

# Technical Datasheet: High-Purity Manganese Dioxide for Pharmaceutical Synthesis

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## 1. Product Description

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High-purity manganese dioxide ( $\text{MnO}_2$ )  $\geq 98\%$  is specifically engineered for pharmaceutical synthesis. It is an ideal choice for organic oxidation and dehydrogenation reactions, offering consistent reactivity and minimal impurities. This product is suitable for both research and industrial-scale chemical production, ensuring reliable and reproducible results.

## 2. Key Features

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- **Ultra-high purity  $\geq 98\%$ :** Guarantees precise chemical synthesis with reduced risk of side reactions.
- **Controlled particle size:** Ensures uniform reaction rates and optimal performance.
- **Low moisture and minimal heavy metal impurities:** Enhances product stability and purity, crucial for pharmaceutical applications.
- **Stable performance:** Maintains consistent reactivity under various industrial conditions.
- **Easy to handle and disperse:** Facilitates efficient integration into organic solvents and existing processes.

## 3. Technical Specifications

Property	Typical Range	Unit
MnO <sub>2</sub> content	98–99	%
Moisture	≤0.5	%
Particle size (D50)	5–20	µm
Loss on ignition	≤0.5	%
Bulk density	0.8–1.2	g/cm <sup>3</sup>
Impurities (Fe, Al, Pb, Cd)	≤0.01	%

## 4. Applications

- Pharmaceutical synthesis:** Primarily used for oxidation and dehydrogenation reactions in the production of active pharmaceutical ingredients (APIs).
- Organic chemical reactions:** Provides consistent and predictable reactivity for various organic transformations.
- Research laboratories:** Ensures reproducible experimental results due to its high purity and controlled properties.
- Fine chemicals production:** Its low impurity grade is critical in preventing unwanted side reactions, leading to higher yields and purer products.

## 5. Packaging & Supply

BTLnewmaterial offers high-purity manganese dioxide in various packaging options to meet diverse customer needs:

- Standard Packaging:** Available in 25 kg, 50 kg, and 500 kg bags.
- Export Readiness:** Suitable for international export with all necessary standard documentation.
- Customization:** Bulk and custom packaging solutions are available upon request to accommodate specific logistical or production requirements.

## 6. Customization & Technical Support

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BTLnewmaterial is committed to providing comprehensive support:

- **Product Customization:** Particle size and purity can be adjusted to meet specific application requirements.
- **Technical Support:** Full technical assistance is available for reaction optimization and scale-up processes, ensuring successful integration and performance of the product.