1. PRODUCT AND COMPANY IDENTIFICATION

Product name: 1,8-Diazabicyclo[5.4.0]undec-7-ene
Product Number: 139009
Brand: Aldrich
Supplier: Sigma-Aldrich
Address: 3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone: +1 800-325-6532
Fax: +1 800-325-5062
Emergency Phone # (For both supplier and manufacturer): (314) 776-8655
Preparation Information: Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8655

2. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards
Toxic by Ingestion, Corrosive

GHS Classification
Corrosive to metals (Category 1)
Acute toxicity Oral (Category 1A)
Skin corrosion (Category 2)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 3)
Chronic aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements
Pictogram
Signal word Danger
Hazard statement(s)
H225 May be corrosive to metals.
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/ eye protection/ face protection.
P330 + P315 + 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 or doctor/physician.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: DBU
2,3,4,6,7,8,9,10-Octahydro-1H-diazepino[1,2-a]azepine
Formula: C₂H₁₃N₂
Molecular Weight: 152.24 g/mol
Component
Concentration

4. FIRST AID MEASURES

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

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

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

Special protective equipment for firefighters
Wear self-contained breathing apparatus for fire fighting if necessary.

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

6. ACCIDENTAL RELEASE MEASURES
**Personal precautions**  
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**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.

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

### 7. HANDLING AND STORAGE

**Precautions for safe handling**  
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

**Conditions for safe storage**  
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. Sensitive to carbon dioxide. Air sensitive.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**Personal protective equipment**  
- **Respiratory protection**
  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) or AEN (EU).

- **Hand 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.

- **Immersion protection**
  Material: butyl-rubber
  Minimum layer thickness: 0.3 mm
  Break through time: > 480 min.
  Material tested: Buton® (Aldrich 2677647, Size M)

- **Splash protection**
  Material: Nitrile rubber
  Minimum layer thickness: 0.11 mm
  Break through time: > 30 min.
  Material tested: Dermat® (Aldrich 2672727, Size M)

- **data source:** KCL GmbH, D-36124 Eichenzell, phone +49 (0) 6655 873000, e-mail salzes@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 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.

- **Eye protection**
  Tight fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

- **Skin and 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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

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

| Appearance | Form: clear, liquid  
| Colour: yellow |
| **Safety data** | **pH:** 12.6 at 10 g/l at 20 °C (68 °F)  
| Melting point/freezing point: Melting point: -70 °C (-94 °F)  
| Boiling point: 80 - 83 °C (176 - 181 °F) at 0.8 hPa (0.8 mmHg) - lit.  
| Flash point: 116 °C (241 °F)  
| Ignition temperature: 260 °C (500 °F)  
| Autoignition temperature: no data available  
| Lower explosion limit: 1.1 % (V)  
| Upper explosion limit: 6.5 % (V)  
| Vapour pressure: 7.1 hPa (53 mmHg) at 37.7 °C (99.9 °F)  
| Density: 1.018 g/mL at 25 °C (77 °F)  
| Water solubility: no data available  
| Partition coefficient: n-octanol/water: log Pow: < -2.2  
| Relative vapour density: no data available  
| Odour: unpleasant  
| Odour Threshold: no data available  
| Evaporation rate: no data available |

### 10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
No data available.

**Conditions to avoid**
No data available.

**Materials to avoid**
Acids, Acid chlorides, Acid anhydrides, Oxidizing agents, Chlorofluoromethanes.

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

**Other decomposition products** - no data available.

### 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

| Oral LD50 | L50 Oral - rat: 215 - 681 mg/kg |

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Inhalation LC₅₀
no data available

Dermal LD₅₀
no data available

Other information on acute toxicity
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 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 the 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

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion Toxic if swallowed.

Skin May be harmful if absorbed through skin. Causes skin burns.

Eyes Causes eye burns.

Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Cough, Shortness of breath, Headache, Nausea

Synergistic effects
no data available

Additional information

RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish LC₅₀ - Leuciscus idus (Golden orfe) - 100.0 - 220.0 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates EC₅₀ - Daphnia magna (Water flea) - 50 mg/l - 48 h
Toxicity to algae EC₅₀ - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h

Persistence and degradability

Biodegradability Method: OECD Test Guideline 302

Bioaccumulative potential

Does not bioaccumulate.

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects

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

no data available

13. DISPOSAL CONSIDERATIONS

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: 3267 Class: 8
Proper shipping name: Corrosive liquid, basic, organic, n.o.s. (1,8-Diazabicyclo[5.4.0]undec-7-ene)
Reportable Quantity (RQ): Marine pollutant: No
Pesticide Inhalation hazard: No

IMDG
UN number: 3267 Class: 8
Proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,8-Diazabicyclo[5.4.0]undec-7-ene)
Marine pollutant: No
EMS-No: F-A-S-8

IATA
UN number: 3267 Class: 8
Proper shipping name: Corrosive liquid, basic, organic, n.o.s. (1,8-Diazabicyclo[5.4.0]undec-7-ene)

15. REGULATORY INFORMATION

OSHA Hazards
Toxic by ingestion, Corrosive

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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

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

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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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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