

Material Safety Data Sheet (MSDS)

Product Name: Pea Protein Isolate 80%

MSDS Generate Date: 20-05-2017

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Supplier:

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1. Identification of the Substance/Preparation and Company

- **Product:** Pea Protein Isolate 80%
- **Use of substance:** Food ingredient, dietary supplement ingredient, bakery, beverage & nutritional formulations.
- **Manufacturer / Supplier contact:** see company details above.

2. Hazard(s) identification

- **GHS classification:** Not classified as hazardous under GHS for physical or health hazards.
- **Main hazards / overview:**
 - Not classified as acutely toxic.
 - May cause allergic reactions in persons sensitive to legumes (pea/legume allergy).
 - In powdered form, dust may present an explosion/combustion hazard under certain conditions (dust cloud + ignition source).

- May cause minor irritation to eyes, skin or respiratory tract on prolonged/repeated exposure to dust.
 - **Label elements:**
 - **Signal word:** None (not classified)
 - **Hazard statement(s):** H317 (only where specific allergen risk is determined) — “May cause an allergic reaction” (include where applicable).
 - **Precautionary statements:** Avoid creating dust. Use adequate ventilation. In case of inadequate ventilation wear appropriate respiratory protection. Avoid contact with eyes. Wash hands after handling.
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3. Composition / information on ingredients

(Non-table format)

- **Substance:** Pea (*Pisum sativum*) protein isolate
 - **Typical composition:** ~80% protein (nitrogen × 6.25), remainder: moisture, carbohydrates (including some fiber), ash (minerals), trace lipids.
 - **CAS / identifiers:** Food-grade pea protein (may not have a single CAS for the mixture). Product is a preparation from *Pisum sativum*.
 - **Impurities/additives:** May contain trace minerals or processing aids depending on batch. If fortified, refer to supplier specification.
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4. First-aid measures

- **Inhalation:** Remove person to fresh air. If breathing is difficult, administer oxygen and seek medical attention. If respiratory irritation persists, consult a physician.
- **Skin contact:** Generally non-irritant. Remove contaminated clothing and wash skin with soap and water. If irritation occurs, seek medical advice.
- **Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If irritation persists, seek medical attention.
- **Ingestion:** Generally of low toxicity. Rinse mouth with water. Do not induce vomiting unless directed by medical personnel. If large amounts ingested and symptoms occur, seek medical attention.
- **Notes to physician:** Treat symptomatically. Be aware of potential allergic hypersensitivity in susceptible individuals.

5. Fire-fighting measures

- **Suitable extinguishing media:** Water spray, foam, dry chemical, CO₂. For large fires use foam or water spray.
- **Unsuitable extinguishing media:** None specific — avoid high pressure that may disperse dust clouds.
- **Special hazards from the substance:** In powder form, product may form combustible dust clouds; dust may explode if dispersed in air and exposed to ignition. Burning may produce oxides of carbon, nitrogen and other decomposition products.
- **Special protective equipment for firefighters:** Use self-contained breathing apparatus and full protective clothing. Prevent dust generation; avoid inhalation of smoke.

6. Accidental release measures

- **Personal precautions:** Avoid breathing dust. Use appropriate PPE (respirator if dust is present, safety goggles, gloves). Eliminate all ignition sources.
- **Environmental precautions:** Prevent product entering drains, sewers or waterways.
- **Methods for containment and cleanup:** Carefully sweep or vacuum (use explosion-proof equipment) for recovery. Avoid dry sweeping that creates dust clouds. Transfer to suitable containers for disposal or recovery. Wash area with water after removal.

7. Handling and storage

- **Handling:** Avoid creating dust clouds. Use good housekeeping to avoid accumulations of dust. Use local exhaust ventilation where dust may form. Ground and bond containers and equipment to prevent static discharge. Avoid open flames and other ignition sources.
- **Storage:** Store in a cool, dry, well-ventilated area in tightly closed containers. Protect from moisture and strong oxidisers. Store away from heat and ignition sources.
- **Specific uses:** Food/ingredient manufacture — follow Good Manufacturing Practices (GMP) and local food safety regulations.

