MATERIAL SAFETY DATA SHEET
LIQUID LYSINE 60 (Feed Grade)

Manufacturer & Distributor: Ajinomoto Heartland LLC
1 Heartland Drive
Eddyville, Iowa 52553

Emergency Phone: (641) 969-4551 Eddyville
(773) 380-7000 Chicago

DESCRIPTION
Product Name: Liquid Lysine 60 (Feed Grade)
Chemical Name: 2,6 Diaminohexanoic acid
CAS Registry Number: 657-27-2 (L-Lysine HCl); 56-87-1(L-Lysine)
Synonyms: Aqueous solution of L-Lysine and L-Lysine monohydrochloride mixture. Alpha, Epsilon-Diaminocaproic acid; 2,6–Diaminohexanoic acid, L-Lysine, L-Lysine Hydrochloride
Chemical Family: Amino Acids
Composition: As L-Lysine 60.0%
Formula:
\[ C_6 H_{14} N_2 O_2 \] (L-Lysine)
\[ C_6 H_{14} N_2 O_2 \cdot HCl \] (L-Lysine Monohydrochloride)
Product use: To be used in manufacture of animal feeds.

STATEMENT OF HEALTH HAZARD
Hazard Description: Avoid contact with eyes; mild irritant. Otherwise, non-hazardous.

EMERGENCY TREATMENT
Eyes: Wash eyes immediately with large amounts of water or saline.
Skin contact: Ensure thorough rinsing. Remove contaminated clothing and wash with water and mild detergent.

PHYSICAL DATA
Appearance & Odor: Brown liquid, slight odor.
Specific Gravity (H_2O=1): 1.16 – 1.18 kg/l
pH as Supplied: 9.5 – 10.5
Solubility in Water: Aqueous liquid
Percent Solids by Weight: 62 – 66%
Molecular weight: L-Lysine HCl 182.65; L-Lysine 146.19
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FIRE & EXPLOSION HAZARD DATA
Fire-Fighting Measures: Aqueous solution Non Flammable.
Unusual Fire & Explosion Hazards: Not a fire hazard.

ACCIDENTAL RELEASE MEASURES
Steps to be taken: Ordinary same as food.
Waste Disposal: Collect spilled material in appropriate containers for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate area.

CHEMICAL REACTIVITY
Stability: Stable for 6 months at 25 to 35ºC
Conditions to Avoid (Stability): Temperature below 20ºC
Incompatibility (Materials to avoid) Concentrated Methionine Hydroxy Analogue, Liquid Methionine, Choline Chloride.

SPECIAL PROTECTION & PROCEDURES
Ventilation: Handle only in well-ventilated areas. Ensure compliance with applicable exposure limits.
Protective Equipment: Splash resistant eye protection recommended.
Skin Protection: Appropriate chemical resistant gloves recommended.

HANDLING and STORAGE
Handling and Storage: Recommended to wear gloves and face mask if excessive handling is necessary.
Other Precautions: Store in insulated tanks at temperatures between 25 and 35ºC. Keep separated from incompatible substances.

LABELING & SHIPPING
Proper Shipping Name: Liquid Lysine 60

DISPOSAL CONSIDERATIONS
Disposal: Dispose of in accordance with all regulations.

For animal feed only – not for human consumption