

# L-TYROSINE FOR BIOCHEMISTRY

## Safety Data Sheet

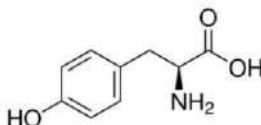
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Reference number: 06425  
Issue date: 08.09.2023 Revision date: 08.09.2026 Supersedes version of: 09.04.2015 Version: 1.0



### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
Trade name : L-TYROSINE FOR BIOCHEMISTRY  
EC-No. : 200-460-4  
CAS-No. : 60-18-4  
Product code : B-02803  
Type of product : Amino acids  
Formula : C<sub>9</sub>H<sub>11</sub>NO<sub>3</sub>  
Chemical structure :



Synonyms : (S)-2-Amino-3-(4-hydroxyphenyl) propionic acid, 3-(4-Hydroxyphenyl)-L-alanine  
, (S)-Tyrosine, L-2-Amino-3-(4-hydroxyphenyl) propanoic acid

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Bio-Chem Chemicals  
5455, Nicholson Road Science Market,  
Ambala Cantt. 133001 Haryana (India)  
+91-82952 41953  
[info@biofinechemical.com](mailto:info@biofinechemical.com) - [www.biofinechemical.com](http://www.biofinechemical.com)

#### 1.4. Emergency telephone number

Emergency number : +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

**Adverse physicochemical, human health and environmental effects**

May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation.

#### 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

**Nordic countries regulation**

**Denmark**

MAL code : 00-1 (Executive Order No. 301 (1993))

#### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

# L-TYROSINE FOR BIOCHEMISTRY

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Substance type : Mono-constituent  
Name : L-TYROSINE  
CAS-No. : 60-18-4  
EC-No. : 200-460-4

| Name       | Product identifier                    | %   |
|------------|---------------------------------------|-----|
| L-TYROSINE | CAS-No.: 60-18-4<br>EC-No.: 200-460-4 | 100 |

#### 3.2. Mixtures

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice. Call a poison center or a doctor if you feel unwell.  
First-aid measures after skin contact : Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash skin with plenty of water. Take off contaminated clothing.  
First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.  
First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : May cause respiratory irritation.  
Symptoms/effects after skin contact : Causes skin irritation. Irritation.  
Symptoms/effects after eye contact : Causes serious eye irritation. Eye irritation.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>). Water spray. Dry powder. Foam.  
Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

#### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

# L-TYROSINE FOR BIOCHEMISTRY

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

---

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Stop release.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Clear up rapidly by scoop or vacuum.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container tightly closed. Store in a dry place. Protect from moisture. Store locked up. Store in a well-ventilated place. Keep cool.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

No additional information available

##### 8.1.2. Recommended monitoring procedures

No additional information available

##### 8.1.3. Air contaminants formed

No additional information available

##### 8.1.4. DNEL and PNEC

No additional information available

##### 8.1.5. Control banding

No additional information available

# L-TYROSINE FOR BIOCHEMISTRY

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

---

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

#### 8.2.2. Personal protection equipment

**Personal protective equipment symbol(s):**



##### 8.2.2.1. Eye and face protection

**Eye protection:**

Chemical goggles or safety glasses

##### 8.2.2.2. Skin protection

**Skin and body protection:**

Wear a mask

**Hand protection:**

Protective gloves

##### 8.2.2.3. Respiratory protection

**Respiratory protection:**

Wear appropriate mask

##### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

**Environmental exposure controls:**

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|   |   |
|---|---|
| Physical state                                  | : Solid   |
| Colour  | : White to off white.                               |
| Appearance                                      | : Powder. Crystals.                                 |
| Molecular mass                                  | : 181,19 g/mol                                      |
| Odour   | : Odourless.  |
| Odour threshold                                 | : Not available                                     |
| Melting point                                   | : 343 °C  |
| Freezing point                                  | : Not applicable                                    |
| Boiling point                                   | : Not available                                     |
| Flammability                                    | : Non flammable.                                    |
| Lower explosion limit                           | : Not applicable                                    |
| Upper explosion limit                           | : Not applicable                                    |
| Flash point                                     | : 176 °C  |
| Auto-ignition temperature                       | : Not applicable                                    |
| Decomposition temperature                       | : Not available                                     |
| pH  | : 5,5 – 7   |
| pH solution concentration                       | : 0,4 %   |
| Viscosity, kinematic                            | : Not applicable                                    |
| Solubility                                      | : Water: 0,479 g/l at 25 °C                         |
| Partition coefficient n-octanol/water (Log Kow) | : Not available                                     |
| Partition coefficient n-octanol/water (Log Pow) | : -2,26 at 25 °C - Bioaccumulation is not expected. |
| Vapour pressure                                 | : Not available                                     |

# L-TYROSINE FOR BIOCHEMISTRY

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

|   |  |
|---|--|
| Vapour pressure at 50 °C                      | : Not available                          |
| Density                                       | : 1,456 g/cm <sup>3</sup>                |
| Relative density                              | : Not available                          |
| Relative vapour density at 20 °C              | : Not applicable                         |
| Relative density of saturated gas/air mixture | : 1,41 at 20°C - OECD Test Guideline 109 |
| Particle size                                 | : Not available                          |

