

MATERIAL SAFETY DATA SHEET

1. Identification of Substance

Product details: Beta-Carotene Powder (Food, Water-Dispersible)
Product Name/Synonyms: Provitamin A Powder, β -Carotene Encapsulated Powder
Chemical Name: β , β -Carotene
CAS No.: 7235-40-7
EC No.: 230-636-6
Molecular Formula: $C_{40}H_{56}$
Supplier/Manufacturer Details: Xi'an Land Nutra Co., Ltd.
Address: 12th Floor, Vanke Huizhi Center, Yanta District, Xi'an City, Shaanxi, China
Email: sale01@landnutra.com

2. Hazards Identification

Classification (GHS): Not classified as hazardous.
Label Elements:
Signal Word: None required.
Hazard Statements: None.
Precautionary Statements: None based on classification.
Other Hazards:
Low dust explosion hazard under normal handling conditions.
Powder may cause mild mechanical irritation to eyes and respiratory tract.
Contains food-grade carriers; no significant chemical hazards identified.

3. Composition/Information On Ingredients

Mixture: Yes

Component	CAS No.	Concentration (w/w)	Remarks
Beta-Carotene (active)	7235-40-7	10% $\pm$ 1%	Encapsulated form
Carrier/Filler (e.g., Maltodextrin, Modified Starch)	Varies	~88–89%	Food-grade, water-soluble
Antioxidants (e.g., Ascorbyl Palmitate, Tocopherol)	Varies	0.5–1%	Stabilizers
Anti-caking Agent (e.g., Silicon Dioxide)	7631-86-9	<0.5%	Improves flow

Component	CAS No.	Concentration (w/w)	Remarks
Emulsifier (e.g., Lecithin)	8002-43-5	<0.5%	Optional

Exact percentages may vary slightly per batch; full formulation available upon request.

4. First Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, seek medical attention.

Skin Contact: Wash thoroughly with soap and water.

Eye Contact: Rinse immediately with plenty of water for at least 15 minutes. If irritation persists, consult a physician.

Ingestion: Rinse mouth. Drink water. Generally low toxicity, but large amounts may cause temporary skin yellowing (carotenemia) or gastrointestinal discomfort. Seek medical advice if symptoms occur.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Water spray, foam, CO₂, dry chemical.

Specific Hazards Arising From The Substance:

May decompose when heated, producing carbon monoxide, carbon dioxide, and other pyrolysis products.

Dust-air mixtures may be explosive in high concentrations with an ignition source.

Special Protective Equipment For Firefighters: Wear self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

Personal Precautions: Wear dust mask, safety glasses, and protective clothing.

Environmental Precautions: Prevent from entering drains or soil.

Methods for Cleanup:

Collect spilled material using a damp cloth or industrial vacuum cleaner (not necessarily explosion-proof).

Place in a closed container. Wash area with water.

7. Handling And Storage

Handling:

Avoid creating dust. Use in well-ventilated areas.

No special anti-static measures required under normal conditions.

Wash hands after handling.

Storage:

Store in a cool, dry, well-ventilated place, protected from light and moisture.

Keep container tightly closed.

Store away from strong oxidizing agents.

8. Exposure Controls/Personal Protection

Engineering Controls: General ventilation is usually sufficient. Local exhaust recommended if dust is generated in large amounts.

Individual Protection:

Respiratory: Dust mask (e.g., N95) if airborne dust is present.

Hands: Wear protective gloves (nitrile/latex).

Eyes: Safety glasses or face shield.

Skin/Body: Wear dust-proof overalls if handling large quantities.

9. Physical And Chemical Properties

Property	Specification
Appearance	Orange-red to reddish-brown free-flowing powder
Odor	Faint characteristic
pH (10% slurry)	~6.0–7.5 (neutral)
Melting Point	Decomposes before melting
Boiling Point	Not applicable
Flash Point	Not applicable (non-flammable solid)
Explosive Limits	Low dust explosion potential
Solubility	Dispersible in water (key difference from pure beta-carotene). Oil solubility depends on carrier.
Density	~0.5–0.7 g/cm ³ (bulk density)

10. Stability And Reactivity

Chemical Stability: Stable under recommended storage conditions. Sensitive to light, oxygen,

and heat.

Conditions To Avoid: Exposure to light, air, high temperatures, strong acids, strong oxidizers.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, hydrocarbons upon heating or combustion.

11. Toxicological Information

Acute Toxicity: Very low acute toxicity. LD₅₀ (oral, rat) > 5000 mg/kg.

Skin Irritation: Non-irritating.

Eye Irritation: May cause mild mechanical irritation as powder.

Respiratory Irritation: Dust may cause mild irritation of respiratory tract.

Sensitization: Not known to be a sensitizer.

Chronic Toxicity/Carcinogenicity: Not classified as carcinogenic. Recognized as safe in food and cosmetic use.

12. Ecological Information

Ecotoxicity: Low aquatic toxicity.

Persistence And Degradability: Readily biodegradable.

Bioaccumulation Potential: Low.

Mobility In Soil: Low mobility due to insolubility in water.

13. Disposal Considerations

Product/Contaminated Packaging: Dispose of according to local regulations. Incineration or landfill at licensed facilities. Do not discharge into waterways.

14. Transport Information

UN Number: Not regulated.

Proper Shipping Name: Not dangerous goods.

Transport Hazard Class(es): Not classified as dangerous for transport.

Packing Group: Not applicable.

Environmental Hazards: No special requirements.

Special Precautions For User: Keep container tightly closed and protected from light.

15. Regulatory Information

China: Approved as food additive (INS 160a) and cosmetic ingredient.

EU: Approved as food color (E 160a) and cosmetic ingredient. Not hazardous per CLP.



XI'AN LAND NUTRA CO.,LTD

Room 1202, Building 1, Vanke Huizhi Center, No. 56, Xifeng Road,
Yanta District, Xi'an City, Shaanxi Province, China

US: GRAS as food color and nutrient. Permitted in cosmetics.

GHS Labeling: No hazard label required.

16. Other Information

Disclaimer: The information provided in this Safety Data Sheet is based on current knowledge and is intended for safety guidance only. No warranty, express or implied, is made regarding merchantability or fitness for a particular purpose. It is the user's responsibility to ensure compliance with all applicable laws and regulations.

