

Technical Data Sheet (TDS)

- Feed Grade L-Methionine Issue Date: 28 FEB 2026 | Version: V1.0

1. Product Overview

- Name:** L-Methionine (Feed Grade)
- CAS:** 63-68-3 | **Formula:** C₅ H₁₁NO₂S | **MW:** 149.21 g/mol
- Definition:** The **natural L-isomer** of methionine, an **essential sulfur-containing amino acid** for all livestock and poultry. Cannot be synthesized by animals and must be supplemented in feed.
- Key Features:** High bioavailability (100% for L-isomer), low impurities, excellent stability, compliant with global feed safety standards.
- Application:** Core feed additive for broilers, layers, pigs, aquaculture (fish/shrimp), and ruminants.

2. Technical Specifications (Feed Grade)

Item	Standard Value	Test Method
Assay (L-Methionine)	≥99.0%	HPLC
Specific Rotation [α] _{D²⁵}	+21.0° ~ +25.0°	Polarimetry
Appearance	White crystalline powder	Visual
Melting Point	280-284°C (decomp)	Melting Point Meter
pH (1% Aqueous)	5.4-6.4	pH Meter
Loss on Drying	≤0.3%	105°C Constant Weight
Residue on Ignition	≤0.1%	600°C Ignition
Heavy Metals (Pb)	≤1 ppm	AAS
Arsenic (As)	≤0.5 ppm	AFS
Total Bacteria	≤10 CFU/g	Plate Count
E. coli / Salmonella	Negative	Microbiological Test
Particle Size (Typical)	80-120 mesh (customizable)	Sieve Analysis

3. Product Advantages (Feed Grade Focus)

- Superior Bioavailability:** L-isomer is directly absorbable by animals (100% utilization), compared to 50% for DL-Methionine. Reduces feed cost per unit of production.
- Essential Nutrient:** Critical for protein synthesis, growth, feathering (poultry), and milk production (dairy). Improves feed conversion ratio (FCR) and lean meat percentage.
- High Purity & Safety:** Meets strict feed hygiene standards with ultra-low heavy metals and zero pathogens (Salmonella/E. coli). Safe for long-term animal consumption.
- Stable Supply:** Industrial-scale production ensures consistent quality and bulk supply for feed mills.
- Regulatory Compliance:** Approved for use in major markets (China, EU, US, ASEAN) as a feed additive.

4. Application & Dosage Guide (Feed Formulation)

4.1 Target Species & Benefits

- Broilers/Poultry:** Improves growth rate, FCR, and feather quality. Reduces leg disorders.
- Pigs:** Enhances lean muscle growth, reproductive performance (sows), and immunity.
- Aquaculture (Fish/Shrimp):** Promotes growth, stress resistance, and survival rate.
- Ruminants:** Improves milk protein content and yield in dairy cows.

4.2 Recommended Inclusion Levels (w/w, based on total feed)

Species	Growth Stage	Dosage (L-Methionine)
Broilers	Starter/Grower/Finisher	0.05% - 0.20%
Layers	Peak Production	0.03% - 0.10%
Pigs	Weaner/Grower/Finisher	0.04% - 0.15%



NEWAY SINOPHC TECH. LIMITED

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Species	Growth Stage	Dosage (L-Methionine)
Aquaculture	Fish/Shrimp	0.10% - 0.30%
<i>Note: Adjust based on basal diet amino acid balance and animal performance.</i>		

5. Handling & Formulation Guidelines

- Mixing:** Premix with a carrier (e.g., corn starch) at 1:10 ratio before adding to the main feed batch for uniform distribution.
- Processing Stability:** Stable under typical pelleting temperatures (<85°C). Avoid contact with steam at >250°C.
- Compatibility:** Compatible with all common feed ingredients (soybean meal, corn, vitamins, minerals).
- Avoid:** Mixing with strong oxidizing agents in high-temperature environments.

6. Packaging, Storage & Shelf Life

- Packaging:**
 - 25kg Standard:** Moisture-proof paper drum with double PE inner liners (food-grade).
 - Bulk:** 500kg/1000kg jumbo bags (for large feed mills).
 - Samples:** 10g/50g HDPE bottles.
- Storage:**
 - Store in a cool, dry warehouse ($\leq 25^{\circ}\text{C}$, RH $\leq 60\%$).
 - Keep tightly sealed to prevent moisture absorption and caking.
 - Shelf Life: **36 months (unopened)**; 12 months after opening (if resealed).
- Transport:** Non-hazardous goods. Transport in covered, dry vehicles. Protect from rain and sunlight.

7. Quality Assurance

- Production:** Manufactured in GMP-compliant facilities with ISO 9001 and ISO 22000 (Food Safety) certifications.
- Testing:** Every batch is tested for assay, isomer purity, heavy metals, and microbiology before release. A COA is provided with each shipment.
- Third-Party:** Accepts testing by SGS, Intertek, or customer-designated labs to verify feed grade compliance.

8. Supplier Information

- Supplier:** NEWAY SINOPHC TECH. LIMITED
- Address:** RM. 204, BUILDING 3, NO. 188, AONA RD., SHANGHAI FTZ, CHINA
- Contact:** +86-021-50350029
- Services:** Bulk supply, technical support for feed formulation, custom packaging, and full export documentation (COA, MSDS, Feed Additive Certificate).