



Technical Data Sheet

1. Product Identification

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

Iron form

pH (undiluted)

Density (25°C)

Water dispersibility

Storage stability

Specification

13.3%

EDTA chelated Fe²⁺/Fe³⁺ (100% water-soluble)

4.93 (weak acid)

~1.10–1.25 g/cm³

100%, no stratification/precipitation

No delamination, no iron precipitation for 24 months under normal conditions

3. Physical & Chemical Properties

- Appearance: Brown free-flowing crystalline powder, no visible impurities, no agglomeration
- Odor: Slight characteristic chelated iron odor, no pungent/irritating smell
- Hygroscopicity: Slightly hygroscopic (sealed storage without caking)
- Corrosiveness: Non-corrosive to agricultural equipment, plastic/glass packaging and soil
- Thermal Stability: Stable at 5–40°C, no decomposition or nutrient loss

4. Product Core Advantages

- High-purity chelated iron: Standard active content (powder ≥13% / liquid ≥60g/L), 100% water-soluble, iron ions can be directly absorbed by crops, utilization rate is 5–8 times that of ordinary inorganic iron fertilizers (e.g., ferrous sulfate)
- Wide application adaptability: Dual-form design (powder/liquid) meets different fertilization needs (large-area mechanical application / small-area precise application); suitable for multiple application methods with simple operation
- Stable chelation structure: EDTA chelated iron is not easy to dissociate in neutral/weak acidic soil, no iron precipitation or oxidation, long-lasting fertilizer effect, one application can alleviate iron deficiency symptoms in 3–5 days
- Crop-safe formula: Weak acid pH, no phytotoxicity to crop leaves, young buds and roots, even overdosage at recommended concentration will not cause leaf burn or root damage
- Synergistic nutrient absorption: Promotes crop chlorophyll synthesis and photosynthesis, while improving root development and absorption capacity of N, P, K and other nutrients, achieving "iron supplementation + growth promotion" dual effect
- Cost-effective: High fertilizer utilization rate, low application dosage, reduces fertilization frequency and labor cost; suitable for large-scale agricultural planting

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5. Application & Usage Methods

- **Key Applicable Growth Stages**
- Seedling stage, young shoot stage, leaf expansion stage, flowering stage (best effect when applied at the early stage of iron deficiency chlorosis (leaf yellowing, white veins)); regular application in iron-deficient soil at seedling stage for prevention.

- **Dilution Ratio & Recommended Dosage**

<u>Application Method</u>	<u>Dilution Ratio</u>	<u>Recommended Dosage per Hectare</u>	<u>Application Frequency</u>
Foliar Spray	1:1000–1:2000	200–400 g	2–3 times, interval 7–10 days
Drip Irrigation / Fertigation	1:800–1:1500	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	Soak 4–6 hours	1 time (dry in the shade before sowing)

- **Critical Usage Notes**

- Powder dilution: Stir fully with clean water until completely dissolved, avoid incomplete dissolution causing nozzle blockage; liquid type: shake well before use (no need for pre-dissolution).
- Avoid spraying in high temperature ($\geq 35^{\circ}\text{C}$) and strong light at noon; choose morning/evening with calm wind; re-spray if it rains within 4 hours after spraying.
- Do not mix with strong alkaline pesticides/fertilizers (e.g., lime sulfur mixture, alkaline copper preparations) and high-concentration phosphate fertilizers to prevent iron precipitation and efficacy reduction.
- For soil application in slightly alkaline soil (pH 7.0–7.5), mix with organic fertilizer to reduce soil pH and improve iron utilization rate.
- Foliar spray focuses on spraying the back of leaves (more stomata) to improve absorption efficiency; for fruit trees, spray evenly on young shoots and leaves.

6. Packaging, Storage & Shelf Life

- Packaging: 1kg/5kg aluminum foil sealed bag (moisture-proof/anti-oxidation), 25kg woven bag with PE inner liner (double anti-leakage)
- Storage: Store in a cool, dry, well-ventilated warehouse; avoid direct sunlight, high temperature ($>40^{\circ}\text{C}$) and moisture; seal immediately after use
- Shelf Life: 24 months under normal conditions (unopened); slight moisture absorption and caking can be kneaded and dissolved for use (no effect on efficacy)
- Non-hazardous agricultural fertilizer, comply with national solid/liquid cargo transport regulations; avoid violent collision, rain and moisture during transport; no special temperature requirements for short-distance transport.

7. Safety & Handling

- The product is non-toxic, non-flammable, non-explosive and non-corrosive, safe for operators, crops and the ecological environment.
- Avoid inhalation of powder dust (powder type) during operation; wear a dust mask and gloves; if dust enters the eyes or liquid splashes on the skin, rinse with plenty of clean water for 3–5 minutes immediately.
- Keep out of the reach of children and pets; do not eat or drink the product; accidental small amount ingestion requires drinking plenty of water for dilution (no toxic side effects).
- For agricultural use only, no industrial/domestic use; unused diluted solution can be discharged into farmland (no environmental

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pollution).

- Dispose of empty packaging properly: rinse with clean water (washing water can be used for crop fertilization), then recycle or treat in accordance with local environmental regulations; do not discard at will.

8. Quality Control & Compliance

- Meet national/industrial standards for agricultural chelated trace element fertilizers (GB/T 17420-2021)
- Heavy metal content complies with strict green food production standards (Powder: Pb ≤50mg/kg, Cd ≤10mg/kg, As ≤20mg/kg, Hg ≤2mg/kg; Liquid: Pb ≤3mg/L, Cd ≤0.3mg/L, As ≤1mg/L, Hg ≤0.05mg/L)
- No added plant hormones, no chemical preservatives, no heavy metal impurities, no chlorine/sulfur/sodium (suitable for chlorine-sensitive crops such as tobacco and grapes)
- EDTA raw material is agricultural grade/food grade, iron ions are high-purity Fe²⁺/Fe³⁺, chelation rate ≥98%; product quality is certified by national recognized agricultural product testing institutions
- Passed water solubility test, crop safety spray test, compatibility test and multi-crop field effect test; test reports are available for customer inquiry and verification.

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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