Technical Data Sheet

1. Product Identification

- Trade Name: EDDHA Fe 6% (Ortho 4.8)
- Manufacturer: SHANXI IHUMATE BIOTECH CO,.LTD
- Address: No. 64 Nan Gou, Chen Village, Bailong Town, Huozhou, Linfen City, Shanxi Province,China.
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2. Typical Composition & Specifications

Component	***Specification***
EDDHA Ferrous (Fe) active content	6.12% min
Iron form	EDDHA chelated Fe^{2+} (stable chelation structure)
pH (1% aqueous suspension)	8.69
Water dispersibility	100%, no stratification/precipitation
Particle size	200 mesh (ultra-fine powder, easy to absorb)
Storage stability	No caking, no Fe ion invalidation for 24 months under normal conditions

3. Physical & Chemical Properties

- Appearance: Dark brown homogeneous fine powder, no visible impurities, free-flowing
- 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
- Environmental stability: Fe^{2+} remains chelated state in pH 4.0–9.5 soil, no oxidation/precipitation
- Compatibility: Good with most alkaline/neutral fertilizers (NPK, humic acid, seaweed extract); avoid mixing with strong acidic products and high-concentration phosphate fertilizers

4. Product Core Advantages

- High Purity EDDHA Chelated Iron
- 6.12% standard active EDDHA ferrous iron, chelation stability rank top in iron fertilizers, Fe^{2+} is not easy to be oxidized or fixed by soil, utilization rate is 10–20 times that of ordinary inorganic iron fertilizers (e.g., ferrous sulfate).
- Alkaline Soil Special Formula
- pH 8.69 adaptive to alkaline/calcareous soil environment, can quickly release available iron in high pH soil (pH 7.5–9.5), effectively correct iron deficiency chlorosis (leaf yellowing, white veins, slow growth) and recover crop growth in 3–7 days.
- Ultra-Fine Powder Easy Absorption
- 200 mesh ultra-fine powder, high water dispersibility, easy to be absorbed by crop roots and leaves, suitable for both soil application (root absorption) and foliar spray (foliar direct absorption), double-channel iron supplementation.
- Long-Lasting Fertilizer Effect

- Stable EDDHA chelation structure, slow release of available iron in soil, fertilizer effect lasts for 3–6 months, one application can meet the iron demand of crops in the whole growth stage, reduce fertilization frequency.
- Crop-Safe & Wide Application
- Non-toxic, no phytotoxicity, no damage to crop roots/leaves even at recommended high dosage, suitable for all iron-deficient crops (apple, pear, citrus, grape, tomato, cucumber, Chinese cabbage, etc.).
- No Secondary Pollution
- EDDHA is a biodegradable chelating agent, no residual harmful substances in soil, no damage to soil micro-ecology, in line with green food and organic planting production standards.

5. Application & Usage Methods

- **Key Applicable Growth Stages**
- Seedling stage, young shoot stage, flowering stage, fruit setting stage (apply at the early stage of iron deficiency chlorosis for best effect); regular application in alkaline soil at seedling stage to prevent iron deficiency in advance.
- **Dilution Ratio & Recommended Dosage**

Application Method	***Dilution Ratio / Application Mode***	***Recommended Dosage per Hectare***	***Application Frequency***
Foliar Spray	1:800–1:1500 dilution (stir evenly)	300–500 g	2–3 times, interval 7–10 days
Soil Application (alkaline soil)	Mix with fine soil/organic fertilizer and spread/hole apply	2–4 kg	1 time per growth cycle
Drip Irrigation / Fertigation	1:1000–1:2000 dilution (filter before use)	800–1200 g	1–2 times per growth cycle
Root Irrigation (seedling chlorosis)	1:1500–1:2000 dilution	200–300 g per 1000 seedlings	1 time (re-spray if necessary)

- **Critical Usage Notes**
- Foliar spray: Dilute with clean water and stir fully to form a uniform suspension; spray both front and back of leaves evenly (focus on chlorotic leaves); avoid spraying at noon with high temperature (≥35℃) and strong light, choose morning/evening with calm wind; re-spray if it rains within 4 hours after spraying.
- Soil application: Mix evenly with organic fertilizer/fine soil before application, and apply near the crop root zone (10–20 cm from the stem) to avoid direct contact with seeds/seedlings; irrigate immediately after application to promote iron dissolution and root absorption.
- Drip irrigation/fertigation: Dilute fully and filter with 80-mesh filter cloth before adding to the irrigation system to avoid powder blocking drip irrigation emitters; can be mixed with alkaline water-soluble NPK fertilizers for combined application.
- Compatibility: Do not mix with strong acidic pesticides/fertilizers and high-concentration phosphate fertilizers (easy to cause iron precipitation); conduct a small amount of compatibility test first when mixing with untested products.
- Dosage control: Do not overapply; excessive iron will not cause phytotoxicity, but will increase fertilization cost and cause slight soil color change (no effect on soil fertility).

6. Packaging, Storage & Shelf Life

- Packaging Specification: 1 kg / 5 kg aluminum foil sealed bag (moisture-proof, anti-oxidation), 25 kg 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℃), moisture and

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heavy pressure; keep away from strong acidic chemicals, food, seeds and feed; seal the package immediately after use to prevent iron oxidation and moisture absorption.

- Shelf Life: 24 months under the above storage conditions (unopened); slight moisture absorption and caking can be kneaded and diluted for use, no effect on fertilizer efficacy.
- Transport Requirements: Non-hazardous agricultural fertilizer, comply with national solid cargo transport regulations; avoid violent collision, rain and moisture during transport; no special temperature requirements for transport.

7. Safety & Handling

- The product is non-toxic, non-flammable, non-explosive, non-corrosive, safe for operators, crops, livestock and the ecological environment.
- Avoid inhalation of powder dust during bulk handling; it is recommended to wear a dust mask and gloves; if dust enters the eyes, rinse with plenty of clean water for 3–5 minutes immediately; if powder adheres to the skin, wash with water and soap.
- Keep out of the reach of children and pets; do not eat or drink the product; 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 suspension can be discharged into farmland without causing environmental pollution.
- Dispose of empty packaging properly: rinse the empty bag 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.

8. Quality Control & Compliance

Meet the national/industrial standards for agricultural chelated trace element fertilizers and iron-specific fertilizers.

Heavy metal content complies with strict green food and organic planting production standards (Pb ≤50 mg/kg, Cd ≤10 mg/kg, As ≤20 mg/kg, Hg ≤2 mg/kg, Cr ≤100 mg/kg).

EDDHA raw material is food-grade/agricultural grade, ferrous iron is high-purity Fe^{2+}, no heavy metal impurities, no chlorine, no sulfur, no sodium.

Passed high temperature/low temperature stability test, soil compatibility test, crop safety spray test and field effect test; product quality is certified by national recognized agricultural product testing institutions.

EDDHA ferrous content is tested by atomic absorption spectrometry, with accurate and reliable detection data, 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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