8. Exposure controls / personal protection

- **Occupational exposure limits:** No specific national OEL for pea protein is widely established; where dust exposure limits apply, follow local regulations (e.g., inhalable/respirable dust limits). Maintain airborne dust below applicable occupational exposure limits.

- **Engineering controls:** Use local exhaust ventilation and dust collection systems where necessary. Use explosion-proof equipment in dusty atmospheres.
 - **Personal protective equipment (PPE):**
 - **Eye protection:** Safety goggles if dust generation is likely.
 - **Skin protection:** Protective gloves if repeated/prolonged contact; normal hygiene practices.
 - **Respiratory protection:** Where dust levels exceed occupational limits use appropriate particulate respirator (e.g., P2/P3 or equivalent) or supplied-air equipment.
 - **Hygiene measures:** Do not eat or smoke during handling. Wash hands after handling.
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9. Physical and chemical properties

(Non-table descriptive format)

- **Appearance:** Fine to coarse powder, off-white to pale yellow.
 - **Odor:** Mild, characteristic bean/vegetal odor.
 - **pH:** Typically near neutral in aqueous solution (dependent on concentration).
 - **Melting / freezing point:** Not applicable (proteinaceous material).
 - **Boiling point / decomposition:** Not applicable; decomposes on heating.
 - **Flash point:** Not applicable for solids.
 - **Flammability:** Powder may be combustible; dust may form explosive mixtures in air.
 - **Solubility:** Dispersible in water with variable solubility depending on pH and processing; insoluble in common organic solvents.
 - **Relative density / bulk density:** Varies by grade and packing; see product specification.
 - **Other information:** Moisture typically low (specified per batch).
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10. Stability and reactivity

- **Reactivity:** No hazardous reactions under recommended storage and handling.
- **Chemical stability:** Stable under normal conditions of storage and use.

- **Possibility of hazardous reactions:** None under normal use. However dust can form explosive mixtures in air.
- **Conditions to avoid:** Heat and ignition sources, strong oxidisers, moisture (may cause caking). Excessive dust accumulation.
- **Incompatible materials:** Strong oxidising agents.
- **Hazardous decomposition products:** Thermal decomposition may produce oxides of carbon and nitrogen, and other fumes.

11. Toxicological information

- **Acute toxicity:** Expected to be low; product is a food ingredient.
- **Irritation / corrosion:** May cause mild mechanical irritation to eyes and respiratory tract if dust concentrations are high. Skin contact is not expected to be irritating for most individuals.
- **Sensitisation:** May cause allergic reactions in individuals sensitive to legumes (pea/legume hypersensitivity). Considered a potential food allergen for susceptible persons.
- **Chronic toxicity / repeated exposure:** No specific chronic toxic effects known when used as intended; follow standard occupational exposure precautions to avoid prolonged inhalation of dust.
- **Toxicokinetics / carcinogenicity / reproductive toxicity:** No data suggesting carcinogenic, mutagenic or reproductive effects for pea protein as a food ingredient. Refer to regulatory/authoritative sources for definitive classifications.

12. Ecological information

- **Ecotoxicity:** Expected to be of low toxicity to aquatic organisms in typical concentrations; organic nutrient material may contribute to biochemical oxygen demand (BOD) in waterways if large quantities are released.
- **Persistence and degradability:** Biodegradable (proteinaceous organic material).
- **Bioaccumulative potential:** Low potential for bioaccumulation.
- **Mobility in soil:** Likely to bind to soil organic matter; moderate mobility.
- **Other adverse effects:** Avoid large discharges to surface waters as they may deplete oxygen and harm aquatic life.

13. Disposal considerations

- **Disposal methods:** Dispose of in accordance with local, regional and national regulations. Product may be incinerated in approved facilities or disposed to landfill in accordance with local rules. Avoid release to drains/watercourses.
- **Contaminated packaging:** Empty containers may retain residues; handle in the same manner as the product. Recycle or dispose of in accordance with local regulations.

14. Transport information — (DETAILED)

Regulatory summary: Pea Protein Isolate 80% is **not classified as Dangerous Goods** under ADR (road), RID (rail), IMDG (sea) or IATA/ICAO (air) regulations in its typical packaged, non-hazardous form. It is a non-toxic, food-grade material. However, the following transport-related considerations and recommended precautions should be followed.

