

## SAFETY DATA SHEET

Version 8.3  
Revision Date 09/07/2021  
Print Date 06/01/2022

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Diethyl-d<sub>10</sub>-amine

Product Number : 488828  
Brand : Aldrich  
CAS-No. : 120092-66-2

**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 ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

**1.4 Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-  
527-3887 CHEMTREC (International) 24  
Hours/day; 7 Days/week

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 2), H225  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 4), H332  
Acute toxicity, Dermal (Category 4), H312  
Skin corrosion (Category 1A), H314  
Serious eye damage (Category 1), H318

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)<br>H225<br>H302 + H312 + H332<br>H314                                                                                                                                                                                                                                                                 | Highly flammable liquid and vapor.<br>Harmful if swallowed, in contact with skin or if inhaled.<br>Causes severe skin burns and eye damage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Precautionary statement(s)<br>P210<br><br>P233<br>P240<br>P241<br>P242<br>P243<br>P261<br>P264<br>P270<br>P271<br>P280<br><br>P301 + P312 + P330<br><br>P301 + P330 + P331<br>P303 + P361 + P353<br><br>P304 + P340 + P310<br><br>P305 + P351 + P338 + P310<br><br>P363<br>P370 + P378<br><br>P403 + P235<br>P405<br>P501 | Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.<br>Keep container tightly closed.<br>Ground/bond container and receiving equipment.<br>Use explosion-proof electrical/ ventilating/ lighting/ equipment.<br>Use only non-sparking tools.<br>Take precautionary measures against static discharge.<br>Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.<br>Wash skin thoroughly after handling.<br>Do not eat, drink or smoke when using this product.<br>Use only outdoors or in a well-ventilated area.<br>Wear protective gloves/ protective clothing/ eye protection/ face protection.<br>IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.<br>IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.<br>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.<br>IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.<br>Wash contaminated clothing before reuse.<br>In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.<br>Store in a well-ventilated place. Keep cool.<br>Store locked up.<br>Dispose of contents/ container to an approved waste disposal plant. |

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

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                  |                                     |
|------------------|-------------------------------------|
| Synonyms         | : Deuterated diethylamine           |
| Formula          | : C <sub>4</sub> D <sub>10</sub> HN |
| Molecular weight | : 82.99 g/mol                       |
| CAS-No.          | : 120092-66-2                       |

| Component                | Classification                                         | Concentration |
|--------------------------|--------------------------------------------------------|---------------|
| <b>Diethyl-d10-amine</b> |                                                        |               |
|                          | Flam. Liq. 2; Acute Tox. 4;<br>Skin Corr. 1A; Eye Dam. | <= 100 %      |

|  |                                          |  |
|--|------------------------------------------|--|
|  | 1; H225, H302, H332,<br>H312, H314, H318 |  |
|--|------------------------------------------|--|

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

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### **General advice**

Consult a physician. Show this material 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. 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

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## SECTION 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<sub>x</sub>)

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

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

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

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.

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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

#### Advice on protection against fire and explosion

Use explosion-proof equipment. **Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

For precautions see section 2.2.

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

#### Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store under inert gas. hygroscopic

#### Storage class

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

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

| Component         | CAS-No.     | Value                                                                    | Control parameters | Basis                                                                                   |
|-------------------|-------------|--------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------|
| Diethyl-d10-amine | 120092-66-2 | TWA                                                                      | 5 ppm              | USA. ACGIH Threshold Limit Values (TLV)                                                 |
|                   | Remarks     | Not classifiable as a human carcinogen<br>Danger of cutaneous absorption |                    |                                                                                         |
|                   |             | STEL                                                                     | 15 ppm             | USA. ACGIH Threshold Limit Values (TLV)                                                 |
|                   |             | Not classifiable as a human carcinogen<br>Danger of cutaneous absorption |                    |                                                                                         |
|                   |             | ST                                                                       | 25 ppm<br>75 mg/m3 | USA. NIOSH Recommended Exposure Limits                                                  |
|                   |             | TWA                                                                      | 10 ppm<br>30 mg/m3 | USA. NIOSH Recommended Exposure Limits                                                  |
|                   |             | TWA                                                                      | 25 ppm<br>75 mg/m3 | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants        |
|                   |             | TWA                                                                      | 10 ppm<br>30 mg/m3 | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                           |
|                   |             | STEL                                                                     | 25 ppm<br>75 mg/m3 | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                           |
|                   |             | C                                                                        | 5 ppm<br>15 mg/m3  | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|                   |             | Skin                                                                     |                    |                                                                                         |

## 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

Tightly fitting safety goggles. Faceshield (8-inch minimum). 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.

#### Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., 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 respirator with multi-purpose combination (US) or type AXBEK (EN 14387) 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.

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## **SECTION 9: Physical and chemical properties**

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

|                                                 |                                                                      |
|-------------------------------------------------|----------------------------------------------------------------------|
| a) Appearance                                   | Form: liquid                                                         |
| b) Odor                                         | No data available                                                    |
| c) Odor Threshold                               | No data available                                                    |
| d) pH                                           | No data available                                                    |
| e) Melting point/freezing point                 | Melting point/range: -50 °C (-58 °F) - lit.                          |
| f) Initial boiling point and boiling range      | 55 °C 131 °F - lit.                                                  |
| g) Flash point                                  | -28.9 °C (-20.0 °F) - closed cup                                     |
| h) Evaporation rate                             | No data available                                                    |
| i) Flammability (solid, gas)                    | No data available                                                    |
| j) Upper/lower flammability or explosive limits | No data available                                                    |
| k) Vapor pressure                               | No data available                                                    |
| l) Vapor density                                | No data available                                                    |
| m) Density                                      | 0.802 g/mL at 25 °C (77 °F) 0.802 g/cm <sup>3</sup> at 25 °C (77 °F) |
| Relative density                                | No data available                                                    |
| n) Water solubility                             | No data available                                                    |
| o) Partition coefficient: n-octanol/water       | No data available                                                    |
| p) Autoignition 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

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## **SECTION 10: Stability and reactivity**

### **10.1 Reactivity**

No data available

### **10.2 Chemical stability**

Stable

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

Vapors may form explosive mixture with air.

### **10.4 Conditions to avoid**

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### **10.5 Incompatible materials**

No data available

### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

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## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

LD50 Oral - 500.1 mg/kg

Oral: No data available

LC50 Inhalation - 4.0 h - 11.0 mg/l

Inhalation: No data available

LD50 Dermal - 1,100.0 mg/kg

Dermal: No data available

#### **Skin corrosion/irritation**

No data available

#### **Serious eye damage/eye irritation**

No data available

#### **Respiratory or skin sensitization**

No data available

#### **Germ cell mutagenicity**

No data available

#### **Carcinogenicity**

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

NTP: No ingredient 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

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

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

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**SECTION 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

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**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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.

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**SECTION 14: Transport information****DOT (US)**

UN number: 1154 Class: 3 (8) Packing group: II  
Proper shipping name: Diethylamine  
Reportable Quantity (RQ): 100 lbs  
Poison Inhalation Hazard: No

**IMDG**

UN number: 1154 Class: 3 (8) Packing group: II EMS-No: F-E, S-C  
Proper shipping name: DIETHYLAMINE

**IATA**

UN number: 1154 Class: 3 (8) Packing group: II  
Proper shipping name: Diethylamine

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**SECTION 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**

Fire Hazard, Acute Health Hazard

**Massachusetts Right To Know Components**

|                   |                        |                             |
|-------------------|------------------------|-----------------------------|
| Diethyl-d10-amine | CAS-No.<br>120092-66-2 | Revision Date<br>1993-02-16 |
|-------------------|------------------------|-----------------------------|

**Pennsylvania Right To Know Components**

|                   |                        |                             |
|-------------------|------------------------|-----------------------------|
| Diethyl-d10-amine | CAS-No.<br>120092-66-2 | Revision Date<br>1993-02-16 |
|-------------------|------------------------|-----------------------------|

**New Jersey Right To Know Components**

|                   |                        |                             |
|-------------------|------------------------|-----------------------------|
| Diethyl-d10-amine | CAS-No.<br>120092-66-2 | Revision Date<br>1993-02-16 |
|-------------------|------------------------|-----------------------------|

**California Prop. 65 Components**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

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## SECTION 16: Other information

### Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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