

# Safety Data Sheet (SDS / MSDS)

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## Manganese Oxide Powder for Ceramic Capacitor Production

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**Revision Date:** March 18, 2026 **Standard:** According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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### SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product Identifier

- **Product Name:** Manganese Oxide Powder for Ceramic Capacitor Production
- **Chemical Name:** Manganese(II) Oxide
- **CAS Number:** 1344-43-0
- **EC Number:** 215-695-8

#### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

- **Identified Uses:** Additive in dielectric ceramics, multilayer ceramic capacitors (MLCCs), and other electronic-grade ceramic applications.
- **Uses Advised Against:** No specific uses advised against.

#### 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
- **Phone/WhatsApp:** +86 18273793022
- **Email:** lixifirm@outlook.com

- **Website:** [manganesesupply.com](http://manganesesupply.com)

#### 1.4 Emergency Telephone Number

- **Emergency Phone:** +86 18273793022
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## 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 criteria.

### 2.2 GHS Label Elements

- **Pictogram:** None
- **Signal Word:** None
- **Hazard Statements:** None
- **Precautionary Statements:**
  - **P261:** Avoid breathing dust/fume/gas/mist/vapours/spray.
  - **P264:** Wash hands thoroughly after handling.
  - **P280:** Wear protective gloves/protective clothing/eye protection/face protection.
  - **P305+P351+P338:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 2.3 Other Hazards

- May cause mild mechanical irritation to eyes and respiratory tract if dust is generated.
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## SECTION 3: Composition/Information on Ingredients

### 3.1 Substances

Chemical Name	CAS No.	EC No.	Concentration (w/w)
Manganese(II) Oxide (MnO)	1344-43-0	215-695-8	≥ 99.0%

### 3.2 Trace Components

- **Iron (Fe):** ≤ 0.01%
  - **Lead (Pb):** ≤ 10 ppm
  - **Arsenic (As):** ≤ 5 ppm
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## SECTION 4: First Aid Measures

### 4.1 Description of First Aid Measures

- **Eye Contact:** Flush eyes with water as a precaution. Remove contact lenses if present.
- **Skin Contact:** Wash off with soap and plenty of water.
- **Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration.
- **Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water.

### 4.2 Most Important Symptoms and Effects, both Acute and Delayed

- No significant symptoms or effects are expected under normal conditions of use.

### 4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

- Treat symptomatically.
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## **SECTION 5: Firefighting Measures**

### **5.1 Extinguishing Media**

- **Suitable Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **5.2 Special Hazards Arising from the Substance or Mixture**

- 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**

- Avoid dust formation. Avoid breathing vapours, mist or gas. Use personal protective equipment.

### **6.2 Environmental Precautions**

- Do not let product enter drains.

### **6.3 Methods and Materials for Containment and Cleaning Up**

- 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**

- Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

## 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. Prevent moisture absorption.
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## SECTION 8: Exposure Controls/Personal Protection

### 8.1 Control Parameters

- **Occupational Exposure Limits:** TWA (Mn): 0.2 mg/m<sup>3</sup> (ACGIH).

### 8.2 Exposure Controls

- **Appropriate Engineering Controls:** General industrial hygiene practice.
  - **Eye Protection:** Safety glasses with side-shields.
  - **Skin Protection:** Handle with gloves. Gloves must be inspected prior to use.
  - **Body Protection:** Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace.
  - **Respiratory Protection:** Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.
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## SECTION 9: Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

- **Appearance:** Greenish-brown powder
- **Odor:** Odorless
- **pH:** Typically neutral in aqueous suspension
- **Melting Point:** 1,650 °C (3,000 °F)
- **Boiling Point:** No data available
- **Flash Point:** Not applicable
- **Density:** 5.37 g/cm<sup>3</sup>

- **Water Solubility:** Insoluble
  - **Bulk Density:** 1.2 – 1.6 g/cm<sup>3</sup>
  - **Particle Size (D50):** 1.0 – 5.0 µm
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## **SECTION 10: Stability and Reactivity**

### **10.1 Reactivity**

- Stable under normal conditions.

### **10.2 Chemical Stability**

- Stable under recommended storage conditions.

### **10.3 Possibility of Hazardous Reactions**

- No data available.

### **10.4 Conditions to Avoid**

- Moisture and humidity.

### **10.5 Incompatible Materials**

- Strong acids, Strong oxidizing agents.

### **10.6 Hazardous Decomposition Products**

- Manganese oxides.
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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:** 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.
  - **Specific Target Organ Toxicity - Single Exposure:** No data available.
  - **Specific Target Organ Toxicity - Repeated Exposure:** No data available.
  - **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 UN Number

- ADR/RID: - | IMDG: - | IATA: -

### 14.2 UN Proper Shipping Name

- Not dangerous goods.

### 14.3 Transport Hazard Class(es)

- ADR/RID: - | IMDG: - | IATA: -

### 14.4 Packaging Group

- ADR/RID: - | IMDG: - | IATA: -

### 14.5 Environmental Hazards

- ADR/RID: No | IMDG Marine pollutant: No | IATA: No
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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 Further Information**

- 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.