

SAFETY DATA SHEET

Version 6.1

Revision Date 07/17/2018

Print Date 10/11/2019

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Hydrazine-d<SB>4</> dideuteriochloride

Product Number : 492795
Brand : Aldrich
Index-No. : 007-014-00-6

CAS-No. : 312623-95-3

1.2 Relevant identified uses of the 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 STATESTelephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887

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 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Respiratory sensitisation (Category 1), H334

Carcinogenicity (Category 1B), H350

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

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

Danger

Hazard statement(s)

H301 + H311 + H331

H314

H334

H350

H410

Toxic if swallowed, in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause cancer.

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201

P202

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

P260

Do not breathe dust or mist.

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.

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P301 + P330 + P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340

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.

P310

Immediately call a POISON CENTER/doctor.

P322

Specific measures (see supplemental first aid instructions on this label).

P361

Remove/Take off immediately all contaminated clothing.

P363

Wash contaminated clothing before reuse.

P391

Collect spillage.

P403 + P233

Store in a well-ventilated place. Keep container tightly closed.

P405

Store locked up.

P501

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

Formula : $D_6Cl_2N_2$
Molecular weight : 110.94 g/mol
CAS-No. : 312623-95-3
Index-No. : 007-014-00-6

Hazardous components

| Component | Classification | Concentration |
|--|---|---------------|
| Hydrazine-d4 dideuteriochloride | | |
| | Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Resp. Sens. 1; Carc. 1B; Aquatic Acute 1; Aquatic Chronic 1; H301 + H311 + H331, H314, H318, | <= 100 % |

| | | |
|--|------------------|--|
| | H334, H350, H410 | |
|--|------------------|--|

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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. 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

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 (NO_x)

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

Wear respiratory protection. 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.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 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.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

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.
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.
Store under inert gas. hygroscopic
Storage class (TRGS 510): 3: Flammable liquids

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

| Component | CAS-No. | Value | Control parameters | Basis |
|---------------------------------|-------------|--|--------------------------------|---|
| Hydrazine-d4 dideuteriochloride | 312623-95-3 | TWA | 0.010000 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | Remarks | Upper Respiratory Tract cancer Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption | | |
| | | TWA | 0.01 ppm | USA. ACGIH Threshold Limit Values (TLV) |
| | | Upper Respiratory Tract cancer Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption | | |
| | | TWA | 1.000000 ppm 1.300000 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants |
| | | Skin designation The value in mg/m3 is approximate. | | |
| | | C | 0.030000 ppm 0.040000 mg/m3 | USA. NIOSH Recommended Exposure Limits |
| | | Potential Occupational Carcinogen See Appendix A 2 hour ceiling value | | |
| | | PEL | 0.01 ppm 0.013 mg/m3 | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
| | | Skin | | |

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses 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

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|---|---|
| a) Appearance | Form: solid |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | Melting point/range: 200 °C (392 °F) Melting point/range: 200 °C (392 °F) - dec. |
| f) Initial boiling point and boiling range | No data available |
| 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 |
| l) Vapour density | No data available |
| m) Relative density | No data available |
| n) Water solubility | No data available |
| o) Partition coefficient: n-octanol/water | log Pow: 5.0 |
| 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

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

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

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

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Carcinogenicity

Possible human carcinogen

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Hydrazine-d4 dideuteriochloride)

NTP: RAHC - Reasonably anticipated to be a human carcinogen. The reference note has been added by TD based on the background information of the NTP. (Hydrazine-d4 dideuteriochloride)

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

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

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Central nervous system depression, May cause convulsions., Liver injury may occur., Kidney injury may occur., Damage to the lungs.

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(Hydrazine-d4 dideuteriochloride)

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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

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. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN number: 2811 Class: 6.1 Packing group: III
Proper shipping name: Toxic solids, organic, n.o.s. (Hydrazine-d4 dideuteriochloride)
Reportable Quantity (RQ) : 1 lbs

noMarine pollutant: no

Poison Inhalation Hazard: No

IMDG

UN number: 2811 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Hydrazine-d4 dideuteriochloride)

IATA

UN number: 2811

Class: 6.1

Packing group: III

Proper shipping name: Toxic solid, organic, n.o.s. (Hydrazine-d4 dideuteriochloride)

15. REGULATORY INFORMATION**SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302:

| | CAS-No. | Revision Date |
|---------------------------------|-------------|---------------|
| Hydrazine-d4 dideuteriochloride | 312623-95-3 | 2007-07-01 |

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

| | CAS-No. | Revision Date |
|---------------------------------|-------------|---------------|
| Hydrazine-d4 dideuteriochloride | 312623-95-3 | 2007-07-01 |

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

| | CAS-No. | Revision Date |
|---------------------------------|-------------|---------------|
| Hydrazine-d4 dideuteriochloride | 312623-95-3 | 2007-07-01 |

Pennsylvania Right To Know Components

| | CAS-No. | Revision Date |
|---------------------------------|-------------|---------------|
| Hydrazine-d4 dideuteriochloride | 312623-95-3 | 2007-07-01 |

New Jersey Right To Know Components

| | CAS-No. | Revision Date |
|---------------------------------|-------------|---------------|
| Hydrazine-d4 dideuteriochloride | 312623-95-3 | 2007-07-01 |

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

| | CAS-No. | Revision Date |
|---------------------------------|-------------|---------------|
| Hydrazine-d4 dideuteriochloride | 312623-95-3 | 2007-09-28 |

16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3.**

| | |
|---------------|--|
| H301 | Toxic if swallowed. |
| H301 + H311 + | Toxic if swallowed, in contact with skin or if inhaled. |
| H331 | |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H350 | May cause cancer. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Further information

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or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

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

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