

Technical Data Sheet (TDS)

- Vital Wheat Gluten

Revision Date: 19 February 2026 **Product Number:** VWG-20260219 **CAS Number:** 8002-80-0 **EINECS Number:** 232-301-0 **Main Components:** Glutenin (~40%), Gliadin (~60%)

1. Product Overview

Vital Wheat Gluten (VWG) is a natural protein-rich powder obtained by washing the starch from wheat flour (*Triticum aestivum*). It is characterized by its high protein content, unique viscoelastic properties, and excellent water absorption capacity. When hydrated, it forms an elastic network that provides structure, chewiness, and volume to food products. This product is non-GMO, contains no artificial additives, and is a versatile ingredient widely used in the food industry for texturizing and in aquaculture as a high-quality protein source.

2. Technical Specifications

Item	Specification
Physical State	Free-flowing powder (25°C)
Color	Pale yellow to off-white
Protein (Dry Basis)	≥ 75.0%
Moisture	≤ 8.0%
Ash	≤ 2.0%
Particle Size	95% through 100 mesh (150 μm)
Water Absorption	≥ 150%
pH Value (10% Suspension)	6.0 - 7.5
Solubility	Insoluble in water (hydrates to form gel); soluble in dilute acids/bases
Viscosity	High (when hydrated)

3. Product Advantages

1. **High Protein Purity:** ≥75% protein on a dry basis, an excellent source of plant-based protein.
2. **Superior Viscoelasticity:** Imparts chewiness and structure to meat alternatives and bakery goods.
3. **Excellent Water Binding:** Reduces cooking loss and improves juiciness in processed foods.
4. **Thermosetting Properties:** Forms a firm, irreversible gel when heated, ideal for texturizing.
5. **Clean Label:** Natural origin, non-GMO, and free from artificial preservatives.

4. Application Fields

- **Bakery & Confectionery:** Bread, pizza crust, bagels (improves elasticity and volume); seitan production.
- **Meat Analogues:** Plant-based burgers, sausages, and nuggets (provides meat-like texture).
- **Aquafeed & Pet Food:** Binder and high-protein ingredient for fish pellets and dog food.
- **Noodles & Pasta:** Enhances texture, reduces cooking loss, and prevents sticking.
- **Industrial Applications:** Adhesives, biodegradable films, and coatings.

5. Usage Methods

5.1 Recommended Dosage (by weight)

- **Bakery:** 2% - 5% of flour weight (improves dough strength).
- **Seitan/Meat Analogs:** 100% (mixed with water and seasonings, then cooked).
- **Aquafeed:** 5% - 20% (acts as a binder and protein source).
- **Noodles:** 1% - 3% (improves texture and elasticity).

5.2 Processing Guidelines

1. **Hydration:** Mix Vital Wheat Gluten with water (1:1.5 to 1:2 ratio) and knead vigorously for 5-10 minutes to develop the gluten network.
2. **Heating:** For texturized products (seitan), steam, boil, or bake the hydrated gluten. Heating above 70°C will set the gel structure irreversibly.
3. **Mixing:** In dry blends, mix thoroughly with other dry ingredients before adding liquids to prevent clumping.

6. Packaging & Storage

- **Packaging:** 25kg multi-ply paper bags with PE inner liner; 1000kg bulk bags (FIBC) with moisture barrier.
- **Storage:** Store in a **cool, dry, well-ventilated warehouse** at 5-25°C. Protect from moisture and pests.
- **Shelf Life:** 12 months from the date of manufacture in unopened, properly stored packaging.
- **Transport:** Classified as **Non-Hazardous Goods**. Transport in covered vehicles to protect from rain and moisture.

7. Quality Assurance

- Manufactured in an ISO 22000 (Food Safety) and GMP certified facility.
- Complies with FCC, GB/T 10368, and EU Regulation 1831/2003.
- **Allergen Warning:** Contains wheat (gluten). Processed in a facility that also handles soy and sesame.