NEWAY SINOPHC TECH. LIMITED
ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com； Phone:+86-021-50350029 https://www.newayphc.com

Technical Data Sheet (TDS)

Issue Date: February 28, 2026**Product Name:** Chitosan (Feed Grade, Powder)**CAS Number:** 9012-76-4

1. Product Overview

- **English Name**: Chitosan (Feed Grade, Powder)
- **Synonyms**: Deacetylated chitin; Poly-D-glucosamine; Natural marine polysaccharide feed additive
- **CAS No.**: 9012-76-4
- **Source**: Extracted from natural crustacean shells (shrimp, crab) via demineralization, deproteinization and high-degree deacetylation; refined by ultra-fine grinding, no chemical residue.
- **Product Characteristics**: White to off-white free-flowing powder, odorless; a natural cationic linear polysaccharide with high deacetylation degree (≥90%). As a green functional feed additive, it can improve animal intestinal mucosal barrier function, enhance immune activity, bind mycotoxins in feed, improve feed utilization rate and reduce breeding waste discharge. It is non-toxic, biodegradable, derived from renewable marine resources, and compliant with global green feed additive standards.

2. Technical Specifications (Complies with Feed Industry Standards)

Item	Specification
Appearance	White to off-white free-flowing powder, no caking
Deacetylation Degree	≥ 90.0%
Viscosity (1% in 1% Acetic Acid, 25℃)	50-200 mPa·s
Loss on Drying	≤ 10.0%
Ash Content	≤ 1.0%
pH Value (1% water suspension, 25℃)	6.0-7.5
Heavy Metals (Pb)	≤ 5 ppm
Heavy Metals (As)	≤ 1 ppm
Cadmium (Cd)	≤ 0.5 ppm
Mercury (Hg)	≤ 0.1 ppm
Solubility	Soluble in dilute organic acids (acetic/citric acid); insoluble in water/alkali/ethanol
Bulk Density	0.4-0.7 g/cm³
Total Bacterial Count	≤ 10^3 CFU/g
Yeast & Mold	≤ 10^2 CFU/g
Pathogens (E. coli/Salmonella)	Negative
Storage Stability	Activity retention ≥ 95% (24 months, ≤25℃, dry)

3. Product Advantages

1. **Natural & Green**: Derived from renewable marine crustacean shells, no artificial synthesis, no drug residues, no resistance; meets the development trend of green animal husbandry and organic breeding.
2. **Multi-Functional Efficacy**: Integrates intestinal health protection, immunity enhancement, mycotoxin binding and feed utilization improvement; one additive replaces multiple functional feed additives, reducing formulation cost.
3. **High Biological Activity**: High deacetylation degree (≥90%) ensures strong cationic property and biological activity; good compatibility with animal intestinal microecology, no damage to beneficial bacteria.
4. **Mycotoxin Binding**: Selectively binds aflatoxin, ochratoxin and zearalenone in feed, reduces mycotoxin absorption by animals, and improves breeding safety.

5. **Environmental Friendly**: Fully biodegradable by microorganisms, no pollution to breeding environment and soil/water; reduces nitrogen and phosphorus discharge in animal manure, improves breeding environmental quality.
6. **Good Compatibility**: Compatible with most feed additives (vitamins, amino acids, trace minerals, probiotics); no adverse reactions, no nutrient loss; suitable for all feed processing technologies (pelleting, extruding).

4. Application Fields

Chitosan is a multi-functional natural polysaccharide feed additive, suitable for all livestock, poultry, aquaculture and ruminant feed, especially for animals under high-density breeding and mycotoxin pollution risks.

- **Poultry Feed**: Broilers, layers, ducks, geese, quails; improves intestinal development, enhances disease resistance, reduces mycotoxin damage, improves egg production rate and feed conversion rate.
- **Livestock Feed**: Pigs (weaned piglets, grow-finish pigs, sows), cattle, sheep; repairs intestinal mucosal damage caused by weaning stress, enhances immune function, binds feed mycotoxins, improves reproductive performance of breeding animals.
- **Aquaculture Feed**: Fish (tilapia, carp, salmon), shrimp, crab, shellfish; improves intestinal barrier function, enhances anti-stress and disease resistance, reduces water pollution caused by feed residue, improves survival rate.
- **Feed Premixes**: Mycotoxin binder, mineral and compound premixes; as a natural functional additive, replaces chemical mycotoxin binders to meet green feed formulation requirements.

5. Usage Methods

Animal Species	Growth Stage	Normal Breeding Dosage (g/ton)	High Mycotoxin Risk Dosage (g/ton)
Poultry	Broilers (0-42 days)	200-300	400-500
	Layers (Laying period)	150-250	300-400
Livestock	Weaned piglets (7-28 days)	300-400	500-600
	Grow-finish pigs	200-300	300-400
	Lactating sows	250-350	400-500
Aquaculture	Fish/Shrimp (All stages)	300-500	500-800
Feed Premixes	Mycotoxin binder premix	1.0%-2.0% (by weight)	2.0%-3.0% (by weight)

6. Packaging & Storage

- **Small Batch**: 1 kg / 5 kg / 10 kg: Sealed aluminum foil bags (moisture-proof) – for trials, small-scale breeding and premix production.
- **Standard Batch**: 25 kg: Multi-ply paper bags with inner polyethylene (PE) liner (moisture-proof, dust-proof) – standard industrial packaging for feed mills.
- **Bulk Batch**: 500 kg / 1000 kg: FIBC bulk bags with PE liner (moisture-proof valve) – for large-scale feed production and aquaculture use.
- **Custom Packaging**: Available upon customer request (all packaging is moisture-proof as standard).

7. Safety & Protection

- The product is non-toxic and non-hazardous; wear mandatory PPE (safety goggles, nitrile rubber gloves, FFP1 dust mask) during bulk handling and mixing to avoid fine powder inhalation and eye contact.
- Do not eat, drink or smoke while handling the product; wash hands and face thoroughly with soap and water after operation.
- In case of eye contact: Rinse with plenty of running water for 10-15 minutes; seek medical advice immediately if irritation persists for more than 24 hours.
- In case of skin contact: Rinse the affected area with water and soap; no special treatment required for normal contact.