

## Safety Data Sheet L-Citrulline

### Section 1 - Chemical Product and Company Identification

#### 1.1 Product Identifiers

**Product Name:** L-Citrulline

**Catalog Numbers:**

**CAS #. :** 372-75-8

**EC#:** 206-759-6

**RTECS#:** NA

#### 1.2 Recommended Use of the Chemical and restrictions of Use

Chemical manufacturing

#### 1.3 Supplier Details

BioSpectra, Inc.

100 Majestic Way

Bangor, Pa 18013

610.599.3400

#### 1.4 Emergency Numbers

**US & Canada:** 1-800-424-9300

**Outside the US & Canada:** +1 703-527-3887

### Section 2 – Hazard Identification

#### 2.1 Classification of Substance or Mixture

Not a hazardous substance or mixture

#### 2.2 GHS Label Elements Including Precautionary Statements

Not a hazardous substance or mixture

#### 2.3 Hazards not Classified or not Covered by the GHS

None

### Section 3 – Composition, Information on Ingredients

Component	Classification	Concentration
L-Citrulline	NA	98.5%

**Synonyms:** L-2-Amino-5-ureidovaleric acid, (S)-2-Amino-5-ureidopentanoic acid

**Formula:** C<sub>6</sub>H<sub>13</sub>N<sub>3</sub>O<sub>3</sub>

**Molecular Weight:** 175.19 g/mol

### Section 4 - First Aid Measures

#### 4.1 Description of necessary first aid measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

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

**Ingestion:** DO NOT induce vomiting unless instructed to do so by a medical professional. Never give anything by mouth to an unconscious person. Get medical aid immediately.

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

**Notes to Physician:** Treat symptomatically and supportively.

#### 4.2 Most Important symptoms/effects, acute and delayed

Refer to Section 2.2 for Precautionary Statements if any are applicable

#### 4.3 Indication of Immediate Medical Attention and Special Treatment

No information available

### Section 5 - Firefighting Measures

#### 5.1 Extinguishing Media

Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Specific Hazards Associated with this Chemical

Carbon oxides, nitrogen oxides (NO<sub>x</sub>)

#### 5.3 Special Equipment/Precautions for Firefighters

May be combustible at high temperatures. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Explosion will appear as fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

#### 5.4 Other information

None available

### Section 6 - Accidental Release Measures

#### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. Use proper personal protective equipment as indicated in Section 8.

#### 6.2 Environmental Precautions

Do not allow to enter drains

### 6.3 Methods and Materials for Containment and Cleaning Up

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.

### 6.4 Other information

None available

## Section 7 - Handling and Storage

### 7.1 Precautions for safe handling

Use with adequate ventilation. Take into consideration the avoidance of formation of combustible dust before processing. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

### 7.2 Conditions for Storage Including any Incompatibilities

Store in a dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

### 7.3 Other information

None available.

## Section 8 - Exposure Controls, Personal Protection

### 8.1 Control parameters

Chemical does not contain any substances with occupational exposure limits

### 8.2 Engineering controls

Use adequate ventilation to keep airborne concentrations low.

### 8.3 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. Wear impervious gloves: Nitrile rubber with layer thickness 0.11mm.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Where protection from nuisance levels of dusts are desired, use type N95

(US) or type P1 (EN 143) dust masks. 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 a respirator's use.

## Section 9 - Physical and Chemical Properties

<b>Physical State:</b> Solid	<b>Melting Point:</b> Not available
<b>Appearance:</b> White	<b>Boiling Point:</b> Not available
<b>Odor:</b> Not available	<b>Decomposition Temperature:</b> Not available
<b>pH:</b> Not available	<b>Specific Gravity/Density:</b> Not available
<b>Vapor Pressure:</b> Not available	<b>Solubility:</b> Not available
<b>Vapor Density:</b> Not available	<b>Molecular Formula:</b> C <sub>6</sub> H <sub>13</sub> N <sub>3</sub> O <sub>3</sub>
<b>Viscosity:</b> Not available	<b>Molecular Weight:</b> 175.19 g/mol

## Section 10 - Stability and Reactivity

### 10.1 Chemical Stability

Stable under normal temperatures and pressures.

### 10.2 Conditions to Avoid

No information available.

### 10.3 Incompatibilities with Other Materials

Strong oxidizing agents

### 10.4 Hazardous Decomposition Products

No information available.

### 10.5 Hazardous Polymerization

Will not occur.

## Section 11 - Toxicological Information

### 11.1 Toxicological effects

#### Acute Toxicity

No information available.

#### Carcinogenicity:

CAS# 372-75-8: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Neurotoxicity:** No information available.

**Mutagenicity:** No information available.

**Other Studies:** No information available.

### 11.2 Additional information

**RTECS#:** NA

To the best of our knowledge the associated physical, chemical and toxicological properties of this chemical have not undergone

thorough investigation, all known information is contained in this SDS.

## Section 12 - Ecological Information

### 12.1 Ecotoxicity

No information available.

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative Potential

No information available

### 12.4 Mobility in Soil

No information available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other Adverse Effects

No information available

## Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

## Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	No Information Available	No Information Available	No Information Available	No Information Available	No information available.
Hazard Class:					
UN Number:					
Packing Group:					

## Section 15 - Regulatory Information

### 15.1 EHS Chemical Specific Regulations

#### SARA

**Section 302 (TPQ):** None of the chemicals in this product have a TPQ.

**Section 313:** No chemicals are reportable under Section 313.

**SARA 311/312 Hazards:** No SARA Hazards

#### STATE:

#### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

#### Pennsylvania Right To Know Components

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#### New Jersey Right To Know Components

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#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 16 - Additional Information

### 16.1 Hazard Ratings

#### HMIS Rating

Health hazard: 0

Flammability: 0

Physical Hazard: 0

#### NFPA Rating

Health hazard: 0

Fire Hazard: 0

Reactivity Hazard: 0

*The information conveyed in this Safety Data Sheet is only a representation of what BioSpectra has found to be accurate based on the current information that is available in regards to this compound. BioSpectra makes no warranty, expressed or implied, with respect to such information, and therefore assumes no liability resulting from product usage. It is strongly recommended that users of this product perform their own investigations to determine the accuracy and suitability of the information for their specific purposes. In no way will BioSpectra assume liability for any claims, losses, damages to any third party, any lost profits or any special, indirect, incidental, consequential or exemplary damages that may arise, even if BioSpectra has been advised of the possibility of such damages.*