



Technical Data Sheet

1. Product Identification

- Trade Name: CALCIUM AMINO SUSP.
- 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>
Calcium Oxide (CaO, chelated)	>700 g/L
Free Amino Acids (total)	>20 g/L
pH (undiluted)	6.0–8.0 (neutral to weak alkaline, crop-safe)

3. Physical & Chemical Properties

- Appearance: Milk white homogeneous suspension liquid
- Odor: Slight characteristic amino acid odor, no pungent or irritating smell
- Density: $\sim 1.5\text{--}1.7\text{ g/cm}^3$ (25°C, undiluted)
- Viscosity: Moderate fluidity, easy to dilute, spray and irrigate without nozzle blockage
- Thermal Stability: Stable at 5–40°C; avoid freezing and prolonged high temperature (>45°C)
- Solubility Characteristic: 100% dispersible, forms uniform stable suspension after dilution with water

4. Product Core Advantages

- High calcium concentration: 700g/L high-content chelated CaO, quick-acting and long-acting, rapidly supplements calcium for crops, quickly corrects calcium deficiency symptoms (blossom-end rot, bitter pit, tip burn, cracking fruit)
- Amino acid chelation: Amino acids chelate calcium ions, prevent calcium fixation by soil anions (e.g. phosphate, carbonate), improve calcium absorption and utilization rate by crops, solve the problem of calcium immobility in plants
- Stable suspension system: No stratification, no caking, no precipitation during storage and use, suitable for large-scale mechanical spray, drip irrigation and fertigation, easy to operate
- Cell stability enhancement: Calcium combines with cell wall pectin to stabilize cell structure, enhance crop resistance to drought, low temperature and diseases, reduce fruit cracking and drop
- Synergistic nutrition: Amino acids supplement organic nutrition while supplementing calcium, promote root development and photosynthesis, improve fruit firmness, sugar content and storage resistance
- Crop-safe formula: Neutral to weak alkaline pH, no damage to crop leaves, young buds, flowers and young fruits, can be used in all growth stages of crops

5. Application & Usage Methods

Mobile :+86 188 7423 0390 Tel. : +86 731 8290 7537 Fax: +86 731 8290 7537

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山西艾优美生物科技有限公司 SHANXI IHUMATE BIOTECH CO.,LTD

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● Applicable Growth Stages

- Seedling stage, rosette stage, flowering stage, fruit setting stage, young fruit expansion stage and fruit ripening stage (apply at the early stage of calcium demand for best effect)

● 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	300–500 mL	2–3 times, interval 7–10 days
Drip Irrigation / Fertigation	1:2000–1:3000	600–1000 mL	1–2 times per growth cycle
Root Irrigation (seedling/transplanting stage)	1:3000–1:4000	200–300 mL per 1000 seedlings	1 time
Fruit Expansion Stage Foliar Spray	1:800–1:1500	400–600 mL	2 times, interval 10 days

● Key Usage Notes

- Shake the product thoroughly for 1–2 minutes before use to ensure uniform concentration of the suspension
- Adopt sequential dilution method: first add a small amount of clean water to the mixing tank, then add the product, stir evenly, and then add water to the required volume
- Avoid spraying in high temperature and strong light at noon ($\geq 35^{\circ}\text{C}$), choose morning or evening with calm wind for application; stop application if it rains within 4 hours after spraying
- Do not mix with strong acidic pesticides/fertilizers, high-concentration phosphate fertilizers and magnesium fertilizers to prevent precipitation and reduce efficacy
- For fruit trees and solanaceous vegetables, spray on both front and back of leaves and fruit surface (properly) to improve calcium absorption

6. Packaging, Storage & Shelf Life

- Packaging Specification: 1L / 5L food-grade plastic bottle (with anti-leak screw cap and tamper-evident seal), 25L / 200L special agricultural plastic drum (with inner anti-corrosion layer)
- Storage Requirements: Store in a cool, dry, well-ventilated warehouse; avoid direct sunlight, high temperature, freezing and heavy pressure; keep away from food, seeds, feed and strong acidic chemicals
- Shelf Life: 24 months under the above storage conditions (unopened)
- Transport Requirements: Non-hazardous agricultural fertilizer, comply with national liquid cargo transport regulations; avoid violent collision, overturning and extrusion during transport; protect from rain and sunlight during transportation

7. Safety & Handling

- The product is non-toxic, non-corrosive, non-flammable and has no harmful gas release, safe for agricultural production
- Avoid direct contact with eyes and skin; if accidental contact occurs, rinse the affected area with plenty of clean water for 5–10 minutes immediately; seek medical attention if discomfort persists
- Keep out of the reach of children and pets; do not drink or eat the product or its diluted solution
- For agricultural use only, no other industrial or domestic use
- Dispose of empty packaging properly: rinse the empty bottle/drum with clean water (the washing water can be used for crop application), then recycle or treat in accordance with local environmental protection regulations; do not discard empty packaging at will in farmland or water bodies

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8. Quality Control & Compliance

- Meet the national/industrial standards for agricultural trace element fertilizers and water-soluble foliar fertilizers
- Heavy metal content complies with strict agricultural fertilizer safety requirements (Pb \leq 5 mg/L, Cd \leq 0.5 mg/L, As \leq 2 mg/L, Hg \leq 0.1 mg/L, Cr \leq 10 mg/L)
- No added plant hormones, no harmful additives, no residual solvents, environmentally friendly and safe for crop growth and agricultural product quality
- All raw materials comply with food-grade or agricultural grade standards, ensuring the safety of the final agricultural products

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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