

MATERIAL SAFETY DATA SHEET

1. Identification of Substance

Product Name: Inulin Powder

Synonyms: Chicory Root Fiber, Fructooligosaccharide (FOS) Polymer, Dahlia Extract

Chemical Name: Poly(1,2-β-D-fructofuranosyl) α-D-glucopyranoside

CAS No.: 9005-80-5

EC No.: 232-684-3

Molecular Formula: (C₆H₁₀O₅)_n (n≈2-60)

Molecular Weight: Variable (typically 1,500-10,000 Da)

Product Form: White to off-white fine powder

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

Recommended Use: Dietary fiber supplement, prebiotic, food additive (texture modifier, fat replacer), functional food ingredient, pharmaceutical excipient.

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:

May form combustible dust clouds during processing.

Powder may cause mild mechanical irritation to eyes and respiratory tract.

Excessive inhalation of fine particles may cause temporary respiratory discomfort.

3. Composition/Information On Ingredients

Substance/Mixture: Substance

Chemical Name: Inulin (polysaccharide)

Concentration: ≥ 90% (w/w) [typical food/pharma grade]

Other Constituents:

Moisture: ≤ 10%

Minor plant constituents (trace minerals, proteins) from natural extraction

No chemical additives in pure form

4. First Aid Measures

Inhalation: Move to fresh air. If coughing or breathing difficulty occurs, rest in a well-ventilated area. If symptoms persist, seek medical attention.

Skin Contact: Wash thoroughly with soap and water. No special treatment required.

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 recognized as safe (GRAS). Large quantities may cause gastrointestinal bloating or discomfort in sensitive individuals. If concerned, seek medical advice.

5. Fire-Fighting Measures

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

Specific Hazards:

Decomposes upon heating (>150°C), producing carbon monoxide, carbon dioxide, and organic fumes.

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

Special Protective Equipment: Wear self-contained breathing apparatus and full protective clothing in fire situations.

6. Accidental Release Measures

Personal Precautions: Wear dust mask, protective goggles, and anti-static clothing.

Environmental Precautions: Prevent material from entering drains or waterways. Low environmental hazard.

Methods for Cleanup:

Collect spilled material using a damp cloth or vacuum cleaner suitable for combustible dust.

Place in a closed container. Wash area with water. Avoid dry sweeping.

7. Handling And Storage

Handling:

Avoid generating dust. Use local exhaust ventilation in enclosed areas.

Ground equipment to minimize static charge.

Wash hands after handling.

Storage:

Store in a cool, dry, well-ventilated place.

Keep container tightly closed to protect from moisture absorption.

Store away from heat, ignition sources, and strong oxidizing agents.

8. Exposure Controls/Personal Protection

Engineering Controls: Use local exhaust ventilation where dust is generated.

Individual Protection:

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

Hand Protection: Protective gloves (nitrile/latex) recommended for prolonged handling.

Eye Protection: Safety glasses or face shield when handling powder.

Skin/Body Protection: Wear dust-proof overalls if significant dust generation is expected.

9. Physical And Chemical Properties

Property	Specification
Appearance	White to off-white fine powder
Odor	Odorless or faint characteristic sweet odor
Taste	Slightly sweet
pH (10% aqueous solution)	5.0–7.0 (neutral)
Melting Point	Decomposes on heating (no sharp melting point)
Boiling Point	Not applicable
Flash Point	Not applicable
Explosive Limits	Dust-air mixtures may be explosive under specific conditions
Solubility	Soluble in hot water, partially soluble in cold water; insoluble in organic solvents
Bulk Density	0.5–0.7 g/cm ³
Moisture Content	≤ 10%

10. Stability And Reactivity

Chemical Stability: Stable under normal conditions. Hygroscopic—absorbs moisture from air.

Conditions to Avoid: High temperatures, excessive humidity, strong oxidizing agents.

Incompatible Materials: Strong oxidizers, strong acids (may hydrolyze).

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, and various organic compounds upon heating or combustion.

11. Toxicological Information

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

Skin Irritation: Non-irritating.

Eye Irritation: Powder may cause mild mechanical irritation.

Respiratory Irritation: Inhalation of dust may cause temporary irritation.

Sensitization: Not known to be a sensitizer.

Chronic Toxicity/Carcinogenicity: Not classified as carcinogenic. Recognized as safe for human consumption (GRAS, EFSA, FDA).

Other Notes: Acts as a prebiotic—may cause mild gastrointestinal effects (gas, bloating) at high doses in sensitive individuals.

12. Ecological Information

Ecotoxicity: Low toxicity to aquatic organisms.

Persistence/Degradability: Readily biodegradable.

Bioaccumulation: Low potential due to high molecular weight and water solubility.

Mobility: High mobility in water due to solubility; low adsorption to soil.

13. Disposal Considerations

Product/Contaminated Packaging: Dispose of in accordance with local regulations. Suitable for incineration or landfill at licensed facilities. Do not flush into sewers or waterways.

14. Transport Information

UN Number: Not regulated.

Proper Shipping Name: Not dangerous goods.

Transport Hazard Class: Not classified.

Packing Group: Not applicable.

Environmental Hazards: No special requirements.

Special Precautions for User: Keep container dry and tightly sealed to prevent moisture absorption.

15. Regulatory Information

China: Approved as food ingredient and dietary fiber.

EU: Approved as food ingredient (E 1200) and novel food. Not classified as hazardous per CLP.

US: Generally Recognized As Safe (GRAS) as a dietary fiber and food ingredient.

GHS Labeling: No hazard label required.

16. Other Information

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

