

MATERIAL SAFETY DATA SHEET (MSDS)

Product Name: Manganese Sand Filter Media 35% MnO₂

Revision Date: April 16, 2026

Standard: GHS Compliant (16 Sections)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

- **Product Name:** Manganese Sand Filter Media 35% MnO₂
- **Chemical Name:** Manganese Dioxide (MnO₂) based filter media
- **Synonyms:** Manganese Sand, MnO₂ Filter Media

1.2 Relevant Identified Uses

- **Identified Uses:** Potable water treatment, groundwater purification, iron and manganese removal.

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:** +86 18273793022
- **Website:** manganesesupply.com

1.4 Emergency Telephone Number

- **Emergency Contact:** +86 18273793022 (24/7 Support)
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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

- **GHS Classification:**
 - Acute toxicity, Oral (Category 4)
 - Acute toxicity, Inhalation (Category 4)
 - Specific target organ toxicity - repeated exposure (Category 2)

2.2 GHS Label Elements

- **Signal Word:** Warning
 - **Hazard Statements:**
 - H302: Harmful if swallowed.
 - H332: Harmful if inhaled.
 - H373: May cause damage to organs (Brain/Nervous System) through prolonged or repeated exposure.
 - **Precautionary Statements:**
 - P260: Do not breathe dust.
 - P264: Wash hands thoroughly after handling.
 - P270: Do not eat, drink or smoke when using this product.
 - P271: Use only outdoors or in a well-ventilated area.
 - P301+P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 - P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	EC No.	Concentration (w/w)
Manganese Dioxide (MnO ₂)	1313-13-9	215-202-6	35% ± 2%
Silicon Dioxide (SiO ₂)	7631-86-9	231-545-4	50% - 60%
Iron Oxides (Fe ₂ O ₃)	1309-37-1	215-168-2	< 5%
Other Inert Minerals	N/A	N/A	Balance

SECTION 4: FIRST AID MEASURES

- **Inhalation:** Remove victim to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical attention.
 - **Skin Contact:** Wash with soap and water. Seek medical attention if irritation persists.
 - **Eye Contact:** Flush eyes with plenty of water for at least 15 minutes. Seek medical attention.
 - **Ingestion:** Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.
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SECTION 5: FIREFIGHTING MEASURES

- **Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
 - **Special Hazards:** Manganese dioxide is a strong oxidizer and may increase the intensity of fire.
 - **Protective Equipment:** Wear self-contained breathing apparatus (SCBA) for firefighting if necessary.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas.
 - **Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
 - **Methods for 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

- **Handling:** Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin and eyes.
 - **Storage:** Store in a cool, dry, well-ventilated place. Keep container tightly closed. Store away from reducing agents and strong acids.
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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

- **Manganese Dioxide (as Mn):** TWA 0.2 mg/m³ (ACGIH).

8.2 Exposure Controls

- **Eye Protection:** Safety glasses with side-shields.
 - **Skin Protection:** Handle with gloves. Use appropriate clothing to prevent skin exposure.
 - **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

Property	Value
Physical State	Solid Granules
Color	Dark Brown to Black
Odor	Odorless
pH Value	6.5 - 8.5 (Slurry)
Melting Point	535 °C (MnO ₂ decomposes)
Bulk Density	1.5 - 1.8 g/cm ³
Solubility in Water	Insoluble
Flammability	Non-combustible

SECTION 10: STABILITY AND REACTIVITY

- **Reactivity:** Stable under recommended storage conditions.
 - **Chemical Stability:** Stable under normal conditions.
 - **Possibility of Hazardous Reactions:** Strong oxidizing agent.
 - **Conditions to Avoid:** Avoid moisture and extreme heat.
 - **Incompatible Materials:** Strong acids, reducing agents, combustible materials.
 - **Hazardous Decomposition Products:** Manganese oxides.
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SECTION 11: TOXICOLOGICAL INFORMATION

- **Acute Toxicity:** LD50 Oral - Rat - > 3,478 mg/kg (MnO₂).
- **Skin Corrosion/Irritation:** No data available.
- **Serious Eye Damage/Irritation:** May cause eye irritation.
- **Respiratory or Skin Sensitization:** 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.
 - **Reproductive Toxicity:** No data available.
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SECTION 12: ECOLOGICAL INFORMATION

- **Toxicity:** No data available.
 - **Persistence and Degradability:** The methods for determining the biological degradability are not applicable to inorganic substances.
 - **Bioaccumulative Potential:** No data available.
 - **Mobility in Soil:** Insoluble in water.
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SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Treatment Methods:** 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

- **DOT (US):** Not dangerous goods.
 - **IMDG:** Not dangerous goods.
 - **IATA:** Not dangerous goods.
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SECTION 15: REGULATORY INFORMATION

- **TSCA:** All components are listed on the TSCA inventory.

- **SARA 313 Components:** Manganese Dioxide (CAS 1313-13-9) is subject to reporting requirements.
 - **GHS:** Compliant with GHS Rev. 8.
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SECTION 16: OTHER INFORMATION

- **Disclaimer:** The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.