



CJ (SHEN YANG) BIOTECH CO., LTD.

Head Office :

#38 YUNONG ROAD SHENBEI NEW DISTRICT
SHENYANG, LIAONING, CHINA

Tel. : (024) 31410001

Fax. : (024) 31410108

Shenyang, Oct 20, 2018

MATERIAL SAFETY DATA SHEET

L-Isoleucine

1. Substance / preparation and company name

Product: L-Isoleucine Feed additive

Manufacturer : CJ (SHENYANG) BIOTECH CO., LTD.

#38 Yunong Road, Shenbei New District, Shenyang, Liaoning, CHINA.

Emergency Phone : (024) 31410001

2. Composition, Information on Ingredients

Composition: L-Isoleucine 90.0% min(on a dry matter basis)

Chemical Family: Amino Acid (Essential)

Formula: $C_6H_{13}NO_2$

Molecular Weight: 131.17

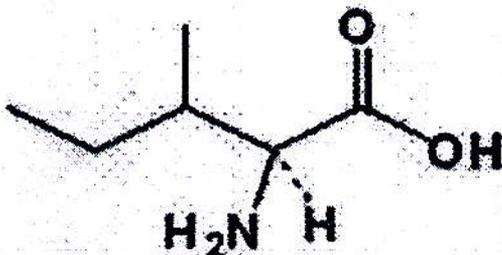
CAS#: 73-32-5

Percent: ca.100

EINECS/ELINCS: 200-798-2

Packaging: 20 kg net with Three in one paper plastic composite bag

Structure Formula:





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3. Hazards Identification

EMERGENCY OVERVIEW

Appearance: White to yellowish crystals or crystalline powders

Caution! May cause eye and skin irritation. May cause respiratory and digestive tract irritation. The toxicological properties of this material have not been fully investigated. This is expected to be a low hazard for usual industrial handling.

Target Organs: No data found.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

Chronic: Laboratory experiments have resulted in mutagenic effects.

4. First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting.

If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.



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5. Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) **Health:** 1; **Flammability:** 0; **Instability:** 0

6. Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

7. Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

8. Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits :

Chemical Name: L-Isoleucine



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ACGIH: none listed

NIOSH : none listed

OSHA - Final PELs: none listed

OSHA Vacated PELs: L-Isoleucine: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

9. Physical and Chemical Properties

Physical State: White or yellowish crystals or crystalline powders

Appearance: White or yellowish

Odor: Odorless or slightly odorless

pH: Not available.

Vapor Pressure: Negligible.

Vapor Density: Not available.

Evaporation Rate: Negligible.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 288 deg C (dec)

Decomposition Temperature: 288 deg C

Solubility: Slightly soluble.

Specific Gravity/Density: 1.18 (water=1)

10. Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.



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Conditions to Avoid: High temperatures, incompatible materials, dust generation.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

11. Toxicological Information

RTECS#: CAS# 73-32-5: NR4705000

LD50/LC50: Not available.

Carcinogenicity: CAS# 73-32-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found.

Teratogenicity: No information found.

Reproductive Effects: No information found.

Mutagenicity: No information available.

Neurotoxicity: No information found.

12. Ecological Information

No information available.

13. Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

14. Transport Information

Shipping Name:

US DOT : Not regulated as a hazardous material

Canada TDG : No information available



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15. Regulatory Information

US FEDERAL

TSCA : CAS# 73-32-5 is listed on the TSCA inventory.

Health & Safety Reporting List: None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules: None of the chemicals in this product are under a Chemical Test Rule.

Section 12b: None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule: None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs: None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances: None of the chemicals in this product have a TPQ.

Section 313: No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

STATE: CAS# 73-32-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65: California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

WGK (Water Danger/Protection): CAS# 73-32-5: 0

Canada - DSL/NDSL: CAS# 73-32-5 is listed on Canada's DSL List.



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Canada – WHMIS: This product has a WHMIS classification of D2B.

Canadian Ingredient Disclosure List

16. Additional Information

MSDS Creation Date: 10/20/2018

Revision #1 Date: 10/20/2018

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall CJ (SHENYANG) BIOTECH CO., LTD. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if CJ (SHENYANG) BIOTECH CO., LTD. has been advised of the possibility of such damages.