

CHAITANYA CHS, 2<sup>nd</sup> FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.  
 CONTACT: +9122 28725393 /94/ 95 | EMAILID: CARE@SUVCHEM.COM

## 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 : C0071700100

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)

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**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)**
**L-CITRULLINE (FOR BIOCHEMISTRY)**
**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)**
**L-CITRULLINE (FOR BIOCHEMISTRY)**
**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

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**9. Physical and chemical properties (continued)**

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]	: 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 <sup>2</sup> /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:

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