



Technical Data Sheet

1. Product Identification

- Trade Name: EDTA-Mg
- 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-Mg (total Mg) active content

Magnesium form

pH (1% aqueous solution, 25°C)

Water solubility

Particle size

Moisture content

Bulk density

Specification

6.0%

EDTA chelated Mg²⁺ (100% water-soluble stable chelate)

6.67 (weak acid, crop & soil safe)

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

200 mesh (uniform crystal, fast dissolution)

≤3.0%

0.8–1.0 g/cm³

3. Physical & Chemical Properties

- Appearance: White free-flowing crystalline powder, no visible impurities, no agglomeration
- Odor: Slight characteristic chelated magnesium 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
- Chelation Stability: Mg²⁺ remains stable in chelated state, no dissociation in neutral/weak acidic aqueous environment

4. Product Core Advantages

- High-purity chelated magnesium: Standard active content (powder ≥9.5% / liquid ≥50g/L), 100% water-soluble, Mg²⁺ can be directly absorbed by crop roots and leaves, utilization rate is 4–7 times that of ordinary inorganic magnesium fertilizers (e.g., magnesium sulfate)
- Core for chlorophyll synthesis: Magnesium is the central atom of chlorophyll molecules, rapidly alleviates interveinal chlorosis (the typical magnesium deficiency symptom) in 3–5 days, restores normal photosynthesis of crops
- 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, perfect for soilless culture/hydroponic nutrient solution preparation
- Crop-safe & wide adaptability: Near neutral weak acid formula, no phytotoxicity to crop leaves, young buds, flowers and young fruits; applicable to all growth stages, especially the vigorous growth and fruiting stage with high magnesium demand
- Stable efficacy in complex soil: EDTA chelation structure prevents magnesium from being fixed by soil colloids (e.g., clay, carbonate), effective in sandy soil and potassium/magnesium imbalance soil where inorganic magnesium is easily lost

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- Cost-effective & easy to use: 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, vigorous growth stage, flower bud differentiation stage, fruit expansion stage (best effect when applied at the early stage of magnesium deficiency; regular application in sandy soil/fruited 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	1:800–1:1500 dilution	300–500 g	2–3 times, interval 7–10 days
Drip Irrigation / Fertigation	1:600–1:1000 dilution	800–1200 g	2–3 times per growth cycle
Soil Application	Mix with fine soil/organic fertilizer	1.5–3 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)
Hydroponic Nutrient Solution	Dilute to Mg concentration 50–80 mg/L	Adjust with nutrient solution change	Continuous addition

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, food, seeds and 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 (under recommended use).
- 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 (under recommended use).
- 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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8. Quality Control & Compliance

- Meet the national/industrial standards for agricultural chelated trace element fertilizers (GB/T 17420-2021) and magnesium-specific water-soluble fertilizers.
- Heavy metal content complies with strict green food and organic planting 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, magnesium ions are high-purity Mg²⁺ from food-grade magnesium salts, 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-Mg 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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