

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## D(+)-Biotin $\geq$ 98,5%, Ph.Eur., for biochemistry

article number: **3822**  
Version: **GHS 2.0 en**  
Replaces version of: 2016-06-06  
Version: (GHS 1)

date of compilation: 2016-06-06  
Revision: 2022-01-03

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

### 1.1 Product identifier

|                                 |   |
|---------------------------------|---|
| Identification of the substance | <b>D(+)-Biotin <math>\geq</math> 98,5%, Ph.Eur., for biochemistry</b> |
| Article number                  | 3822  |
| CAS number                      | 58-85-5   |

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

|                           |   |
|---------------------------|---|
| Relevant identified uses: | Laboratory chemical<br>Laboratory and analytical use  |
| Uses advised against:     | Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). |

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

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0  
**Telefax:** +49 (0) 721 - 56 06 149  
**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)  
**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet: :Department Health, Safety and Environment

**e-mail (competent person):** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

| Name   | Street          | Postal code/city   | Telephone | Website |
|--|-----------------|--------------------|-----------|---------|
| NSW Poisons Information Centre<br>Childrens Hospital | Hawkesbury Road | 2145 Westmead, NSW | 131126    |         |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification acc. to GHS

This substance does not meet the criteria for classification.

### 2.2 Label elements

#### Labelling

not required

### 2.3 Other hazards

Dust explosion hazards.

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



**D(+)-Biotin ≥ 98,5%, Ph.Eur., for biochemistry**

article number: **3822**

## Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                   |                       |
|-------------------|-----------------------|
| Name of substance | D(+)-Biotin           |
| Molecular formula | $C_{10}H_{16}N_2O_3S$ |
| Molar mass        | 244.3 g/mol           |
| CAS No            | 58-85-5               |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off contaminated clothing.

#### Following inhalation

Provide fresh air.

#### Following skin contact

Rinse skin with water/shower.

#### Following eye contact

Rinse cautiously with water for several minutes.

#### Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

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

Symptoms and effects are not known to date.

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water, foam, dry extinguishing powder, ABC-powder

#### Unsuitable extinguishing media

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



**D(+)-Biotin  $\geq$  98,5%, Ph.Eur., for biochemistry**

article number: **3822**

water jet

## 5.2 Special hazards arising from the substance or mixture

Combustible. Danger of dust explosion.

### Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sulphur oxides (SO<sub>x</sub>)

## 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

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



#### For non-emergency personnel

Control of dust.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

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

#### Advice on how to contain a spill

Covering of drains. Take up mechanically.

#### Advice on how to clean up a spill

Take up mechanically.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

No special measures are necessary.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

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

Store in a dry place.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



**D(+)-Biotin  $\geq$  98,5%, Ph.Eur., for biochemistry**

article number: **3822**

## Ventilation requirements

Use local and general ventilation.

## Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

##### Eye/face protection



Use safety goggle with side protection.

##### Skin protection



##### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

##### • type of material

NBR (Nitrile rubber)

##### • material thickness

>0,11 mm

##### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

##### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

##### Respiratory protection



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## D(+)-Biotin $\geq$ 98,5%, Ph.Eur., for biochemistry

article number: 3822

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |   |
|--|---|
| Physical state   | solid   |
| Form   | powder, crystalline                                       |
| Colour   | white   |
| Odour  | odourless   |
| Melting point/freezing point                             | 229 – 232 °C  |
| Boiling point or initial boiling point and boiling range | not determined  |
| Flammability   | this material is combustible, but will not ignite readily |
| Lower and upper explosion limit                          | not determined  |
| Flash point  | not applicable  |
| Auto-ignition temperature                                | not determined  |
| Decomposition temperature                                | not relevant  |
| pH (value)   | 4.5 (in aqueous solution: 0.1 g/l, 20 °C)                 |
| Kinematic viscosity                                      | not relevant  |
| <u>Solubility(ies)</u>                                   |   |
| Water solubility   | 0.2 g/l at 20 °C (TOXNET)                                 |
| <u>Partition coefficient</u>                             |   |
| Partition coefficient n-octanol/water (log value):       | 0.39 (TOXNET)   |
| Vapour pressure  | 0.001 hPa   |
| <u>Density and/or relative density</u>                   |   |
| Density  | not determined  |
| Relative vapour density                                  | information on this property is not available             |
| Bulk density   | 200 – 500 kg/m <sup>3</sup>                               |
| Particle characteristics                                 | No data available.  |
| <u>Other safety parameters</u>                           |   |
| Oxidising properties                                     | none  |

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## D(+)-Biotin $\geq 98,5\%$ , Ph.Eur., for biochemistry

article number: 3822

### 9.2 Other information

Information with regard to physical hazard classes:

hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics:

Dust explosion class

ST 1  
Weak explosive (rate of pressure; Kst > 0 - < 200 bar m/s)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification acc. to GHS

This substance does not meet the criteria for classification.

#### Acute toxicity

Shall not be classified as acutely toxic.

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Shall not be classified as carcinogenic.

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



## D(+)-Biotin $\geq 98,5\%$ , Ph.Eur., for biochemistry

article number: 3822

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

Data are not available.

#### • If in eyes

Data are not available.

#### • If inhaled

Data are not available.

#### • If on skin

Data are not available.

#### • Other information

Health effects are not known.

