4 Conditions to Avoid:** Exposure to moisture.
 - **10.5 Incompatible Materials:** Strong acids, strong oxidizing agents.
 - **10.6 Hazardous Decomposition Products:** Other decomposition products - No data available. In the event of fire: see section 5.
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SECTION 11: Toxicological Information

- **11.1 Information on Toxicological Effects**
 - **Acute Toxicity:** LD50 Oral - Rat - > 2,000 mg/kg.
 - **Skin Corrosion/Irritation:** No data available.
 - **Serious Eye Damage/Eye Irritation:** No data available.
 - **Respiratory or Skin Sensitization:** No data available.
 - **Germ Cell Mutagenicity:** No data available.
 - **Carcinogenicity:** IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
 - **Reproductive Toxicity:** No data available.
 - **STOT-Single Exposure:** No data available.
 - **STOT-Repeated Exposure:** May cause damage to organs (brain/nervous system) through prolonged or repeated exposure (inhalation).
 - **Aspiration Hazard:** No data available.
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SECTION 12: Ecological Information

- **12.1 Toxicity:** No data available.
 - **12.2 Persistence and Degradability:** No data available.
 - **12.3 Bioaccumulative Potential:** No data available.
 - **12.4 Mobility in Soil:** No data available.
 - **12.5 Results of PBT and vPvB Assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
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SECTION 13: Disposal Considerations

- **13.1 Waste Treatment Methods**
 - **Product:** Offer surplus and non-recyclable solutions to a licensed disposal company.
 - **Contaminated Packaging:** Dispose of as unused product.
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SECTION 14: Transport Information

- **14.1 DOT (US):** Not dangerous goods.
 - **14.2 IMDG:** Not dangerous goods.
 - **14.3 IATA:** Not dangerous goods.
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SECTION 15: Regulatory Information

- **15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**
 - This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
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SECTION 16: Other Information

- **16.1 Disclaimer**

- The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BTLnewmaterial shall not be held liable for any damage resulting from handling or from contact with the above product.