



## MATERIAL SAFETY DATA SHEET

### COMPANY IDENTIFICATION

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### 1. CHEMICAL PRODUCT IDENTIFICATION

- Commercial name	L-CARNOSINE
- Other names	N-β-Alanyl-L-Histidine
- IUPAC	H-β-Ala-His-OH
- Use	Pharmaceutical/ Food raw materials

### 2. INFORMATION ON COMPOSITION

- Name	L-Carnosine		
- Chemical formula	C <sub>9</sub> H <sub>14</sub> N <sub>4</sub> O <sub>3</sub>		
- Molecular weight	226.23 g/mole		
- CAS nr.	305-84-0	- EINECS nr.	206-169-9

### 3 HAZARD

#### Hazards Identification

#### Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation(EC) No 1272/2008  
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC

#### Label elements

The product does not need to be labeled in accordance with EC directives or respective national laws.

Other hazards –none



#### 4. FIRST AID MEASURES

- General Instructions	The product is neither dangerous nor hazardous. Availability of the usual first aid means is requested.
- Eye contact	In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers; call a physician.
- Skin contact	In case of contact, immediately wash skin with soap and copious amounts of water.
- Ingestion	If swallowed, wash out mouth with water provided person is conscious; call a physician.
- Inhalation	If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.
- Notes to physicians	Treat symptomatically.

#### 5. FIRE FIGHTING MEASURES

- Suitable extinguishing media	Water spray, dry chemical powder, carbon dioxide.
- Unsuitable extinguishing media	n.av
- Unusual fire and explosions hazards	Emits toxic fumes under fire conditions.
- Special protective equipment	Wear a self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

#### 6. ACCIDENTAL SPILLING MEASURES

- Antidust mask, chemical safety goggles, rubber boots and heavy rubber gloves.
- Sweep up, place in a bag and hold for waste disposal; avoid raising dust.
- Ventilate area and wash spill site after material pickup is complete.

#### 7. STORAGE AND HANDLING

- Handling	Usual protective equipment against chemical powder.
- Storage	Store in dry, dark and cool place.

#### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- General measures	Normal cautions for chemical materials.
- Personal protection and hygiene	General guidelines of good industrial hygiene.
- Respiratory protection	Antidust mask.
- Hands protection	Gloves.
- Eyes protection	Goggles.
- Skin protection	Protective clothing.
- Technical facility measures	Efficient exhaustion system.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical aspect	Crystalline powder
- Colour	White or off-white
- Odour	Odourless
- Melting point	258-260°C
- Boiling point	n.a.
- Flammability	n.a.
- Flash point	n.a.
- Explosion limits	
- lower	n.a.
- upper	n.a.
- Bulk Density (loose)	n.a.
- Bulk Density (tapped)	n.a.
- Solubility	
- water	33 g/100 ml
- organic solvents	Generally insoluble.
- pH (% in H <sub>2</sub> O)	8.2 (1%) at 20°C
- Liposolubility	n.av.
- Viscosity	n.a.
- Vapour pressure	n.a.
- Partition coefficient n-Octanol/Water	n.av.

## 10. STABILITY AND REACTIVITY

- General features	Stable in dry and cool place.
- Conditions to avoid	Warming (> 30°C), contact with acidic mediums.
- Materials to avoid	Oxidizers, mineral acids.
- Hazardous decomposition products	It could form nitrogen and carbon oxides by combustion.

## 11. TOXICOLOGICAL INFORMATION

- Acute toxicity	The product is not toxic.
- LD50 (oral/rat)	14930 mg/Kg
- LD50 (ipr/mouse)	9087 mg/Kg
- Human dosage	n.av.
- Additional information	n.av.

## 12. ECOLOGICAL INFORMATION

- Mobility	n.av.
- Biodegradability	The product is partially biodegradable.
- Degradability	The product is degradable to $\alpha$ -alanine and histidine in acidic mediums.
- Biological effects	n.av.
- Ecotoxicity	n.av.
- Water toxicity	n.av.
- Bioaccumulation	n.av.



### 13. DISPOSAL CONSIDERATIONS

- Product	If recycling is not possible, dispose in accordance to local solid waste disposal regulations. General rules for chemical materials disposal.
- Containers	

### 14. TRANSPORT REGULATIONS

- Land	n.av.
- ADR nr.	n.av.
- RID nr.	n.av.
- UN nr.	n.av.
- Sea	n.av.
- UN nr.	n.av.
- Class nr.	n.av.
- Air	n.av.
- IATA/ICAO	n.av.
- UN nr.	n.av.
- Class	n.av.
- Additional information	Not regulated as hazardous material.

### 15. REGULATORY INFORMATION

- Symbols	n.av.
- R phrases	R n.a.      Not available
- S phrases	S 22      Do not breathe dust
	S 24/25      Avoid contact with skin and eyes
- Additional information	n.av.

### 16. ADDITIONAL INFORMATION

- Bibliographic	Merck Index, 12 <sup>th</sup> Ed., 1899
- References	Quinn et al., Molec Aspects Med. Vol. 13, pp 379-444, 1992

Data Sheet released by      Technical Manager

Information given above is to the best of our knowledge and is only related to the product as delivered in order to give a complete review of safety aspects accurate as of the date indicated. All data given are never meant to guarantee product properties. Fushilai shall not be held liable for any damage resulting from handling or from contact with the above product.