

Technical Datasheet: Manganese Dioxide 90% (Enamel & Frits Grade)

1. Company Information

Detail	Information
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

2. Product Description

Manganese Dioxide 90% for Enamel and Frits Industry is a high-performance, technical-grade MnO_2 powder specifically engineered for industrial applications. With a guaranteed assay of at least 90%, this product is optimized to provide consistent coloring and superior oxidation performance in both enamel and frit formulations. It is an essential component for achieving reliable pigment strength and stable firing behavior in ceramic and glass enamel systems.

3. Key Features

- **High Purity & Consistency:** Engineered with a 90–92% MnO₂ assay to ensure uniform results across production batches.
 - **Optimal Particle Size:** Fine particle distribution (D50 5–15 µm) allows for excellent dispersion in slurries and glazes.
 - **Low Impurity Profile:** Strictly controlled levels of Iron Oxide (Fe₂O₃) and Silica (SiO₂) minimize unwanted side reactions and color shifts.
 - **Superior Oxidation:** Acts as a powerful oxidizing agent, essential for the stability of frit and enamel coatings.
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4. Technical Specifications

Property	Specification / Typical Range
Assay (MnO ₂)	90% – 92%
Moisture (LOD)	≤ 2.0%
Iron Oxide (Fe ₂ O ₃)	≤ 0.15%
Silica (SiO ₂)	≤ 0.50%
CaO + MgO	≤ 0.30%
Bulk Density	0.60 – 0.90 g/cm ³
Particle Size (D50)	5 – 15 µm
pH (10% slurry)	6.5 – 8.0

5. Applications

- **Enamel Colorant:** Widely used as a pigment and oxidizing agent in both ceramic and metal enamels.

- **Frit Formulations:** Serves as a critical oxidizing component in the production of frits for glass and protective coatings.
 - **Glaze Manufacturing:** Ideal for producing high-quality glazes requiring precise manganese-based coloration and finishes.
 - **Industrial Ceramics:** Used to control the surface properties and color of various technical ceramic bodies.
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6. Packaging & Supply

The product is packaged in moisture-resistant kraft bags with secure inner liners to maintain purity and prevent contamination during transport.

- **Standard Bags:** 20 kg, 25 kg, and 50 kg.
 - **Bulk Options:** Jumbo bags available for high-volume industrial requirements.
 - **Logistics:** Suitable for international export with full documentation support.
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***Note:** This document is for informational purposes. For specific formulation advice or safety handling, please refer to the Material Safety Data Sheet (MSDS).*