

# Technical Datasheet (TDS)

**Product Name:** Water-Soluble Manganese Oxide Precursor for Liquid Fertilizers  
**Manufacturer:** BTLnewmaterial **Website:** [manganesesupply.com](http://manganesesupply.com) **Email:** lixifirm@outlook.com **Phone:** +8618273793022

## 1. Product Description

Water-Soluble Manganese Oxide Precursor is a specialized intermediate raw material engineered for the manufacturing of liquid micronutrient fertilizers. It serves as a highly reactive manganese source that can be efficiently converted into water-soluble manganese salts (such as manganese sulfate or nitrate) or chelated manganese solutions. This product is ideal for fertilizer producers focused on fertigation, foliar sprays, and high-concentration liquid nutrient blends.

## 2. Technical Specifications

Parameter	Typical Value
MnO Purity	≥ 90–95%
Manganese (Mn) Content	≥ 60%
Particle Size	80–200 mesh
Moisture	≤ 1.5%
Bulk Density	1.0–1.5 g/cm <sup>3</sup>
Acid Solubility	≥ 90% in mineral acid
Arsenic (As)	≤ 10 ppm
Lead (Pb)	≤ 20 ppm
Cadmium (Cd)	≤ 5 ppm

### 3. Key Features

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- **High Manganese Concentration:** Optimized for efficient fertilizer micronutrient manufacturing.
- **High Reactivity:** Specifically designed for rapid conversion into soluble manganese forms through acid dissolution.
- **Low Heavy Metals:** Strictly controlled levels of As, Pb, and Cd to comply with agricultural safety standards.
- **Controlled Particle Size:** 80–200 mesh distribution ensures uniform reaction and dissolution efficiency.
- **Formulation Stability:** Improves the accuracy and consistency of manganese levels in liquid fertilizer batches.

### 4. Applications

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- **Liquid Micronutrient Production:** Primary precursor for manufacturing manganese sulfate and manganese nitrate solutions.
- **Chelated Fertilizer Manufacturing:** Raw material for producing chelated manganese (e.g., EDTA-Mn) for advanced crop nutrition.
- **Foliar Fertilizer Blending:** Used to create soluble manganese sprays for rapid correction of crop deficiencies.
- **Fertigation Systems:** Essential component for irrigation-based fertilization programs requiring high-solubility inputs.
- **Compound Fertilizer Additives:** Provides necessary manganese for plant enzyme activation and chlorophyll synthesis.

### 5. Packaging & Supply

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- **Standard Packaging:** 25 kg kraft paper bags with inner PE liner.
- **Export Packaging:** Palletized for secure international container shipments (20 ft / 40 ft FCL).

- **Supply Reliability:** Bulk industrial production capacity ensures a steady supply for large-scale manufacturers.
  - **Samples:** Evaluation samples are available for formulation testing and process optimization.
  - **Storage:** Store in a dry, well-ventilated area away from moisture and strong acids to maintain chemical reactivity.
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