MATERIAL SAFETY DATA SHEET

L-Valine [Feed Grade (96.5%)]

Manufactured by: Ajinomoto EuroLysine S.A.S.
153, rue de Courcelles
75817 Paris Cedex 17

Emergency Phone: +1 33 1 44 40 12 12 – Paris, France

Distributed by: Ajinomoto Heartland LLC
1 Heartland Drive
Eddyville, Iowa 52553

Emergency Phone: (773) 380-7000 - Chicago

PRODUCT INFORMATION

Product Name: L-Valine (Feed Grade)

Chemical Name: 2-Aminoisovaleric Acid

CAS Registry Number: 72-18-4

Synonyms: Valine

Chemical Family: Amino acid

Composition: L-Valine: Minimum 96.5% on product as is / 98.0% on a dry matter basis

For animal feed only – not for human consumption
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Formula: \( \text{C}_5\text{H}_{11}\text{NO}_2 \)
Molecular Weight: 117.15

PHYSICAL DATA

Bulk Density: 0.5 to 0.6 grams/cm\(^3\)
Appearance & Odor: White to whitish crystalline powder
Solubility in Water: 5.70 g/100 g water at 20ºC; insoluble in common neutral solvents

STATEMENT OF HEALTH HAZARD

Hazard Description: This is not a hazardous material; however, avoid contact with eyes as it is a mild eye irritant.

FIRST AID MEASURES

Emergency Aid:

INHALATION: In case of breathing trouble, immediately relocate to a fresh air environment. Rinse mouth with water. If not breathing, give artificial respiration. If breathing becomes difficult give oxygen and seek medical attention.

EYES: Flush eyes with copious amounts of water for 15 minutes. Assure adequate flushing by separating eyelids with fingers. If contacts are worn, remove lenses and continue rinsing. Seek medical attention.

SKIN CONTACT: In case of exposure, wash with soap and copious amounts of water. If irritation persists, seek medical attention.

INGESTION: Rinse mouth with water. If any trouble appears, seek medical attention.

FIRE & EXPLOSION HAZARD DATA

Electrostatic Properties: Under certain conditions, electrostatic discharges may be capable of igniting dust cloud.
Maximum Explosion Pressure
P_{\text{max}} (\text{bar}): 5.7

Maximal Rate of Pressure Rise
MRP (\text{bar/s}): 507

Flash Point: None

Auto-ignition Temperature: of a dust layer, 400^\circ\text{C} (752^\circ\text{F}); of a dust cloud, 460^\circ\text{C} (860^\circ\text{F})

Extinguishing Media: Water, carbon dioxide, dry chemical powder / foam

Special Fire-Fighting Procedures: Should wear protective clothing and respiratory protection to protect from fumes of carbon dioxide, carbon monoxide and NOx.

Personal Protective measures: Wear protective clothing and breathing mask to protect from fumes

HANDLING AND STORAGE

Handling: No particular protection required, although it is recommended to wear gloves and face mask if excessive handling is necessary.

Storage: Store in dry conditions in sealed or closed containers. After opening, the product should be used within a short period. Keep away from sources of ignition.

SPILL OR LEAD PROCEDURES

Steps to be Taken: Ordinary, same as food.
Waste Disposal: Prevent spills from entering sewers and water ways. Ventilate the work area and prevent dust generation. Collect the product and place it in bags or containers for later waste disposal. This product may be disposed of as would be with any other non-hazardous material as prescribed by local and state law. After the dry material is removed, rinse surfaces with water.

CHEMICAL REACTIVITY

Stability: Stable if stored in dry conditions in sealed or closed containers

Conditions to Avoid: Avoid electrical sparks and other sources of ignition when handling this product.

Materials to Avoid: None

Hazardous Decomposition Products: Combustion of the product will result in the release of carbon dioxide, carbon monoxide and nitric oxide.

PROTECTION PROCEDURES

Respiratory Protection: It is recommended to wear a (paper) mask that covers the nose and mouth

Hand Protection: It is recommended to wear gloves, especially in case of extended contact

Eye Protection: It is recommended to wear safety goggles

Skin Protection: It is recommended to wear protective clothes that cover the skin. Discard or wash protective clothes after being exposed to the dust.

LABELING & SHIPPING

Proper Shipping Name: L-Valine

Transport: Not subject to legislation regarding transport of hazardous substances or preparations.

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