A. UN number / Proper shipping name / Class / Packing group

- **UN number:** Not applicable / Not regulated.
- **Proper Shipping Name:** Not regulated (Pea Protein Isolate).
- **Hazard Class:** Not applicable.
- **Packing Group:** Not applicable.

B. Applicability of Dangerous Goods regulations

- **ADR / RID (Road / Rail):** Not classified as dangerous for transport. No UN number required. However national/regional rules for powdered organic materials and combustible dusts may apply; consult local authorities.
- **IMDG (Sea):** Not regulated as hazardous material/IMDG. No marine pollutant designation. Standard safe stowage and handling practices apply.
- **IATA / ICAO (Air):** Not classified as dangerous goods for air transport. Airline-specific food/ingredient carriage rules may apply; contact carrier.
- **Special / Limited Quantity provisions:** Not applicable under dangerous goods provisions; follow carrier requirements for powder shipments.

C. Transport hazards and precautions

- **Dust explosion risk:** Although not classified as a DG, pea protein in powdered form may create combustible dust clouds. During transport, avoid conditions that would generate airborne dust (avoid rough handling that disperses dust). Ensure packaging is secure and sealed to prevent leakage. Use antistatic / grounded handling where risk of static ignition exists.

- **Packaging recommendations:** Use strong, sealed, moisture-resistant bags, sacks or bulk containers (FIBC) appropriate for food-grade powders. For FIBC/bulk containers ensure they are suitably designed for powdered foodstuffs and are labelled for content. If transporting by sea, ensure pallets/containers are protected from water ingress.
- **Labeling / documentation:** While no hazardous goods labels are required, clearly mark packages with product name, lot/batch, net weight and handling instructions (e.g., “Keep Dry”, “Avoid Dust Generation”, “Food Ingredient”). Include consignee, shipper and contact details. For export/import, include required commercial and food-safety documentation.
- **Segregation:** No special segregation required under dangerous goods rules. Segregate from incompatible materials (strong oxidisers) during transport.
- **Emergency response in transit:** In case of spillage during transport, avoid generating dust; sweep up/collect and secure material in suitable containers for return or disposal. Prevent entry to drains/soil/water. For significant incidents consult emergency services and the shipper’s emergency contact.
- **Transport temperature / environmental constraints:** Keep dry and protect from moisture and heat. Not temperature-sensitive in normal transport conditions but avoid exposure to damp conditions that may lead to caking or microbial growth.
- **Special transport notes for bulk shipments (road/rail/sea):** Ensure bulk containers are sealed and secured to prevent shifting and leakage. For road transport of large quantities check local rules regarding transport of combustible powders and follow any required transport risk assessments.

D. Recommended emergency EMS / spill codes: Not applicable (use general fire/air pollution response — treat as organic dust spill). Provide carrier with supplier emergency contact (+91 97272 88479).

E. Tunnel restriction code (ADR): Not restricted (no ADR classification), but follow local transport guidance regarding combustible powders.

Summary statement: No dangerous-goods classification applies under current transport regulations for the packaged product. Nevertheless, because powdered pea protein can form combustible dust clouds, minimize dust release, use sealed packaging, avoid ignition sources, and follow carrier-specific rules for powders. In doubt, treat as “Non-hazardous food powder — handle to prevent dust generation.”

15. Regulatory information

- **Food / ingredient status:** Product is intended as a food ingredient; compliance with local food safety and labeling regulations is the responsibility of the purchaser/processor.
- **Allergen declaration:** May contain pea (legume) proteins — must be declared on food labels where required by law. Check regional allergen labelling regulations.
- **Other regulations:** Follow applicable local, regional and national laws for foodstuffs, worker safety (e.g., dust exposure), transport and environmental release.

16. Other information

- **Disclaimer:** The information in this MSDS is believed to be correct as of the revision date given. It is provided in good faith but without warranty, expressed or implied. Users should verify data under their own conditions of use and ensure compliance with applicable laws and regulations.
- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer's provided information.