



## Technical Data Sheet

### 1. Product Identification

- Trade Name: EDTA Mn
- Manufacturer: SHANXI IHUMATE BIOTECH CO.,LTD
- Address: No. 64 Nan Gou, Chen Village, Bailong Town, Huozhou, Linfen City, Shanxi Province,China.
- Tel. No.: +86- 18874230390

### 2. Typical Composition & Specifications

#### Component

EDTA-Mn (total Mn) active content

Manganese form

pH (1% aqueous solution)

Water solubility

Particle size

Moisture content

Bulk density

#### Specification

12.7%

EDTA chelated Mn<sup>2+</sup> (100% water-soluble stable chelate)

6.57 (weak acid, crop & soil safe)

100% (25 °C), clear solution, no precipitation/insoluble residue

200 mesh (uniform crystal, fast dissolution)

≤3.0%

0.9–1.1 g/cm<sup>3</sup>

### 3. Physical & Chemical Properties

- Appearance: White free-flowing crystalline powder, no visible impurities, no agglomeration
- Odor: Slight characteristic chelated manganese odor, no pungent/irritating smell
- Hygroscopicity: Slightly hygroscopic (sealed storage without caking)
- Corrosiveness: Non-corrosive to agricultural sprayers, drip irrigation equipment, plastic/glass packaging and soil
- Thermal Stability: Stable at 5–40 °C, no decomposition or nutrient loss in normal storage
- Oxidation Resistance: Mn<sup>2+</sup> remains stable in chelated state, no oxidation to invalid Mn<sup>3+</sup> in neutral/weak acidic environment

### 4. Product Core Advantages

- High-purity chelated manganese: Standard active content (powder ≥13% / liquid ≥60g/L), 100% water-soluble, Mn<sup>2+</sup> can be directly absorbed by crop roots and leaves, utilization rate is 5–8 times that of ordinary inorganic manganese fertilizers (e.g., manganese sulfate)
- Stable efficacy in complex soil: EDTA chelation structure prevents manganese oxidation and soil fixation, quickly alleviates manganese deficiency symptoms (interveinal chlorosis, leaf brown spot, slow growth) in 3–5 days, long-lasting fertilizer effect
- Dual-form design for diverse needs: Powder type is suitable for large-area soil application and mechanical fertilization; liquid type is convenient for foliar spray and drip irrigation, meeting the fertilization needs of greenhouse, open field and hydroponic planting
- Crop-safe formula: Weak acid pH, no phytotoxicity to crop leaves, young buds, flowers and young fruits, even overdosage at recommended concentration will not cause leaf burn or root damage, applicable to all growth stages
- Synergistic growth promotion: Promotes chlorophyll synthesis and photosynthetic electron transport, enhances crop photosynthetic efficiency by 20%+; improves crop disease resistance (e.g., wheat scab, corn leaf spot) and cold tolerance, increases fruit setting rate and

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thousand-grain weight

- Easy to use and cost-effective: Can be mixed with most agricultural inputs, no separate application required, saving labor cost; low application dosage, high fertilizer utilization rate, suitable for large-scale agricultural planting

## 5. Application & Usage Methods

- **Key Applicable Growth Stages**
- Seedling stage, leaf expansion stage, tillering/branching stage, flower bud differentiation stage, initial flowering stage (best effect when applied at the early stage of manganese deficiency; regular application in manganese-deficient soil at seedling stage for prevention)

- **Dilution Ratio & Recommended Dosage**

| <u>Application Method</u>     | <u>Dilution Ratio / Application Mode</u> | <u>Recommended Dosage per Hectare</u> | <u>Application Frequency</u>            |
|-------------------------------|--|---------------------------------------|---|
| Foliar Spray                  | 1:1000–1:2000 dilution                   | 200–400 g                             | 2–3 times, interval 7–10 days           |
| Drip Irrigation / Fertigation | 1:800–1:1500 dilution                    | 500–800 g                             | 1–2 times per growth cycle              |
| Soil Application              | Mix with fine soil/organic fertilizer    | 1–2 kg                                | 1 time per growth cycle                 |
| Seed Soaking                  | 1:2000–1:3000 dilution                   | Soak 4–6 hours                        | 1 time (dry in the shade before sowing) |

## 6. Packaging, Storage & Shelf Life

- Packaging Specification: 1kg/5kg aluminum foil sealed bag (moisture-proof/anti-oxidation), 25kg woven bag with PE inner liner (double anti-leakage, anti-hygroscopic); customizable small packaging for retail market.
- Storage Requirements: Store in a cool, dry, well-ventilated warehouse; avoid direct sunlight, high temperature (>40°C) and moisture; seal the package immediately after use to prevent moisture absorption and caking; keep away from strong alkaline chemicals and food/seeds/feed.
- Shelf Life: 24 months under normal storage conditions (unopened); slight moisture absorption and caking can be kneaded and dissolved for use, no effect on fertilizer efficacy.

## 7. Safety & Handling

- The product is non-toxic, non-flammable, non-explosive and non-corrosive, safe for agricultural operators, crops, livestock and the ecological environment.
- Avoid inhalation of powder dust (powder type) during bulk handling; it is recommended to wear a dust mask and gloves; if dust enters the eyes or liquid splashes on the skin, rinse the affected area with plenty of clean water for 3–5 minutes immediately; no special medical treatment is needed for general contact.
- Keep out of the reach of children and pets; do not eat or drink the product or its diluted solution; no toxic side effects if accidentally ingested in a small amount (drink plenty of water for dilution).
- For agricultural use only, no industrial, domestic or other non-agricultural use; the unused diluted solution can be discharged into farmland without causing environmental pollution.
- Dispose of empty packaging properly: rinse the empty bag/bottle/drum with clean water (the washing water can be used for crop fertilization), then recycle or treat in accordance with local environmental protection regulations; do not discard empty packaging at will in farmland, water bodies or public areas.

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**SHANXI IHUMATE BIOTECH CO.,LTD**  
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## 8. Quality Control & Compliance

- Meet the national/industrial standards for agricultural chelated trace element fertilizers (GB/T 17420-2021) and manganese-specific water-soluble fertilizers.
- Heavy metal content complies with strict green food production standards:
- Powder type: Pb ≤50mg/kg, Cd ≤10mg/kg, As ≤20mg/kg, Hg ≤2mg/kg, Cr ≤100mg/kg;
- Liquid type: Pb ≤3mg/L, Cd ≤0.3mg/L, As ≤1mg/L, Hg ≤0.05mg/L, Cr ≤5mg/L.
- No added plant hormones, no chemical preservatives, no heavy metal impurities, no chlorine, no sulfur, no sodium; suitable for chlorine-sensitive crops (tobacco, grapes, potatoes, citrus).
- EDTA raw material is agricultural grade/food grade, manganese ions are high-purity Mn<sup>2+</sup>, chelation rate ≥98%; all raw materials meet agricultural production safety standards and have no solvent residue.
- Passed water solubility test, crop safety spray test, compatibility test and multi-crop field effect test; product quality is certified by national recognized agricultural product testing institutions, and test reports are available for customer inquiry and verification.
- EDTA-Mn content is tested by atomic absorption spectrometry, with accurate and reliable detection data, and product quality is traceable throughout the whole process.

## 9. Disclaimer

This TDS is for reference only. Actual effect depends on soil type, crop type, climate, and application method. Field testing is recommended before large-scale use.

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