



Qingdao Bright Honor Biotechnology Co., Ltd

Address: Huangdao District, Qingdao City, Shandong Province, China (formerly Unit 2, Building1, No. 3, Yinshatan Road, Development Zone, Room 1303)

Email: hanyu@organic-green.cn Tel: +86-15610512127

Technical Data Sheet (TDS)

1. Product Overview

Product Name: Calcium Liquid Fertilizer

Type / Model: Liquid Fertilizer

Usage: Provides essential calcium and nitrogen nutrients to plants for improved growth and yield.

Application Fields: Suitable for use in agriculture, horticulture, and greenhouse crops.

2. Physical Properties

Color	Colorless
Odor	Mild characteristic odor
Density	Approx. 1.3 - 1.4 g/cm ³
Melting Point	Not applicable (liquid product)
Boiling Point	Not applicable (aqueous solution)

3. Chemical Properties

The product contains the following key chemical components:

- Nitrogen (N): 9%, supplied as calcium nitrate
- Calcium Oxide (CaO): 15%, supplied as calcium nitrate
- Chloride (Cl): None detected
- Sodium (Na): None detected

Molecular Structure: Primarily calcium nitrate [Ca(NO₃)₂] in aqueous solution.

Molecular Weight: Calcium nitrate molecular weight approx. 164.1 g/mol.

Chemical Reactivity: Stable under normal conditions; reacts with strong acids and bases.

4. Performance Indicators

Nitrogen Content (N)	9% ± 0.2%
Calcium Oxide Content (CaO)	15% ± 0.5%
Chloride (Cl)	None detected
Sodium (Na)	None detected

5. Stability

- Product shelf life: 3 years when stored properly.
- Storage conditions: Store in a cool, dry, and well-ventilated place away from direct sunlight and freezing temperatures.
- Product stability is affected by prolonged exposure to high temperatures and light; keep tightly sealed when not in use.



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6. Solubility

Completely soluble in water, forming a clear solution without residues or precipitation.

7. pH Value

pH of 250 times diluted solution: 7.0 - 8.0 (neutral to slightly alkaline).

8. Viscosity

Low viscosity liquid, easy to handle and apply; flows freely at ambient temperature.

9. Safety Information

- Non-flammable and non-explosive.
- Low toxicity under normal use conditions.
- May cause mild skin or eye irritation upon direct contact; avoid prolonged exposure.
- Use appropriate personal protective equipment when handling.

10. Usage Instructions

- Recommended dilution ratio: 1:800 to 1:1000 with water before application.
- Apply via foliar spray or soil drench as per crop requirements.
- Shake well before use.
- Avoid mixing with incompatible chemicals without prior testing.
- Store diluted solutions in cool, shaded areas and use promptly.
- Wear protective gloves and eye protection during handling.



Handwritten signature or initials.



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Material Safety Data Sheet (MSDS)

1. Product and Company Identification

Product Name: Calcium Liquid Fertilizer

Batch Number: 20250701

Manufacture Date: July 1, 2025

Analysis Date: July 1, 2025

Expiry Date: July 1, 2030

Manufacturer: Qingdao Bright Honor Biotechnology Co., Ltd.

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Contact Person: Hanyu

Phone: +86 15610512127

2. Hazard Identification

- Classification: Not classified as hazardous under normal handling and use.
- Potential Health Effects:
 - **Eye Contact:** May cause mild irritation.
 - **Skin Contact:** May cause mild irritation upon prolonged exposure.
 - **Inhalation:** Unlikely to cause irritation under normal use.
 - **Ingestion:** May cause gastrointestinal discomfort if swallowed in large quantities.

3. Composition / Information on Ingredients

Chemical Name	CAS Number	Concentration	Function
Calcium Nitrate [Ca(NO ₃) ₂]	10124-37-5	Contains Calcium Oxide 15% and Nitrogen 9%	Calcium and Nitrogen nutrient source
Water	7732-18-5	Balance	Solvent

4. First Aid Measures

- **Eye Contact:** Rinse immediately with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.
- **Skin Contact:** Wash affected area thoroughly with soap and water. Remove contaminated clothing. Seek medical advice if irritation develops.
- **Inhalation:** Move to fresh air. Seek medical attention if breathing difficulties occur.



