Biotin 2%

D-biotin powder blend on a dextrin carrier

Document reference	Revision	Issue date
KA-TDS-BIOTIN-2	05	21 November 2026

1. Product overview

A white to off-white powder supplied as a dry blend of D-biotin and dextrin.

2. Product identity

Parameter	Details
Manufacturer	Redwood Biotech Co., Limited
Ingredient identity (COA)	Biotin and dextrin
CAS number (biotin)	58-85-5

3. Technical specifications

Property	Specification	Unit
Appearance	White or off-white powder	
Reference standard	USP/EP, as listed on the COA	
D-biotin (HPLC)	≥2	%
Carrier	Dextrin, dry blended	
Organic volatile impurities	Within maximum solvent residue limits	
Loss on drying	≤8.0	%
Bulk density	≈0.61	g/cm³
Heavy metals	Pb ≤5, As ≤1, Hg ≤0.1, Cd ≤1	ppm
Dioxins (WHO-PCDD/F-TEQ)	≤0.75	ng/kg
Particle size	90% through 80 mesh	

Applications and processing

Biotin 2% | Guidance for cosmetic manufacturers

4. Applications and use levels

Biotin is used as a hair- and skin-conditioning ingredient in cosmetics. Candidate applications include shampoos, rinse-off conditioners, hair masks, and skin-care creams and lotions. Confirm suitability of this dextrin blend for the intended format.

Use the nominal strength of 2% D-biotin for trial calculations. Divide the target active biotin percentage by 0.02 to obtain the percentage of this blend in the finished product. Use the actual lot assay when exact active content is required.

Target D-biotin in formula	Biotin 2% blend to weigh
0.005%	0.25% (250 g per 100 kg)
0.010%	0.50% (500 g per 100 kg)

These are calculation examples. Select the target level for the finished product and verify it in trials.

5. Formulation and compatibility

For water-based products, trial a small premix with part of the formula water. Add powder gradually under mixing, check for clumps or sediment, then incorporate the premix into the aqueous batch. Assess clarity in transparent products before scaling up.

Trial the premix at room temperature. Confirm water and oil solubility, as well as any hot-process or cool-down requirements, with Redwood for this grade.

Check appearance, sediment, pH and viscosity at initial testing and during stability studies. Verify preservation for aqueous products. Confirm the grade-specific use range, solubility, pH and temperature limits, and suitability for cosmetics with Redwood before production.

6. Storage, packaging and references

Store in a cool, dry and clean place. Supplier packaging is 25 kg per carton. Confirm grade-wide shelf life with Redwood and use the lot-specific expiry on the COA.

Specifications source: Redwood Biotech Biotin 2% COA, batch TS2-2602002.