Technical Data Sheet (TDS)

Agriculture Grade Manganese Oxide for Fertilizer Micronutrients

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1. Product Description

Agriculture Grade Manganese Oxide is a specialized manganese micronutrient source designed for use in various fertilizer formulations. It provides a stable and readily available manganese content, crucial for correcting soil manganese deficiency and enhancing overall plant metabolic activity. This material is highly suitable for incorporation into micronutrient fertilizers, soil conditioners, and a wide range of agricultural nutrient blends, supporting healthy crop growth and improved yields.

2. Technical Specifications

The following table outlines the key technical parameters of Agriculture Grade Manganese Oxide for Fertilizer Micronutrients:

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^3
Solubility in 2% Citric Acid	≥ 80–90%
Arsenic (As)	≤ 10 ppm
Lead (Pb)	≤ 20 ppm
Cadmium (Cd)	≤ 10 ppm

3. Key Features

- **High Manganese Concentration:** Provides a potent source of manganese, making it highly suitable for efficient micronutrient fertilizer production and ensuring adequate supply to crops.
- **Stable Oxide Structure:** Guarantees a consistent and sustained release of manganese during soil application, optimizing nutrient uptake by plants.
- **Low Impurity Levels:** Minimizes contamination risks in agricultural fertilizers, ensuring the safety and quality of crops and the environment.
- **Controlled Particle Size:** Enhances blending performance in fertilizer premix systems, leading to uniform distribution of micronutrients in the final product.
- **Supports Balanced Trace Element Supplementation:** Crucial for maintaining optimal crop nutrition, promoting robust plant growth, and preventing manganese deficiency-related issues.

4. Applications

Agriculture Grade Manganese Oxide is widely applied in:

- **Micronutrient Fertilizer Manufacturing:** Serves as an essential trace element source for the production of various micronutrient fertilizers, vital for overall crop health.
- **Soil Micronutrient Correction:** Effectively used to address manganese-deficient soils, thereby improving plant growth performance and nutrient availability.
- **Compound Fertilizer Formulations (NPK blends):** Incorporated into granular NPK fertilizers to provide a balanced supply of trace manganese alongside primary nutrients.
- **Agricultural Nutrient Premixes:** A key component in trace element premix systems, facilitating the creation of multi-micronutrient fertilizer products.
- **Soil Conditioning Products:** Applied as an amendment to agricultural soils to enhance the availability of essential micronutrients, improving soil fertility.

Manganese is an indispensable micronutrient for plants, playing a critical role in metabolic functions such as enzyme activation, photosynthesis, and nitrogen assimilation. Its deficiency can lead to reduced plant growth and leaf chlorosis, underscoring the importance of manganese supplementation for balanced crop nutrition.

5. Packaging & Supply

The product is supplied in standard **25 kg kraft paper bags with a PE inner liner**, ensuring protection from moisture and maintaining product integrity. Palletized export packaging is available, suitable for container shipment to international destinations. Bulk supply options are also offered to cater to the needs of large fertilizer manufacturers and agricultural distributors. Product samples are readily available for comprehensive fertilizer formulation testing and compatibility assessments.