

Technical Data Sheet (TDS)

1. Product Overview

Product Name: Ergocalciferol (Vitamin D2)**English Name:** Ergocalciferol**CAS Number:** 50-14-6**Formula:** C₂₈ H₄₄O**Molecular Weight:** 396.65 g/mol**Product Characteristics:** Natural fat-soluble vitamin, white to off-white odorless crystalline powder, insoluble in water, soluble in organic solvents and vegetable oils. It is a biologically active vitamin D, which promotes the absorption of calcium and phosphorus in the body, regulates calcium and phosphorus metabolism, and maintains the normal development of bones and teeth. Sensitive to light, heat and oxygen, easy to oxidize and decompose, stable under dark, low-temperature and anaerobic sealed conditions.

2. Technical Specifications

Appearance: White to off-white crystalline powder; Assay: ≥97.0%; Melting Point: 115~119°C; Loss on Drying: ≤0.5%; Residue on Ignition: ≤0.1%; Heavy Metals (Pb): ≤10 ppm; Heavy Metals (As): ≤2 ppm; Related Substances: ≤1.5%; Optical Rotation (25°C, C=1 in ethanol): +102° ~ +110°; Solubility: Insoluble in water, soluble in ethanol, chloroform, ether and vegetable oils.

3. Product Advantages

1. **High Bioactivity:** Natural active form, effectively regulates calcium and phosphorus metabolism, and is suitable for human and animal nutritional supplementation.
2. **Excellent Purity:** Assay up to 98.8%, low impurity and related substance content, meeting pharmaceutical, food and feed grade quality requirements.
3. **Good Compatibility:** Soluble in most organic solvents and vegetable oils, compatible with various fat-soluble raw material systems, easy to process and formulate.
4. **Stable Quality:** Strict production and storage control, low drying loss, stable efficacy under recommended conditions.
5. **Safe & Compliant:** Non-toxic at normal dosage, compliant with international and domestic safety standards for food and feed additives.

4. Application Fields

1. **Pharmaceutical Industry:** Raw material for vitamin D2 deficiency drugs, calcium supplement preparations, used for treating rickets, osteomalacia, hypocalcemia and other diseases.
2. **Food Industry:** Food fortifier, added to dairy products, baked foods, cereals, vegetable oils to supplement vitamin D2.
3. **Feed Industry:** Feed additive for livestock, poultry and aquatic products, promoting bone development, improving growth performance and reproductive capacity.
4. **Cosmetic Industry:** Added to skin care products, regulating skin calcium metabolism, enhancing skin barrier function and anti-aging.

5. Usage Methods

1. **Pharmaceutical Use:** Formulated into tablets, capsules, oral liquids and injections according to pharmaceutical preparation processes, dosage following national pharmacopoeia and drug quality standards.



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

2. **Food Fortification:** Dissolve in edible vegetable oil first, then add to the production process, addition amount 0.4~1.8 µg/100g (adjust according to national food fortification regulations).
3. **Feed Addition:** Dilute with vegetable oil or carrier (corn starch, bran) to make premix, addition amount 40~180 IU/kg of feed, mix uniformly with feed raw materials.
4. **Cosmetic Application:** Dissolve in the oil phase during preparation, add to cream, lotion, essence, addition amount 0.0008~0.008% (w/w), avoid high temperature processing (>80°C).

6. Packaging & Storage

1. **Packaging Specifications:** 100g brown glass bottle, 500g brown glass bottle, 1kg brown glass bottle, 5kg aluminum foil bag, 25kg sealed drum (custom packaging available upon request).
2. **Storage Conditions:** Store in a cool, dark, sealed anaerobic warehouse, temperature ≤20°C, relative humidity ≤55%. Avoid direct sunlight, high temperature (>50°C), oxygen and moisture. Keep away from oxidants, strong acids and strong bases.
3. **Shelf Life:** 24 months (unopened, under specified storage conditions); the product after opening should be used up within 2 weeks and filled with inert gas for sealing.
4. **Transportation:** Non-hazardous goods, transport with sealed light-shielding and moisture-proof packaging, avoid collision, sunlight exposure, high temperature and rain during transportation. Separate from strong oxidants and corrosive substances.

7. Safety & Protection

1. The product is non-toxic at normal dosage, avoid direct contact with eyes and respiratory tract in large quantities.
2. Wear nitrile rubber gloves, safety glasses, dust mask and protective clothing during large-scale handling, weighing and mixing operations.
3. In case of eye contact, rinse thoroughly with plenty of running water for 5~10 minutes; consult a doctor if redness, pain or blurred vision persists.
4. If accidentally swallowed in large amounts, rinse mouth with water and seek medical advice if abdominal distension or discomfort occurs.
5. Avoid dust flying during operation to prevent inhalation.

8. Quality Assurance

1. The product is manufactured in accordance with ISO 9001 and ISO 14001 quality and environmental management system standards, with complete quality control records.
2. Each batch of product is tested by an authoritative third-party laboratory and accompanied by a Certificate of Analysis (COA) to ensure all indicators meet industrial standards.
3. Provide professional technical support, including formula design, dosage adjustment, storage and application guidance for different application fields.