

Safety Data Sheet: Manganese Dioxide Drier

Section 1: Identification

Product Name: Manganese Dioxide Drier for Oil-Based Paints and Varnishes **Other Means of Identification:** Manganese Dioxide, MnO₂ **Recommended Use:** Catalytic drier for oil-based paints and varnishes. **Restrictions on Use:** Not specified.

Manufacturer/Supplier Details: **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

Emergency Phone Number: +8618273793022 (General)

Section 2: Hazard(s) Identification

GHS Classification:

- Acute toxicity (Oral), Category 4
- Acute toxicity (Inhalation), Category 4

Signal Word: Warning

Hazard Statements:

- H302 + H332: Harmful if swallowed or if inhaled.

Precautionary Statements: Prevention:

- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264: Wash face, hands and any exposed skin thoroughly after handling.

- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.

Response:

- P301 + P312 + P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
- P304 + P340 + P312: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

Disposal:

- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition/Information on Ingredients

Substance/Mixture: Substance

Chemical Name	CAS No.	Concentration (Typical)
Manganese Dioxide	1313-13-9	85-92%

Section 4: First-Aid Measures

Description of First-Aid Measures:

- **General Advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.
- **If Inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **In Case of Skin Contact:** Wash off with soap and plenty of water. Consult a physician.
- **In Case of Eye Contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

- **If Swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most Important Symptoms and Effects, Both Acute and Delayed: The most important known symptoms and effects are described in the labelling (Section 2) and/or in Section 11.

Indication of Any Immediate Medical Attention and Special Treatment Needed: No data available.

Section 5: Fire-Fighting Measures

Extinguishing Media:

- **Suitable Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- **Unsuitable Extinguishing Media:** No data available.

Specific Hazards Arising from the Chemical: Manganese oxides. Nonflammable, noncombustible solid. Strong oxidizer, fire hazard when in contact with combustible materials. When heated to decomposition, may emit toxic fumes.

Special Protective Equipment and Precautions for Firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions: Do not let product enter drains.

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.

Section 7: Handling and Storage

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. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Conditions for Safe Storage, Including Any Incompatibilities: Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Keep away from strong acids, strong reducing agents, and combustible materials. Store in sealed containers in a dry, ventilated environment. Avoid excessive humidity and contamination to maintain catalytic activity during storage.

Section 8: Exposure Controls/Personal Protection

Control Parameters:

Component	CAS No.	Value	Control Parameters	Basis
Manganese Dioxide	1313-13-9	TWA	0.02 mg/m ³ (respirable fraction)	ACGIH TLV
		TWA	0.1 mg/m ³ (inhalable fraction)	ACGIH TLV
		PEL	5 mg/m ³ (ceiling)	OSHA PEL

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 (PPE):**
 - **Eye/Face Protection:** Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
 - **Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory

practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

- **Body Protection:** Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- **Respiratory Protection:** For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties:

- **Appearance:** Black powder
- **Odor:** Odorless
- **Odor Threshold:** No data available
- **pH:** No data available
- **Melting Point/Freezing Point:** No data available
- **Initial Boiling Point and Boiling Range:** No data available
- **Flash Point:** Not applicable
- **Evaporation Rate:** No data available
- **Flammability (solid, gas):** No data available
- **Upper/Lower Flammability or Explosive Limits:** No data available
- **Vapor Pressure:** No data available
- **Vapor Density:** No data available
- **Relative Density:** 0.6–0.9 g/cm³ (Bulk Density)
- **Water Solubility:** Insoluble
- **Partition Coefficient (n-octanol/water):** No data available
- **Auto-Ignition Temperature:** No data available

- **Decomposition Temperature:** No data available
- **Viscosity:** Not applicable (solid)
- **Particle Size (D50):** 3–10 µm
- **Specific Surface Area:** 35–70 m²/g
- **Moisture Content:** ≤ 1.0%
- **Crystal Phase:** Predominantly γ-MnO₂

Section 10: Stability and Reactivity

Reactivity: Strong oxidizing agent. Reacts with reducing agents.

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: No data available.

Conditions to Avoid: Incompatible materials, dust formation.

Incompatible Materials: Strong reducing agents, strong acids, combustible materials.

Hazardous Decomposition Products: Other decomposition products - No data available. In the event of fire: see Section 5.

Section 11: Toxicological Information

Information on Toxicological Effects:

- **Acute Toxicity:**
 - **Oral LD50:** Rat > 3478 mg/kg (Manganese dioxide) [NIST SDS]
 - **Inhalation LC50:** No data available
 - **Dermal LD50:** No data available
- **Skin Corrosion/Irritation:** No data available
- **Serious Eye Damage/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:** High incidence of pneumonia has been found in workers exposed to the dust or fume of some manganese compounds.
- **Aspiration Hazard:** No data available

Section 12: Ecological Information

Toxicity: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

Section 13: Disposal Considerations

Waste Treatment Methods:

- **Product:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
- **Contaminated Packaging:** Dispose of as unused product.

Section 14: Transport Information

DOT (US): Not regulated. **IMDG:** Not regulated. **IATA:** Not regulated.

Section 15: Regulatory Information

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

- **OSHA Hazards:** Harmful by ingestion, Harmful by inhalation.
- **SARA 302 Components:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- **SARA 313 Components:** The following components are subject to reporting levels established by SARA Title III, Section 313:
 - Manganese Dioxide (CAS No. 1313-13-9)
- **SARA ³¹¹/₃₁₂ Hazards:** Acute Health Hazard.
- **Massachusetts Right To Know Components:** No components are subject to the Massachusetts Right to Know Act.
- **Pennsylvania Right To Know Components:** Manganese Dioxide (CAS No. 1313-13-9).
- **New Jersey Right To Know Components:** Manganese Dioxide (CAS No. 1313-13-9).
- **California Prop. 65 Components:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16: Other Information

Date of Preparation: March 12, 2026 **Revision:** 1.0

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