

SAFETY DATA SHEET

Version 4.6
Revision Date 06/30/2014
Print Date 07/15/2014

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : 3,4-Dihydroxy-L-phenylalanine
Product Number : D9628
Brand : Sigma
CAS-No. : 59-92-7

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Warning

Hazard statement(s)

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you

P302 + P352
P304 + P340

feel unwell.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER or doctor/ physician if you feel unwell.
Specific treatment (see supplemental first aid instructions on this label).
Rinse mouth.

P312
P321
P330
P332 + P313
P337 + P313
P362
P403 + P233
P405
P501

If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : L-3-Hydroxytyrosine
Levodopa
3-(3,4-Dihydroxyphenyl)-L-alanine
L-DOPA

Formula : C₉H₁₁NO₄
Molecular Weight : 197.19 g/mol
CAS-No. : 59-92-7
EC-No. : 200-445-2

Hazardous components

| Component | Classification | Concentration |
|-----------|---|---------------|
| Levodopa | Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H302, H315, H319, H335 | - |

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

| | | | | |
|--|---|--|---|---|
| <p>5. FIREFIGHTING MEASURES</p> <p>5.1 Extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</p> <p>5.2 Special hazards arising from the substance or mixture Carbon oxides, nitrogen oxides (NOx)</p> <p>5.3 Advice for firefighters Wear self contained breathing apparatus for fire fighting if necessary.</p> <p>5.4 Further information no data available</p> | <p>5.1 Personal precautions, protective equipment and emergency procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.</p> <p>5.2 Environmental precautions Do not let product enter drains.</p> <p>5.3 Methods and materials for containment and cleaning up Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.</p> <p>5.4 Reference to other sections For disposal see section 13.</p> | <p>7. HANDLING AND STORAGE</p> <p>7.1 Precautions for safe handling Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection. For precautions see section 2.2.</p> <p>7.2 Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place.</p> <p>7.3 Specific end uses(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated</p> | <p>8. EXPOSURE CONTROLS/PERSONAL PROTECTION</p> <p>8.1 Control parameters Control parameters Contains no substances with occupational exposure limit values.</p> <p>8.2 Exposure controls Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Personal protective equipment Eye/face protection Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).</p> | <p>9.1 Information on basic physical and chemical properties</p> <p>9. PHYSICAL AND CHEMICAL PROPERTIES</p> <p>9.1.1 Information on basic physical and chemical properties</p> <p>a) Appearance Form: crystalline Colour: white</p> <p>b) Odour no data available</p> <p>c) Odour Threshold no data available</p> <p>d) pH no data available</p> <p>e) Melting point/freezing point Melting point/range: 276 - 278 °C (529 - 532 °F) - lit.</p> <p>f) Initial boiling point and boiling range no data available</p> <p>g) Flash point no data available</p> <p>h) Evaporation rate no data available</p> <p>i) Flammability (solid, gas) no data available</p> <p>j) Upper/lower flammability or explosive limits no data available</p> <p>k) Vapour pressure no data available</p> <p>l) Vapour density no data available</p> <p>m) Relative density no data available</p> <p>n) Water solubility no data available</p> |
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|--|---|--|---|---|

- o) Partition coefficient: n-octanol/water no data available
- p) Auto-ignition temperature no data available
- q) Decomposition temperature no data available
- r) Viscosity no data available
- s) Explosive properties no data available
- t) Oxidizing properties no data available

9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY

- 10.1 Reactivity**
no data available
- 10.2 Chemical stability**
Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions**
no data available
- 10.4 Conditions to avoid**
Air Light.
- 10.5 Incompatible materials**
Strong oxidizing agents
- 10.6 Hazardous decomposition products**
Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 1,780 mg/kg

Remarks: Behavioral:Excitement. Behavioral:Ataxia. Behavioral:Aggression.

Inhalation: no data available

Dermal: no data available

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: AY5600000

Nausea, Headache, Vomiting

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data 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 data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Sigma - D9628

Delivery 0848111780-000090 Purchase Order P0040453

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Sigma - D9628

Delivery 0848111780-000090 Purchase Order P0040453

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15. REGULATORY INFORMATION

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the

threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

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

Pennsylvania Right To Know Components

Levodopa

CAS-No. 59-92-7
Revision Date

New Jersey Right To Know Components

Levodopa

CAS-No. 59-92-7
Revision Date

California Prop. 65 Components

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive

CAS-No. 59-92-7
Revision Date 2007-09-28

Levodopa

harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Acute toxicity

H302 Eye Irritation

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Skin Irrit. Skin Irritation

HMS Rating

Health hazard: 2

Chronic Health Hazard: *

Flammability: 0

Physical Hazard: 0

NFPA Rating

Health hazard: 2

Fire Hazard: 0

Reactivity Hazard: 0

Further Information

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Preparation Information
Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956
Version: 4.6

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