

## Technical Data Sheet (TDS)

**Issue Date:** 28 FEB 2026

**Product Name:** Calcium Saccharin (Feed Grade) **CAS Number:** 6485-34-3

### 1. Product Overview

- **English Name:** Calcium Saccharin Dihydrate (Feed Grade)
- **Synonyms:** Saccharin calcium salt dihydrate
- **Molecular Formula:** C<sub>14</sub>H<sub>8</sub> CaN<sub>2</sub>O<sub>6</sub> S<sub>2</sub>·2H<sub>2</sub>O
- **Molecular Weight:** 468.46 g/mol
- **CAS No.:** 6485-34-3
- **Formula Characteristic:** Non-nutritive sweetener, organic sulfimide calcium salt hydrate; high sweetness intensity, stable chemical properties under normal feed processing conditions.
- **Product Characteristics:** White to off-white crystalline powder, odorless, soluble in water; non-caloric sweetener with sweetness intensity ~300-500 times that of sucrose; stable to heat, acid and alkali in feed processing; effectively masks bitter taste of feed additives (e.g., vitamins, minerals, antibiotics); approved as a feed additive for all major animal species. Low dosage, high efficiency, no impact on animal metabolism or product quality.

### 2. Technical Specifications (Complies with Feed Industry Standards)

Item	Specification
Appearance	White to off-white crystalline powder
Assay (on dry basis)	≥ 98.0%
Loss on Drying	≤ 10.0%
pH Value (1% in H <sub>2</sub> O, 25°C)	5.0 - 7.5
Heavy Metals (Pb)	≤ 10 ppm
Heavy Metals (As)	≤ 2 ppm
Chloride (Cl <sup>-</sup> )	≤ 0.05%
Sulfate (SO <sub>4</sub> <sup>2-</sup> )	≤ 0.05%
Ammonium (NH <sub>4</sub> <sup>+</sup> )	≤ 0.02%
Benzoic Acid	≤ 0.02%
Phthalic Acid	≤ 0.02%
Water Solubility (25°C)	≥ 18 g/L
Bulk Density	0.7 - 0.9 g/cm <sup>3</sup>
Total Bacterial Count	≤ 10 <sup>4</sup> CFU/g
E. coli	Negative
Salmonella	Negative

### 3. Product Advantages

1. **High Sweetness Intensity:** 300-500 times sweeter than sucrose; small addition amount achieves obvious sweetening effect, reducing feed formulation cost.
2. **Heat Stability:** Resistant to high temperature of feed pelleting (≤ 120°C); no decomposition, no loss of sweetness, suitable for all feed processing technologies.
3. **Taste Masking:** Effectively masks the bitter, astringent taste of feed raw materials and additives; improves feed palatability, increases animal feed intake.
4. **Stable Chemical Properties:** Resistant to acid, alkali and oxidation in feed system; no reaction with other feed ingredients, stable storage and use.
5. **Safe for Animals:** No metabolism in animal body, no residue in meat, milk and egg products; complies with global feed safety MRL standards.
6. **Easy to Use:** Soluble in water, easy to mix evenly with feed raw materials and premixes; no caking under proper storage conditions.

### 4. Application Fields

- **Poultry Feed:** Broilers, layers, ducks, geese, quails; improves feed palatability, increases feed intake and daily gain; improves egg production rate of layers.



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- **Livestock Feed:** Pigs (nursery, grow-finish, sows), cattle, sheep; masks bitter taste of milk replacer and premixes; increases feed intake of weaned piglets and lactating sows.
- **Aquaculture Feed:** Fish (tilapia, carp, salmon), shrimp, crab; improves palatability of aquatic feed, increases feeding frequency and growth rate; suitable for both pellet and extruded feed.
- **Pet Feed:** Dogs, cats; sweetener and flavor enhancer for commercial pet food; improves taste acceptance of pet feed.
- **Feed Premixes:** Vitamin, mineral, amino acid and antibiotic premixes; masks unpleasant taste of functional additives, improves premix palatability.

## 5. Usage Methods

### 5.1 Recommended Dosage (Addition amount, adjust according to animal species and feed type)

- Poultry Feed: 50 - 200 g/ton of complete feed
- Livestock Feed: 80 - 300 g/ton of complete feed (weaned piglets: 200-300 g/ton; finishing pigs: 80-150 g/ton)
- Aquaculture Feed: 100 - 350 g/ton of complete feed
- Pet Feed: 100 - 250 g/ton of complete feed
- Feed Premixes: 0.5 - 2.0% of premix weight (according to final feed dilution ratio)

### 5.2 Addition Method

- Dry mixing: Mix the powder evenly with feed raw materials or premixes (recommend step-by-step dilution for uniform mixing); suitable for all dry feed processing.
- Wet mixing: Dissolve in water first (1:50 w/v ratio), then add to wet feed, mash or drinking water; stir evenly before use.
- Feed pelleting: Add during the feed mixing stage; compatible with normal pelleting ( $\leq 120^{\circ}\text{C}$ ) and extruding processing, no loss of efficacy.

### 5.3 Optimal Conditions

- Avoid mixing with strong acids ( $\text{pH} < 3$ ) or strong alkalis ( $\text{pH} > 10$ ) to prevent decomposition.
- The prepared feed should be stored in a dry environment; use within 14 days after preparation to avoid moisture caking.
- Do not exceed the recommended dosage; excessive addition will not improve sweetening effect and may cause waste.

## 6. Packaging & Storage

- 1 kg / 5 kg / 10 kg: Sealed aluminum foil bags (for small-batch use and trials, with moisture-proof liner)
- 25 kg: Multi-ply paper bags with inner polyethylene (PE) liner (standard industrial packaging, moisture-proof and dust-proof)
- 500 kg / 1000 kg: Bulk FIBC bags with PE liner (large-scale feed production use, with anti-leakage design)
- Custom packaging available upon request (moisture-proof packaging is mandatory).

## 7. Safety & Protection

- The product is harmful if swallowed and causes serious eye irritation; wear mandatory PPE (safety goggles, nitrile gloves, dust mask) during all handling operations.
- Avoid dust inhalation, eye and skin contact; do not eat, drink or smoke while handling.
- In case of eye contact: Rinse with plenty of water for 15-20 minutes and seek medical advice immediately if irritation persists.
- In case of ingestion: Do not induce vomiting, rinse mouth with water and call a poison center or doctor immediately.
- In case of skin contact: Rinse with plenty of running water for 10-15 minutes; remove contaminated clothing and wash before reuse.
- Keep the product out of reach of children and unauthorized personnel; post hazard warning signs at the workplace and storage area.