

## Material Safety Data Sheet

Version 4.1

Revision Date 02/04/2011

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## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 1-Undecene

Product Number : 242527

Brand : Aldrich

Product Use : For laboratory research purposes.

Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Manufacturer : Sigma-Aldrich Corporation  
3050 Spruce St.  
St. Louis, Missouri 63103  
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

## 2. HAZARDS IDENTIFICATION

## Emergency Overview

## OSHA Hazards

Combustible Liquid, Irritant

## GHS Classification

Flammable liquids (Category 4)

Acute toxicity, Inhalation (Category 4)

Acute toxicity, Oral (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 3)

## GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H227

Combustible liquid

H302 + H332

Harmful if swallowed or if inhaled.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary statement(s)

P261

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## HMIS Classification

Health hazard:

2

Flammability:

2

**Physical hazards:** 0  
**NFPA Rating**  
**Health hazard:** 2  
**Fire:** 2  
**Reactivity Hazard:** 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** May be harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : Undec-1-ene

Formula : C<sub>11</sub>H<sub>22</sub>  
Molecular Weight : 154.3 g/mol

| CAS-No.            | EC-No.    | Index-No. | Concentration |
|--------------------|-----------|-----------|---------------|
| <b>Undec-1-ene</b> |           |           |               |
| 821-95-4           | 212-483-7 | -         | -             |

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**4. 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**

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.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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**5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media**

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

**Further information**

Use water spray to cool unopened containers.

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

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 vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### 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). Keep in suitable, closed containers for disposal.

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## 7. HANDLING AND STORAGE

### Precautions for safe handling

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

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

### 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.

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## 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 CEN (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.

#### Eye 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 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.

#### Hygiene measures

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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form clear, liquid

Colour colourless

### Safety data

pH no data available

Melting/freezing point Melting point/range: -49 °C (-56 °F)

Boiling point 192 - 194 °C (378 - 381 °F) at 1,013 hPa (760 mmHg)

Flash point 63 °C (145 °F) - closed cup

Ignition temperature no data available

Autoignition temperature no data available

|   |                   |
|---|-------------------|
| Lower explosion limit                     | no data available |
| Upper explosion limit                     | no data available |
| Vapour pressure                           | no data available |
| Density                                   | 0.751 g/cm3       |
| Water solubility                          | no data available |
| Partition coefficient:<br>n-octanol/water | no data available |
| Relative vapour<br>density                | no data available |
| Odour                                     | no data available |
| Odour Threshold                           | no data available |
| Evaporation rate                          | no data available |

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## 10. STABILITY AND REACTIVITY

### **Chemical stability**

Stable under recommended storage conditions.

### **Possibility of hazardous reactions**

no data available

### **Conditions to avoid**

Heat, flames and sparks.

### **Materials to avoid**

Strong oxidizing agents

### **Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

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## 11. TOXICOLOGICAL INFORMATION

### **Acute toxicity**

#### **Oral LD50**

no data available

#### **Inhalation LC50**

#### **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 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 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)**

Inhalation - May cause respiratory irritation.

#### **Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

#### **Aspiration hazard**

no data available

#### **Potential health effects**

|                   |  |
|-------------------|--|
| <b>Inhalation</b> | May be harmful if inhaled. Causes respiratory tract irritation.  |
| <b>Ingestion</b>  | May be harmful if swallowed.                                     |
| <b>Skin</b>       | May be harmful if absorbed through skin. Causes skin irritation. |
| <b>Eyes</b>       | Causes eye irritation.   |

#### **Signs and Symptoms of Exposure**

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

#### **Synergistic effects**

no data available

#### **Additional Information**

RTECS: Not available

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## **12. ECOLOGICAL INFORMATION**

#### **Toxicity**

no data available

#### **Persistence and degradability**

no data available

#### **Bioaccumulative potential**

no data available

#### **Mobility in soil**

no data available

#### **PBT and vPvB assessment**

no data available

#### **Other adverse effects**

no data available

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## **13. DISPOSAL CONSIDERATIONS**

#### **Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. 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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## 14. TRANSPORT INFORMATION

### DOT (US)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

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## 15. REGULATORY INFORMATION

### OSHA Hazards

Combustible Liquid, Irritant

### 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

Fire Hazard, Acute Health Hazard

### Massachusetts Right To Know Components

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

### Pennsylvania Right To Know Components

Undec-1-ene

CAS-No.  
821-95-4

Revision Date

### New Jersey Right To Know Components

Undec-1-ene

CAS-No.  
821-95-4

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.

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## 16. OTHER INFORMATION

### Further information

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