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- **Ingestion:** Rinse mouth with water. Do not induce vomiting. Seek medical attention if large quantities are ingested.

5. Fire-Fighting Measures

- **Extinguishing Media:** Use water spray, foam, dry chemical, or CO2 extinguishers.
- **Special Hazards:** May release nitrogen oxides and calcium oxides when heated to decomposition.
- **Protective Equipment:** Firefighters should wear self-contained breathing apparatus and protective clothing.

6. Accidental Release Measures

- Wear appropriate personal protective equipment.
- Contain spill and prevent from entering waterways.
- Absorb spill with inert material (e.g., sand, earth) and collect into suitable containers for disposal.
- Clean area thoroughly with water after material pickup.

7. Handling and Storage

- Handle in well-ventilated area.
- Avoid contact with skin, eyes, and clothing.
- Wash hands thoroughly after handling.
- Store in a cool, dry, well-ventilated place away from incompatible materials.
- Keep container tightly closed when not in use.

8. Exposure Controls / Personal Protection

- **Engineering Controls:** Use adequate ventilation to keep airborne concentrations low.
- **Personal Protective Equipment (PPE):**
 - Eye protection: Safety goggles or face shield.
 - Skin protection: Protective gloves and clothing.
 - Respiratory protection: Not normally required; use if aerosol or mist is generated.

9. Physical and Chemical Properties

Appearance	colorless liquid
Odor	Mild characteristic odor
pH (250x dilution)	7.0 - 8.0
Density	Approx. 1.3 - 1.4 g/cm ³
Solubility	Completely soluble in water



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Flash Point	Not flammable
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10. Stability and Reactivity

- Stable under recommended storage conditions.
- Avoid exposure to extreme heat and incompatible materials such as strong acids and bases.
- Decomposition may release nitrogen oxides and calcium oxides.

11. Toxicological Information

- Low toxicity under normal use conditions.
- May cause mild irritation to skin and eyes.
- No known chronic effects.

12. Ecological Information

- Biodegradable in the environment.
- Do not allow large quantities to enter waterways to avoid potential eutrophication.

13. Disposal Considerations

- Dispose of in accordance with local, regional, and national regulations.
- Do not dispose of into drains or waterways.

14. Transport Information

- Not classified as dangerous goods for transport.
- Transport in properly labeled and sealed containers.

15. Regulatory Information

- Complies with relevant agricultural chemical regulations.
- Not classified as hazardous under OSHA/GHS criteria.

16. Other Information

Prepared by: Qingdao Bright Honor Biotechnology Co., Ltd.

Contact: Hanyu, +86 15610512127

Batch Number: 20250701

Preparation Date: July 1, 2025

Expiry Date: July 1, 2030

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Note: The information contained herein is believed to be accurate at the time of preparation. Users should verify suitability for their specific applications and comply with all applicable laws and regulations.



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CERTIFICATE OF ANALYSIS

Product Information

Product Name:	Liquid Calcium Fertilizer
Appearance:	colorless liquid
Batch No.:	20250701
Manufacturing Date:	July 1, 2025
Analysis Date:	July 1, 2025
Expiry Date:	July 1, 2030

Manufacturer Information

Manufacturer:	Qingdao Bright Honor Biotechnology Co., Ltd.
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Specification

Parameter	Specification (w/v)	Result
Total Nitrogen (N)	9%	Conforms
Calcium Oxide (CaO)	15%	Conforms
Chloride (Cl)	None	Conforms
Sodium (Na)	None	Conforms
pH (250× dilution)	7-8	Conforms
Calcium Source	Calcium Nitrate	Conforms
Nitrogen Source	Calcium Nitrate	Conforms

Conclusion

The above product complies with the specified requirements.

Authorized by:

Qingdao Bright Honor Biotechnology Co., Ltd.



Date: July 1, 2025