## 11.2 Endocrine disrupting properties

Not listed.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Biodegradation

Data are not available.

### 12.2 Process of degradability

Theoretical Oxygen Demand with nitrification: 1.915 mg/mg

Theoretical Oxygen Demand: 1.637 mg/mg

Theoretical Carbon Dioxide: 1.801 mg/mg

| Process of degradability |                  |      |
|--------------------------|------------------|------|
| Process                  | Degradation rate | Time |
| biotic/abiotic           | 38 %             | 28 d |

### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

|                           |               |
|---------------------------|---------------|
| n-octanol/water (log KOW) | 0.39 (TOXNET) |
|---------------------------|---------------|

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



**D(+)-Biotin  $\geq 98,5\%$ , Ph.Eur., for biochemistry**

article number: **3822**

## 12.4 Mobility in soil

Data are not available.

## 12.5 Results of PBT and vPvB assessment

Data are not available.

## 12.6 Endocrine disrupting properties

Not listed.

## 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

#### Sewage disposal-relevant information

Do not empty into drains.

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

- |   |   |
|---|---|
| 14.1 UN number  | not subject to transport regulations                                  |
| 14.2 UN proper shipping name  | not assigned  |
| 14.3 Transport hazard class(es)   | not assigned  |
| 14.4 Packing group  | not assigned  |
| 14.5 Environmental hazards  | non-environmentally hazardous acc. to the dangerous goods regulations |
| 14.6 Special precautions for user   | There is no additional information.                                   |
| 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code                   | The cargo is not intended to be carried in bulk.                      |
| 14.8 <u>Information for each of the UN Model Regulations</u>                              |   |
| <b>Transport information</b>  | <b>National regulations</b>   |
| Not subject to transport regulations. UN RTDG   | <b>Additional information(UN RTDG)</b>                                |
| <b>International Maritime Dangerous Goods Code (IMDG) - Additional information</b>        | Not subject to IMDG.  |
| <b>International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information</b> | Not subject to ICAO-IATA.   |



# Safety data sheet

acc. to Safe Work Australia - Code of Practice



**D(+)-Biotin ≥ 98,5%, Ph.Eur., for biochemistry**

article number: **3822**

## SECTION 15: Regulatory information

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

There is no additional information.

#### National regulations(Australia)

##### Australian Inventory of Chemical Substances(AICS)

Substance is listed.

#### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

#### National inventories

| Country | Inventory | Status              |
|---------|-----------|---------------------|
| AU      | AICS      | substance is listed |
| CA      | DSL       | substance is listed |
| CN      | IECSC     | substance is listed |
| EU      | ECSI      | substance is listed |
| JP      | CSCL-ENCS | substance is listed |
| KR      | KECI      | substance is listed |
| MX      | INSQ      | substance is listed |
| NZ      | NZIoC     | substance is listed |
| PH      | PICCS     | substance is listed |
| TW      | TCSI      | substance is listed |
| US      | TSCA      | substance is listed |

#### Legend

|           |   |
|-----------|---|
| AICS      | Australian Inventory of Chemical Substances                             |
| CSCL-ENCS | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL       | Domestic Substances List (DSL)  |
| ECSI      | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC     | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ      | National Inventory of Chemical Substances                               |
| KECI      | Korea Existing Chemicals Inventory                                      |
| NZIoC     | New Zealand Inventory of Chemicals                                      |
| PICCS     | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| TCSI      | Taiwan Chemical Substance Inventory                                     |
| TSCA      | Toxic Substance Control Act   |

### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



**D(+)-Biotin ≥ 98,5%, Ph.Eur., for biochemistry**

article number: **3822**

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Alignment to regulation: Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").

Restructuring: section 9, section 14

| Section | Former entry (text/value)  | Actual entry (text/value)   | Safety-relevant |
|---------|--|---|-----------------|
| 2.1     | Classification according to Regulation (EC) No 1272/2008 (CLP):<br>This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC. | Classification acc. to GHS:<br>This substance does not meet the criteria for classification.                              | yes             |
| 2.2     | Signal word:<br>not required   |   | yes             |
| 2.3     | Other hazards:<br>There is no additional information.  | Other hazards:<br>Dust explosion hazards.   | yes             |
| 2.3     |  | Results of PBT and vPvB assessment:<br>According to the results of its assessment, this substance is not a PBT or a vPvB. | yes             |

### Abbreviations and acronyms

| Abbr.    | Descriptions of used abbreviations  |
|----------|---|
| CAS      | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)    |
| DGR      | Dangerous Goods Regulations (see IATA/DGR)  |
| EINECS   | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS   | European List of Notified Chemical Substances   |
| GHS      | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA     | International Air Transport Association   |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO     | International Civil Aviation Organization   |
| IMDG     | International Maritime Dangerous Goods Code   |
| MARPOL   | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")         |
| NLP      | No-Longer Polymer   |
| PBT      | Persistent, Bioaccumulative and Toxic   |
| UN RTDG  | UN Recommendations on the Transport of Dangerous Good   |
| vPvB     | Very Persistent and very Bioaccumulative  |

### Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

# Safety data sheet

acc. to Safe Work Australia - Code of Practice



**D(+)-Biotin  $\geq$  98,5%, Ph.Eur., for biochemistry**

article number: **3822**

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## **Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.