

Technical Data Sheet (TDS)

- Elasto Lysine 弹性赖氨酸

Revision Date: 28 FEB 2026

1. Product Overview

- **Product Name:** Elasto Lysine (弹性赖氨酸)
- **English Name:** L-Lysine Bioactive Complex; Elastic Lysine Amino Acid Blend
- **CAS Number:** 56-87-1 (main component L-Lysine)
- **Molecular Formula:** C₆ H₁₄N₂O₂ (L-Lysine)
- **Molecular Weight:** 146.19 g/mol (L-Lysine)
- **Form:** White free-flowing crystalline powder, odorless
- **Grade:** Cosmetic Grade / Food Grade / Health Care Grade

Elasto Lysine is a high-purity bioactive amino acid complex with **L-lysine** as the core, compounded with small molecular active peptides and essential amino acids (Pro, Gly, Hyp) that synergistically promote collagen synthesis. The product is prepared by enzymatic hydrolysis and purification, with high bioavailability, good water solubility and stable physical and chemical properties. It can effectively promote the synthesis of skin collagen and elastin, improve skin elasticity and reduce fine lines; as a nutritional supplement, it can supplement human essential amino acids, maintain bone and immune health. Complies with EU REACH, US FDA and Chinese national standards, non-toxic, non-irritating, and widely used in cosmetics, health care products, food and other fields.

2. Technical Specifications (Complies with Industrial/Food/Cosmetic Standard)

Item	Specification
Appearance	White crystalline powder, no caking, odorless
Assay (Total Elasto Lysine)	≥ 98.0%
L-Lysine Purity	≥ 95.0%
pH Value (5% aqueous solution, 25°C)	5.0 ~ 7.0
Specific Rotation [α] ₂₀ ^D	+20.0 ~ +22.0°
Loss on Drying (105°C, 2h)	≤ 0.5%
Residue on Ignition	≤ 0.1%
Heavy Metals (Pb)	≤ 5 ppm
Heavy Metals (As)	≤ 1 ppm
Total Bacterial Count	≤ 100 CFU/g
E. coli/Staphylococcus aureus	Negative
Water Solubility (25°C)	Fully soluble in water (≥50 g/100 mL)
Bulk Density (25°C)	0.6 ~ 0.8 g/cm ³
Storage Stability (25°C, 24 months)	No caking, assay change ≤ 0.5%
Temperature Stability	Stable at 0 ~ 40°C (activity retention ≥ 98%)

3. Product Advantages

1. **High Bioactivity & Purity:** L-lysine purity ≥95%, high bioavailability, can be quickly absorbed and utilized by human body and skin, no inert impurities.
2. **Synergistic Elasticity Enhancement:** Compounded with collagen synthesis-related amino acids (Pro, Gly, Hyp), synergistically promote the synthesis of skin collagen and elastin, better than single L-lysine.
3. **Multi-functional Efficacy:** Improves skin elasticity and reduces fine lines in cosmetics; supplements essential amino acids, enhances immunity and maintains bone health in health care products.
4. **Excellent Compatibility:** Good water solubility, miscible with most water-based raw materials (hyaluronic acid, plant extracts, vitamins), no adverse reactions, suitable for all water-based formulations.
5. **Natural & Safe:** Complies with food/cosmetic grade standards, low heavy metal content, no microbial contamination, non-toxic, non-irritating, no allergic risk for normal use.

6. **Stable Performance:** No caking under normal storage conditions, stable at room temperature, no easy degradation, long shelf life, easy to store and transport.

4. Application Fields

- **Cosmetic Industry:** Skin care products (serums, creams, facial masks, eye creams) - anti-aging, firming, moisturizing; hair care products (shampoos, conditioners) - repair hair scales, improve hair elasticity.
- **Health Care Products:** Oral amino acid supplements, collagen peptide tablets/powders, bone health products, immune-enhancing health care products.
- **Food Industry:** Nutritional fortifier for beverages, dairy products, baked goods, baby food (comply with food additive dosage standards).
- **Other Fields:** Pet food nutritional additive (improve pet skin and hair health); biological raw material for medical dressings (promote tissue repair).

5. Usage Methods

Recommended Dosage (Adjust according to grade and application scenario)

- **Cosmetic Industry:** 1.0 ~ 5.0% of total formulation (skin care serums/creams); 0.5 ~ 2.0% (facial masks/hair care products).
- **Health Care Products:** 2.0 ~ 10.0% of total formulation (oral powder/tablets); 5.0 ~ 15.0% (amino acid drinks).
- **Food Industry:** 0.5 ~ 3.0% of total formulation (beverages/dairy products); 0.2 ~ 1.0% (baked goods).
- **Pet Food:** 0.1 ~ 0.5% of total feed weight.

Key Application Tips

1. **Dissolution & Addition:** Dissolve the powder in deionized water (5% ~ 10% concentration) at room temperature, stir evenly until fully dissolved, then add to the formulation system; can also be added directly to low-viscosity water-based systems.
2. **Temperature Control:** Avoid heating above 60°C for a long time during formulation to prevent amino acid degradation and activity loss.
3. **pH Adaptation:** The product is stable in the pH range of 5.0 ~ 8.0; adjust the system pH before adding if necessary, avoid strong acid (pH <3) or strong base (pH >9) environments.
4. **Compatibility Note:** Good miscibility with hyaluronic acid, glycerol, vitamin C, plant extracts and other common raw materials; avoid mixing with strong oxidants.

6. Packaging & Storage

Packaging Specifications (Sealed Food/Cosmetic Grade Packaging)

- 1 kg/5 kg sealed HDPE plastic bag (inner) + carton (outer) (laboratory/R&D/small-batch use)
- 25 kg sealed food-grade PP woven bag (industrial/food/cosmetic bulk use)
- 50 kg sealed HDPE plastic drum (health care product large-scale use)
- Custom packaging available according to customer requirements.

Storage Conditions

1. Store in a **cool, dry, well-ventilated warehouse** at 5 ~ 25°C; avoid direct sunlight, high temperature (>30°C) and high humidity (RH >70%).
2. Keep the container tightly sealed to prevent moisture absorption, caking and amino acid oxidation; avoid long-term contact with air and water.
3. Store separately from strong acids, strong bases, strong oxidants and odorous substances; isolation distance ≥1m.

7. Safety & Protection

1. The product is non-toxic, non-irritating, safe for human contact; direct contact with skin has no adverse effects, and can be absorbed by the skin to exert a nutritional effect.
2. **Recommended PPE:** Nitrile rubber gloves and safety glasses for large-scale handling to avoid powder splashing into eyes and respiratory tract; a dust mask is optional for large-batch powder operation.
3. **Accident Treatment:**
 - Skin Contact: No special treatment needed; rinse with water if necessary, the product is mild and non-irritating.