

## Bis(2-hydroxyethyl)amine-d<sub>11</sub>

### Section 1. Chemical product and company identifications

**Product code:** D-5738

**Chemical formula:** C<sub>4</sub>D<sub>11</sub>NO<sub>2</sub>

**CAS:** 1219804-08-6

**CAS (unlabelled):** 111-42-2

**Synonyms:** Diethanolamine, 2,2'-Iminodiethanol

**Supplier / Manufacturer:**

**C/D/N Isotopes Inc.**

88 Leacock Street  
Pointe-Claire (Québec) H9R 1H1  
Phone: 514-697-6254  
Toll-Free (Canada & USA): 1-800-565-4696  
Fax: 514-697-6148  
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**In case of emergency:**

**TOXYSCAN HOTLINE: 1-855-780-0599**

### Section 2. Hazards identifications

**Physical state:** Liquid

**Warning:** Harmful if swallowed. Causes skin irritation. Causes serious eye damage.


**Routes of entry:** Inhalation, ingestion, skin and eyes

**GHS (Globally Harmonized System of Classification and Labelling of Chemicals):**

**GHS Classification:**

- Acute toxicity, Oral (Category 4)
- Skin irritation (Category 2)
- Serious eye damage (Category 1)
- Carcinogenicity (Category 2)
- Specific target organ toxicity - repeated exposure (Category 2)

**GHS Label elements:**

- Pictograms: 
- Signal word: Danger

**Hazards statement:**

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.

**Precautionary statement:**

- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P317 Get medical help.

### Section 3. Composition and information on ingredients

| <u>Name</u>                              | <u>CAS</u>   | <u>Concentration %</u> |
|--|--------------|------------------------|
| Bis(2-hydroxyethyl)amine-d <sub>11</sub> | 1219804-08-6 | > 98                   |

## **Section 4. First aid measures**

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

**Skin contact:** Wash off with soap and plenty of water. Consult a physician.

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

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

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

## **Section 5. Firefighting measures**

**Flammability of the product:** Combustible at high temperature.

**Lower explosion limit:** 1.6 Vol%

**Upper explosion limit:** 10.6 Vol%

**Auto-ignition temperature:** 365 °C (689 °F)

**Flash point:** 176 °C (349 °F)

**Products of combustion:** Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides.

**Firefighting media and instructions:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

## **Section 6. Accidental release measures**

**Personal precautions:** Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

**Environmental precautions:** Do not let product enter drains. Discharge into the environment must be avoided.

**Methods for cleaning up:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## **Section 7. Handling and storage**

**Handling:** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Provide appropriate exhaust ventilation.

**Storage:** Store at room temperature. Adequate ventilation. Protect from air and moisture.

## **Section 8. Exposure Controls, Personal Protections**

**Engineering controls:** Use mechanical exhaust or laboratory fumehood to avoid exposure.

**Eyes:** Safety glasses with side-shields conforming to NIOSH (US) or EN 166 (EU).

**Respiratory:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (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).

**Hands:** Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Skin/body:** Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## **Section 9. Physical and chemical properties (unlabelled)**

**Molecular weight:** 105.14 g/mol

**Physical status:** Liquid

**Color:** Colorless to yellow

**Odour:** No data available

**Density:** 1.097 g/mL

**Melting point:** 28 °C (82 °F)

**Boiling point:** 270 °C (518 °F)

**Vapour pressure:** No data available

**Vapour density:** 3.63 (Air = 1)

**Partition coefficient (octanol/water):** log Pow: -1.43

**Water solubility:** Soluble

## **Section 10. Stability and reactivity**

**Stability and reactivity:** Absorbs carbon dioxide (CO<sub>2</sub>) from air. Stable under recommended storage conditions.

