

Technical Datasheet (TDS)

Product Name: Granular Manganese Oxide (MnO) for Soil Nutrient Supplement
Manufacturer: BTLnewmaterial **Website:** manganesesupply.com **Email:** lixifirm@outlook.com **Phone:** +8618273793022

1. Product Description

Granular Manganese Oxide (MnO) is a high-quality manganese micronutrient source specifically developed for agricultural fertilizer formulations. It provides a stable and concentrated manganese supply, essential for correcting soil deficiencies and supporting critical plant metabolic functions such as photosynthesis and enzyme activation. The granular form is optimized for easy handling, reduced dust, and seamless integration into fertilizer blending systems.

2. Technical Specifications

Parameter	Typical Value
MnO Purity	$\geq 90-95\%$
Manganese (Mn) Content	$\geq 60\%$
Particle Size	1-3 mm granules
Moisture	$\leq 1.5\%$
Bulk Density	1.0-1.5 g/cm ³
Solubility in 2% Citric Acid	$\geq 85-90\%$
Arsenic (As)	≤ 5 ppm
Lead (Pb)	≤ 10 ppm
Cadmium (Cd)	≤ 5 ppm

3. Key Features

- **High Nutrient Concentration:** $\geq 60\%$ Manganese content ensures efficient soil fertility management.
- **Optimized Granule Size:** 1–3 mm diameter provides excellent compatibility with NPK fertilizer blending and prevents segregation.
- **Controlled Release:** Offers a more stable and sustained manganese supply compared to highly soluble alternatives.
- **Superior Handling:** Granular structure minimizes dust generation during manufacturing and field application.
- **Agricultural Safety:** Strictly controlled heavy metal levels (As, Pb, Cd) comply with international environmental and fertilizer safety standards.
- **High Bioavailability:** Excellent solubility in weak organic acids ($\geq 85\text{--}90\%$ in citric acid) enhances nutrient uptake by plant roots.

4. Applications

- **Compound Fertilizer Production:** Integrated into NPK blends to provide essential micronutrient fortification.
- **Soil Micronutrient Correction:** Applied directly to manganese-deficient soils to improve crop yields and health.
- **Multi-Element Blends:** Used in specialized fertilizers containing Zinc, Iron, and Boron.
- **Crop-Specific Nutrition:** Ideal for cereals, vegetables, fruit trees, and plantation crops requiring manganese for chlorophyll synthesis.
- **Agricultural Distribution:** Suitable for bulk blending and retail agricultural nutrient products.

5. Packaging & Supply

- **Standard Packaging:** 25 kg kraft paper bags with inner PE liner.
- **Export Packaging:** Palletized for secure international containerized shipments.

- **Supply Options:** Available in full container loads (FCL) and bulk supply for fertilizer plants.
- **Samples:** Evaluation samples are available for formulation testing and soil trials.
- **Storage:** Store in a dry, well-ventilated environment. Keep sealed to prevent moisture absorption and maintain granule integrity.
- **Shelf Life:** 24 months under recommended storage conditions.

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