Technical Data Sheet (TDS)

Low Heavy Metal MnO for Poultry Feed Additives & Premix Production

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1. Product Description

Low Heavy Metal MnO is a specialized feed-grade manganese monoxide designed for use as a trace mineral supplement in poultry feed additives and mineral premixes. This product is characterized by its typically high manganese content (≥60%) and high MnO purity, ensuring a stable and effective manganese source for animal nutrition. Its formulation specifically supports critical biological functions in poultry, including bone development, enzyme activity, and overall metabolic functions, while adhering to strict heavy metal limits to ensure feed safety.

2. Technical Specifications

The following table outlines the key technical parameters of Low Heavy Metal MnO for Poultry Feed Additives & Premix Production:

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	≥ 85–90%
Arsenic (As)	≤ 5 ppm
Lead (Pb)	≤ 10 ppm
Cadmium (Cd)	≤ 5 ppm

3. Key Features

- **High Manganese Concentration:** Ensures efficient trace mineral supplementation, providing adequate manganese for animal diets with optimized inclusion rates.
- **Low Heavy Metal Content:** Produced under stringent impurity control, specifically designed to meet rigorous feed safety compliance requirements for poultry, minimizing the risk of toxic element accumulation.
- **High Bioavailability:** Features controlled MnO_2 content and an optimized particle structure, leading to enhanced manganese absorption efficiency in animals.
- **Stable Particle Size Distribution:** Supports uniform dispersion and homogeneous blending in mineral premixes, preventing segregation and ensuring consistent nutrient delivery.
- **High Solubility in Digestive Acids:** Facilitates effective manganese absorption in poultry, contributing to better nutritional outcomes.
- **Consistent Quality:** Manufactured to consistent quality standards, making it highly suitable for industrial feed formulation systems and large-scale

production.

4. Applications

Low Heavy Metal MnO is primarily applied in:

- **Poultry Feed Additives:** Provides essential manganese crucial for bone formation, improving eggshell quality, and supporting enzyme activity in poultry metabolism.
- **Mineral Premix Manufacturing:** Utilized as a stable and reliable manganese source for the formulation of trace mineral premixes, ensuring balanced nutrition.
- **Swine Feed Formulations:** Supports skeletal development and enhances reproductive performance in swine, contributing to healthy growth.
- **Cattle Nutrition:** Contributes to enzyme activation and overall metabolic health in ruminants, supporting their physiological functions.
- **Aquaculture Feed:** Helps maintain the critical trace mineral balance in the diets of fish and shrimp, promoting healthy growth and development.

5. Packaging & Supply

The product is supplied in standard **25 kg kraft paper bags with an inner PE liner**, designed to protect the product from moisture and maintain its quality during storage and transportation. For export, bags are palletized, ensuring suitability for container shipment. Bulk supply options are available to accommodate the needs of large feed mills and premix plants. Samples are also provided for feed formulation trials and nutritional testing to ensure compatibility and efficacy.