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MATERIAL SAFETY DATA SHEET (MSDS)**L-CITRULLINE (FOR BIOCHEMISTRY)****1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Trade name : L-CITRULLINE (FOR BIOCHEMISTRY)

Product code : C0071700025

Identification of the product : L-CITRULLINE99+%
CAS No :372-75-8

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**

Not classified.

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

Not classified.

2.2. Label elements**Labelling EC 67/548 or EC 1999/45**

Not classified.

Labelling Regulation EC 1272/2008 (CLP)

MATERIAL SAFETY DATA SHEET (MSDS)
L-CITRULLINE (FOR BIOCHEMISTRY)
2. Hazards identification -DSD (continued)

Not classified.

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-CITRULLINE99+%
 CAS No :372-75-8
 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

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 immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
Ingestion : Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting.

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

Symptoms relating to use : Not expected to present a significant hazard under anticipated conditions of normal use.

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).

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.

MATERIAL SAFETY DATA SHEET (MSDS)
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5. Fire-fighting measures (continued)
5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : Under fire conditions, hazardous fumes will be present.

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.

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 hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

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

7.2. Conditions for safe storage, including any incompatibilities

MATERIAL SAFETY DATA SHEET (MSDS)
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7. Handling and storage (continued)

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

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.

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 crystalline

Odour : Odorless

Odour threshold : No data available.

pH value : Not applicable.

Melting point [°C] : No data available.

Decomposition point [°C] : N/A

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

MATERIAL SAFETY DATA SHEET (MSDS)
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9. Physical and chemical properties (continued)

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

10. Stability and reactivity
10.1. Reactivity

Reactivity	: Not established.
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10.2. Chemical stability

Chemical stability	: Stable under recommended storage conditions.
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10.3. Possibility of hazardous reactions

Hazardous reactions	: Not established.
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10.4. Conditions to avoid

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

Materials to avoid	: Strong acids. Strong bases.
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10.6. Hazardous decomposition products

Hazardous decomposition products	: Fumes. Carbon monoxide. Carbon dioxide.
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MATERIAL SAFETY DATA SHEET (MSDS)
L-CITRULLINE (FOR BIOCHEMISTRY)
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 : Based on available data, the classification criteria are not met.

Corrosion

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

Irritation

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

Sensitization

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

Carcinogenicity

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

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.

MATERIAL SAFETY DATA SHEET (MSDS)
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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.

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

MATERIAL SAFETY DATA SHEET (MSDS)

L-CITRULLINE (FOR BIOCHEMISTRY)

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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