

Technical Data Sheet (TDS)

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1. Product Description

Riboflavin (Vitamin B2) is a water-soluble vitamin characterized by its intense yellow color. It is crucial for energy metabolism, cellular respiration, and maintaining healthy skin, eyes, and mucous membranes. Our USP/FCC grade Riboflavin is a fine yellow powder with high bioactivity, suitable for nutritional fortification and coloring applications.

2. Technical Specifications

Parameter	Standard (USP/FCC)
Assay (dried basis)	≥ 98.5%
Appearance	Yellow/orange crystalline powder
Loss on Drying	≤ 1.5%
Residue on Ignition	≤ 0.3%
Heavy Metals (Pb)	≤ 5 ppm
Arsenic	≤ 1 ppm
Specific Rotation	+120° to +130°
Fluorescence	Positive (UV light)

3. Key Benefits

- Dual Function:** Acts as both a nutrient and a natural yellow colorant.
- High Bioavailability:** Natural form ensures optimal absorption.
- Light Sensitivity:** Well-documented stability profile when properly protected.
- Regulatory Compliance:** Approved for use in food, pharmaceuticals, and feed worldwide.

4. Applications

Industry	Application	Typical Dosage
Food	Fortified flour, dairy products, beverages, baby food.	0.5-2 mg/100g
Pharmaceuticals	Multivitamin tablets, B-complex supplements.	5-10 mg/capsule
Feed	Premixes for livestock and aquaculture.	5-20 mg/kg feed
Cosmetics	Skin care products (anti-aging properties).	0.01-0.1% (w/w)

5. Handling & Formulation

- Solubility:** Sparingly soluble in water. For enhanced solubility, use Riboflavin-5'-Phosphate (coenzyme form) or add a solubilizer (e.g., urea).
- Light Sensitivity: Critical Precaution** – Degrades rapidly in light. All production and storage must be light-proof.
- Formulation Tip:** Disperse in warm water (40-50°C) before adding to the main batch. Avoid contact with reducing agents.

6. Packaging & Storage



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- **Packaging:**

- 1kg/aluminum foil bag (light-proof), 5kg/drum
- 25kg/fiber drum with **light-proof inner lining**

- **Storage:** Store in a cool, dry place ($\leq 25^{\circ}\text{C}$) in **complete darkness**.

- **Shelf Life:** 24 months unopened (if stored light-proof).

7. Quality Assurance

- Produced in compliance with ISO 22000 (Food Safety) and GMP.
- Each batch is tested for identity, purity, and fluorescence; COA provided.
- Complies with EU Novel Food Regulations and US FDA requirements.



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