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SAFETY DATA SHEET

Version 6.0 Revision Date 07/16/2018 Print Date 11/18/2018

| 1. PRODUCT AND COMPANY IDENTIFICATION | | | | | |
|---------------------------------------|--|------|---|--|--|
| 1.1 | Product identifiers Product name | : | <sc>DL-Histidine monohydrochloride monohydrate</sc> | | |
| | Product Number Brand | : | H7875 Sigma | | |
| | CAS-No. | : | 123333-71-1 | | |
| 1.2 | ne substance or mixture and uses advised against | | | | |
| | Identified uses | : | Laboratory chemicals, Synthesis of substances | | |
| 1.3 | Details of the supplier of the safety data sheet | | | | |
| | Company | : | Sigma-Aldrich Inc. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES | | |
| | Telephone Fax | : | +1 314 771-5765 +1 800 325-5052 | | |
| 1.4 | Emergency telephone nu | umbo | er | | |

: (314) 776-6555

2. HAZARDS IDENTIFICATION

Emergency Phone #

2.1 Classification of the 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 otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms:<SC>DL</>>DL</>-α-Amino-β-(4-imidazolyl)propionic acidmonohydrochlorideFormula: $C_6H_9N_3O_2 \cdot HCI \cdot H_2O$ Molecular weight:209.63 g/molCAS-No.:123333-71-1EC-No.:229-266-8

No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

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

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information No data available

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.
- 6.2 Environmental precautions Do not let product enter drains.
- **6.3** Methods and materials for containment and cleaning up Sweep up and shovel. Keep in suitable, closed containers for disposal.
- **6.4 Reference to other sections** For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

Storage class (TRGS 510): 13: Non Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| a) | Appearance | Form: powder Colour: white |
|----|--------------------------------|--------------------------------------|
| b) | Odour | No data available |
| c) | Odour Threshold | No data available |
| d) | рН | No data available |
| e) | Melting point/freezing point | Melting point/range: 253 °C (487 °F) |
| L) | Initial la silia a la sint and | Na data available |

f) Initial boiling point and No data available

boiling range

| g) | Flash point | No data available | | | |
|--------------------------|--|-------------------|--|--|--|
| h) | Evaporation rate | No data available | | | |
| i) | Flammability (solid, gas) | No data available | | | |
| j) | Upper/lower flammability or explosive limits | No data available | | | |
| k) | Vapour pressure | No data available | | | |
| I) | Vapour density | No data available | | | |
| m) | Relative density | No data available | | | |
| n) | Water solubility | No data available | | | |
| 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 | | | |
| Other safety information | | | | | |

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** No data available
- **10.5** Incompatible materials Strong oxidizing agents

10.6 Hazardous decomposition products Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas 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

No data available 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 on OSHA's list of regulated carcinogens.

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: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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(DL-Histidine monohydrochloride monohydrate)
- 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.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US) Not dangerous goods IMDG Not dangerous goods

ΙΑΤΑ

Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

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

SARA 313 Components

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

No SARA Hazards

Massachusetts Right To Know Components

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

Pennsylvania Right To Know Components

| DL-Histidine monohydrochloride monohydrate | CAS-No. 123333-71-1 | Revision Date |
|--|------------------------|---------------|
| New Jersey Right To Know Components | | |
| DL-Histidine monohydrochloride monohydrate | CAS-No. 123333-71-1 | Revision Date |

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.

16. OTHER INFORMATION

Further information

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Preparation Information

Sigma-Aldrich Corporation Product Safety – Americas Region 1-800-521-8956 Version: 6.0

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