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MATERIAL SAFETY DATA SHEET (MSDS)

L-ORNITHINE MONOHYDROCHLORIDE (FOR BIOCHEMISTRY)

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : L-ORNITHINE MONOHYDROCHLORIDE (FOR BIOCHEMISTRY)

Product code : O0150200100

Identification of the product : L-ORNITHINE MONOHYDROCHLORIDE 99%
 CAS No: 3184-13-2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification : SUVCHEM
 Chaitanya Tower, 2nd Floor, Office # 206,
 Siddharth Nagar, S.V. Road,
 Goregaon (West), Mumbai - 400062,
 Maharashtra, India.
 Contact: +91 22 28725393 / 94 / 95
 Email ID: info@suvchem.com/care@suvchem.com

1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [Office hours]

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Classification : Xi; R36

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302
 Eye irritation - Category 2A - Warning (CLP : Eye Irrit. 2) H319

2.2. Label elements

Labelling EC 67/548 or EC 1999/45

Symbol(s)



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2. Hazards identification -DSD (continued)

Symbol(s)	: Xi : Irritant
R Phrase(s)	: R36 : Irritating to eyes.
S Phrase(s)	: S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Labelling Regulation EC 1272/2008 (CLP)
Hazard pictograms


Signal words	: Warning
Hazard statements	: H302 : Harmful if swallowed. H319 : Causes serious eye irritation.

Precautionary statements

• Prevention	: P280: Wear protective gloves, protective clothing, eye protection, face protection. P264: Wash thoroughly after handling. P270: Do not eat, drink or smoke when using this product.
• Response	: P301+P312: IF SWALLOWED : Call a POISON CENTER or doctor if you feel unwell. P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention.
• Disposal considerations	: P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards	: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.
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3. Composition/information on ingredients

Substance / Preparation	: L-ORNITHINE MONOHYDROCHLORIDE 99%
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Substance.

Contains no other components or impurities which will influence the classification of the product.

4. First aid measures
4.1. Description of first aid measures

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4. First aid measures (continued)

Inhalation	: Assure fresh air breathing. Allow the victim to rest.
Skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
Eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists : Get medical advice.
Ingestion	: Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms relating to use	: Swallowing a small quantity of this material will result in serious health hazard. Causes serious eye irritation.
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4.3. Indication of any immediate medical attention and special treatment needed

General information	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
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5. Fire-fighting measures
5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.
Surrounding fires	: Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	: Under fire conditions, hazardous fumes will be present.
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5.3. Advice for fire-fighters

Protection against fire	: Do not enter fire area without proper protective equipment, including respiratory protection.
Special procedures	: Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental release measures
6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders	: Equip cleanup crew with proper protection. Ventilate area.
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MATERIAL SAFETY DATA SHEET (MSDS)
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6. Accidental release measures (continued)

For non-emergency personnel : Evacuate unnecessary personnel.

6.2. Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Clean up methods : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage
7.1. Precautions for safe handling

Handling : Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Technical protective measures : Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.

Storage - away from : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Specific end use(s) : None.

8. Exposure controls/personal protection
8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.

- **Respiratory protection** : Wear approved mask.
- **Hand protection** : Wear protective gloves.
- **Eye protection** : Chemical goggles or safety glasses.
- **Others** : When using, do not eat, drink or smoke.

MATERIAL SAFETY DATA SHEET (MSDS)
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8. Exposure controls/personal protection (continued)
8.2. Control parameters

Occupational Exposure Limits : No data available.

9. Physical and chemical properties
9.1. Information on basic physical and chemical properties

Physical state at 20 °C	: Solid.
Colour	: White powder
Odour	: Odorless
Odour threshold	: No data available.
pH value	: Not applicable.
Melting point [°C]	: 245 °C
Decomposition point [°C]	: 233 °C
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: N/A
Flammability (solid, gas)	: N/A
Flash point [°C]	: N/A
Boiling point [°C]	: N/A
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm ³]	: N/A
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: Soluble in water
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: N/A
Viscosity at 40°C [mm ² /s]	: N/A

9.2. Other information

Explosive properties	: N/A
Explosion limits - upper [%]	: N/A

MATERIAL SAFETY DATA SHEET (MSDS)
L-ORNITHINE MONOHYDROCHLORIDE (FOR BIOCHEMISTRY)
9. Physical and chemical properties (continued)

Explosion limits - lower [%] : N/A
 Oxidising properties : No data available.

10. Stability and reactivity
10.1. Reactivity

Reactivity : Not established.

10.2. Chemical stability

Chemical stability : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : Not established.

10.4. Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.

11. Toxicological information
11.1. Information on toxicological effects
Acute toxicity

- Inhalation : Based on available data, the classification criteria are not met.
- Dermal : Based on available data, the classification criteria are not met.
- Ingestion : Harmful if swallowed.

Corrosion

: Based on available data, the classification criteria are not met.

Irritation

: Causes serious eye irritation.

Sensitization

: Based on available data, the classification criteria are not met.

Mutagenicity

: Based on available data, the classification criteria are not met.

Carcinogenicity

: Based on available data, the classification criteria are not met.

MATERIAL SAFETY DATA SHEET (MSDS)
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11. Toxicological information (continued)

Toxic for reproduction	: Based on available data, the classification criteria are not met.
STOT-single exposure	: Based on available data, the classification criteria are not met.
STOT-repeated exposure	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.

12. Ecological information
12.1. Toxicity

Toxicity information : Not established.

12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

12.4. Mobility in soil

Mobility in soil : Not established.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

13. Disposal considerations
13.1. Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

MATERIAL SAFETY DATA SHEET (MSDS)
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14. Transport information
14.1. Land transport (ADR-RID)

General information : Not regulated.

14.2. Sea transport (IMDG) [English only]

General information : Not regulated.

14.3. Air transport (ICAO-IATA) [English only]

General information : Not regulated.

15. Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.

REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.

REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

16. Other information

Revision : Revision - See : *

 Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.
vPvB: very persistent and very bioaccumulative

Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Further information : None.

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In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

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- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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