**Incompatibility:** Strong oxidizing agents.

**Products of combustion:** Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides.

**Reactivity conditions:** No data available.

## **Section 11. Toxicological information (unlabelled)**

**Toxicological data:** Diethanolamine

### **Information on ingredients:**

| <b><u>Name</u></b> | <b><u>CAS</u></b> | <b><u>LD<sub>50</sub></u></b>                           | <b><u>LC<sub>50</sub></u></b> |
|--------------------|-------------------|---|-------------------------------|
| Diethanolamine     | 111-42-2          | Oral - Rat - 680 mg/kg<br>Dermal - Rabbit - 8,381 mg/kg | No data available             |

### **Potential acute effects**

- **Eyes:** Causes serious eye damage.
- **Skin:** May be harmful if absorbed through skin. Causes skin irritation.
- **Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion:** Harmful if swallowed.

### **Potential chronic effects**

- **Carcinogenic effects:** This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. IARC: 2B - Group 2B: Possibly carcinogenic to humans (Diethanolamine). ACGIH: A3 - Animal carcinogen.
- **Mutagenic effects:** No data available.
- **Teratogenic effects:** No data available.
- **Medical conditions aggravated by overexposure:** May cause damage to organs through prolonged or repeated exposure.

## **Section 12. Ecological information**

### **Ecological data:**

| <b><u>Name</u></b> | <b><u>Results</u></b> | <b><u>Species</u></b>   | <b><u>Period</u></b> |
|--------------------|-----------------------|-------------------------|----------------------|
| Diethanolamine     | 1,460 mg/l LC50       | Pimephales promelas     | 96 h                 |
|                    | 55 mg/l EC50          | Daphnia magna           | 48 h                 |
|                    | 7.8 mg/l EC50         | Desmodesmus subspicatus | 72 h                 |

**Effects on environment:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**Mobility:** No data available.

**Environmental precautions:** No data available.

**Persistence and degradability:** No data available.

**Bioaccumulative potential:** No data available.

## **Section 13. Disposal considerations**

**Waste disposal:** Contact a licensed professional waste disposal service to dispose of this material.

## **Section 14. Transportation information**

### **Classification DOT/IMDG/IATA label:**

**Shipping name:** Not dangerous goods

**UN number:** None

**Class:** None

**Packaging group:** None

**Additional information:** None

## **Section 15. Regulatory information**

### **UNITED STATES: NFPA classification**



Health: 2  
Flammable: 1  
Reactivity: 0  
Special conditions: None

**Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous**

### **U.S. Federal regulations:**

**TSCA 8(b) inventory:** Diethanolamine

**SARA 302/304/311/312 extremely hazardous substances:** Not Listed

**SARA 302/304 emergency planning and notification:** Not Listed

**SARA 302/304/311/312 hazardous chemicals:** Not Listed

**SARA 311/312 MSDS distribution - chemical inventory - hazard identification:** Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard: Not Listed

**CWA (Clean Water Act) 307:** Not Listed

**CWA (Clean Water Act) 311:** Not Listed

**CAA (Clean Air Act) 112 accidental release prevention:** Not Listed

**CAA (Clean Air Act) 112 regulated flammable substances:** Not Listed

**CAA (Clean Air Act) 112 regulated toxic substances:** Not Listed

### **State regulations:**

**DEA List I Chemicals (Precursor Chemicals):** Not Listed

**DEA List II Chemicals (Essential Chemicals):** Not Listed

**Substances in Massachusetts:** Listed

**Dangerous substances in New Jersey:** Listed

**New York – Dangerous substances with acute effects:** Not Listed

**Dangerous substances in Pennsylvania – right to know:** Listed

### **WHMIS (Canada):**



D2A - Very toxic material causing other toxic effects

D2B - Toxic material causing other toxic effects

## **Section 16. Additional information**

### **References:**

- ANSI Z400.1, MSDS Standard, 2001.
- Manufacturer's Material Safety Data Sheet.
- 29CFR Part1910.1200 OSHA MSDS Requirements.
- 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. -Canada
- Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List".
- Federal act on the controlled products
- Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2002.
- Toxicological repertory, HSC.
- Material safety data sheet from the components.

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**Elaborated by:** Toxyscan Inc., 1-866-780-0599

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