

Technical Data Sheet (TDS)

Bulk MnO₂ for Fertilizer Micro-Granule Production

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1. Product Description

Bulk MnO₂ for Fertilizer Micro-Granule Production is an industrial-grade manganese dioxide specifically formulated for use in micronutrient fertilizer applications. With a typical MnO₂ purity ranging from 90% to 95%, it serves as a stable and effective manganese source that can be seamlessly integrated into various compound fertilizer granulation processes. The product's controlled particle size (200–325 mesh) ensures uniform dispersion, which is critical for the consistent quality of micro-granule fertilizers, providing essential manganese for plant metabolic processes and enzyme activation.

2. Technical Specifications

The following table outlines the key technical parameters of Bulk MnO₂ for Fertilizer Micro-Granule Production:

Parameter	Typical Value
MnO ₂ Purity	90–95%
Particle Size	200–325 mesh
Surface Area	15–30 m ² /g
Moisture	≤1.5%
Bulk Density	0.8–1.1 g/cm ³
Crystal Phase	Pyrolusite dominant

3. Key Features

- **Stable Manganese Source:** Provides a reliable and consistent supply of manganese, essential for agricultural micronutrient formulations.
- **Consistent MnO₂ Purity:** Ensures predictable manganese content in fertilizer blends, leading to uniform nutrient delivery to crops.
- **Controlled Particle Size (200–325 mesh):** Facilitates uniform dispersion during granulation and blending processes, preventing segregation and ensuring even nutrient distribution.
- **High Surface Reactivity:** Improves interaction with soil moisture and plant root systems, enhancing manganese uptake efficiency.
- **Easy Integration:** Designed to integrate smoothly into existing NPK micro-granule manufacturing lines, optimizing production efficiency.
- **Free-Flowing Powder:** Supports efficient mixing, handling, and storage, reducing operational challenges and material waste.

4. Applications

Bulk MnO₂ for Fertilizer Micro-Granule Production is widely used in:

- **Micronutrient Fertilizer Granules:** Supplies manganese, a vital micronutrient essential for various plant metabolic processes and enzyme activation, promoting healthy growth.

- **NPK Fertilizer Micro-Granule Production:** The fine MnO_2 powder blends uniformly into compound fertilizer formulations, ensuring comprehensive nutrient profiles.
- **Soil Amendment Formulations:** Provides effective manganese supplementation in manganese-deficient soils, correcting nutritional imbalances and improving soil health.
- **Controlled-Release Fertilizer Additives:** Its stable oxide form offers gradual manganese availability in soil systems, supporting sustained plant nutrition over time.
- **Agricultural Nutrient Premixes:** Ensures consistent trace element distribution in micronutrient blends, critical for balanced crop nutrition programs.

5. Packaging & Supply

Standard packaging for Bulk MnO_2 for Fertilizer Micro-Granule Production includes **25 kg fiber drums or kraft bags with inner PE liners**. This packaging is specifically designed to prevent moisture absorption during storage and transport, thereby maintaining the product's quality and integrity. Export packaging options are available, tailored for long-distance sea transportation and palletized shipments, adhering to international logistics standards. Furthermore, **laboratory samples** are provided for comprehensive fertilizer formulation testing and granulation trials, enabling customers to thoroughly evaluate the product's suitability for their specific agricultural applications.