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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 : O0150200005

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.

#### 3. Composition/information on ingredients

Substance / Preparation : L-ORNITHINE MONOHYDROCHLORIDE 99%

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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**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.

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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 <sup>3</sup> ]	: 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 <sup>2</sup> /s]	: N/A

**9.2. Other information**

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

**MATERIAL SAFETY DATA SHEET (MSDS)**
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**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.

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**11. Toxicological information (continued)**

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

**DISCLAIMER:**

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **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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