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

|                                   |                                 |
|-----------------------------------|---------------------------------|
| Acute toxicity (oral)             | : Not classified                |
| Acute toxicity (dermal)           | : Not classified                |
| Acute toxicity (inhalation)       | : Not classified                |
| Skin corrosion/irritation         | : Not classified<br>pH: 5,5 – 7 |
| Serious eye damage/irritation     | : Not classified<br>pH: 5,5 – 7 |
| Respiratory or skin sensitisation | : Not classified                |
| Germ cell mutagenicity            | : Not classified                |
| Carcinogenicity                   | : Not classified                |
| Reproductive toxicity             | : Not classified                |
| STOT-single exposure              | : Not classified                |
| STOT-repeated exposure            | : Not classified                |
| Aspiration hazard                 | : Not classified                |

### L-TYROSINE FOR BIOCHEMISTRY (60-18-4)

|                      |                |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |
|----------------------|----------------|

# L-TYROSINE FOR BIOCHEMISTRY

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.  
Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Not classified

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

|   |   |
|---|---|
| L-TYROSINE FOR BIOCHEMISTRY (60-18-4)           |   |
| Partition coefficient n-octanol/water (Log Pow) | -2,26 at 25 °C - Bioaccumulation is not expected. |

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

### 14.1. UN number or ID number

Not regulated for transport

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated  
Proper Shipping Name (IMDG) : Not regulated  
Proper Shipping Name (IATA) : Not regulated  
Proper Shipping Name (ADN) : Not regulated  
Proper Shipping Name (RID) : Not regulated

# L-TYROSINE FOR BIOCHEMISTRY

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

---

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : Not regulated

#### IMDG

Transport hazard class(es) (IMDG) : Not regulated

#### IATA

Transport hazard class(es) (IATA) : Not regulated

#### ADN

Transport hazard class(es) (ADN) : Not regulated

#### RID

Transport hazard class(es) (RID) : Not regulated

### 14.4. Packing group

Packing group (ADR) : Not regulated

Packing group (IMDG) : Not regulated

Packing group (IATA) : Not regulated

Packing group (ADN) : Not regulated

Packing group (RID) : Not regulated

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

#### Inland waterway transport

Not regulated

#### Rail transport

Not regulated

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

##### REACH Annex XIV (Authorisation List)

L-TYROSINE FOR BIOCHEMISTRY is not on the REACH Annex XIV List

# L-TYROSINE FOR BIOCHEMISTRY

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### REACH Candidate List (SVHC)

L-TYROSINE FOR BIOCHEMISTRY is not on the REACH Candidate List

### PIC Regulation (Prior Informed Consent)

L-TYROSINE FOR BIOCHEMISTRY is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

### POP Regulation (Persistent Organic Pollutants)

L-TYROSINE FOR BIOCHEMISTRY is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

### Ozone Regulation (1005/2009)

L-TYROSINE is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

### Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

### 15.1.2. National regulations

#### Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 6704).  
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed  
SZW-lijst van mutagene stoffen : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

#### Denmark

MAL code : 00-1 (Executive Order No. 301 (1993))

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

| Abbreviations and acronyms: |   |
|-----------------------------|---|
| ADN                         | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR                         | European Agreement concerning the International Carriage of Dangerous Goods by Road             |
| ATE                         | Acute Toxicity Estimate   |
| BCF                         | Bioconcentration factor   |
| BLV                         | Biological limit value  |
| BOD                         | Biochemical oxygen demand (BOD)   |
| COD                         | Chemical oxygen demand (COD)  |
| DMEL                        | Derived Minimal Effect level  |
| DNEL                        | Derived-No Effect Level   |
| EC-No.                      | European Community number   |
| EC50                        | Median effective concentration  |



# L-TYROSINE FOR BIOCHEMISTRY

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| <b>Abbreviations and acronyms:</b> |  |
|------------------------------------|--|
| EN                                 | European Standard  |
| IARC                               | International Agency for Research on Cancer                                  |
| IATA                               | International Air Transport Association                                      |
| IMDG                               | International Maritime Dangerous Goods                                       |
| LC50                               | Median lethal concentration  |
| LD50                               | Median lethal dose   |
| LOAEL                              | Lowest Observed Adverse Effect Level   |
| NOAEC                              | No-Observed Adverse Effect Concentration                                     |
| NOAEL                              | No-Observed Adverse Effect Level   |
| NOEC                               | No-Observed Effect Concentration   |
| OECD                               | Organisation for Economic Co-operation and Development                       |
| OEL                                | Occupational Exposure Limit  |
| PBT                                | Persistent Bioaccumulative Toxic   |
| PNEC                               | Predicted No-Effect Concentration  |
| RID                                | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS                                | Safety Data Sheet  |
| STP                                | Sewage treatment plant   |
| ThOD                               | Theoretical oxygen demand (ThOD)   |
| TLM                                | Median Tolerance Limit   |
| VOC                                | Volatile Organic Compounds   |
| CAS-No.                            | Chemical Abstract Service number   |
| N.O.S.                             | Not Otherwise Specified  |
| vPvB                               | Very Persistent and Very Bioaccumulative                                     |
| ED                                 | Endocrine disrupting properties  |

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.