



## Technical Data Sheet

### 1. Product Identification

- Trade Name: EDTA-Cu
- 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

<u>Component</u>	<u>Specification</u>
EDTA-Cu (total Cu) active content	14.7%
Copper form	EDTA chelated Cu <sup>2+</sup> (100% water-soluble stable chelate)
pH (1% aqueous solution, 25°C)	6.54 (weak acid, crop & soil safe)
Water solubility	100% (25°C), clear blue solution, no precipitation/insoluble residue
Particle size	200 mesh (uniform crystal, fast dissolution)
Moisture content	≤3.0%
Bulk density	0.9–1.1 g/cm <sup>3</sup>

### 3. Physical & Chemical Properties

- Appearance: Bright blue free-flowing crystalline powder, no visible impurities, no agglomeration
- Odor: Slight characteristic chelated copper 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: Cu<sup>2+</sup> remains stable in chelated state, no invalid valence state conversion in neutral/weak acidic environment

### 4. Product Core Advantages

- High-purity chelated copper: Standard active content (powder ≥15% / liquid ≥70g/L), 100% water-soluble, Cu<sup>2+</sup> can be directly absorbed by crop roots and leaves, utilization rate is 6–10 times that of ordinary inorganic copper fertilizers (e.g., copper sulfate)
- Stable efficacy in complex soil: EDTA chelation structure prevents copper from being fixed by soil and oxidized, quickly alleviates copper deficiency symptoms (leaf tip blight, interveinal chlorosis, poor tillering) 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, hydroponic and orchard planting
- Crop-safe formula: Weak acid pH, low application dosage with no phytotoxicity to crop leaves, young buds, flowers and young fruits; no copper accumulation in soil under recommended use, suitable for long-term application
- Synergistic growth & disease resistance: Promotes crop enzyme synthesis and protein metabolism, enhances photosynthetic efficiency and nutrient translocation; improves crop resistance to fungal/bacterial diseases (e.g., wheat scab, fruit tree canker) and abiotic stress

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(cold, drought)

- Easy to use and cost-effective: Can be mixed with most agricultural inputs, no separate application required, saving labor cost; high fertilizer utilization rate with low dosage, 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 copper deficiency; regular application in copper-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	200–300 g	2–3 times, interval 7–10 days
Drip Irrigation / Fertigation	1:800–1:1500 dilution	400–600 g	1–2 times per growth cycle
Soil Application	Mix with fine soil/organic fertilizer	0.8–1.5 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, 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); seek medical attention if a large amount is ingested.
- 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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**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 copper-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, copper ions are high-purity Cu<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-Cu 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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