

## SAFETY DATA SHEET

Version 4.9  
 Revision Date 03/03/2015  
 Print Date 06/17/2015

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : 1-Octanol  
 Product Number : 297887  
 Brand : Sigma-Aldrich  
 CAS-No. : 111-87-5

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

#### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich  
 3050 Spruce Street  
 SAINT LOUIS MO 63103  
 USA  
 Telephone : +1 800-325-5832  
 Fax : +1 800-325-5052

#### 1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 4), H227  
 Skin irritation (Category 2), H315  
 Eye irritation (Category 2A), H319  
 Acute aquatic toxicity (Category 3), H402

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

Warning

Hazard statement(s)

H227 Combustible liquid.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H402 Harmful to aquatic life.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 P264 Wash skin thoroughly after handling.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/ eye protection/ face protection.  
 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

P332 + P313 contact lenses, if present and easy to do. Continue rinsing.  
 P337 + P313 If skin irritation occurs: Get medical advice/ attention.  
 P362 If eye irritation persists: Get medical advice/ attention.  
 P370 + P378 Take off contaminated clothing and wash before reuse.  
 P403 + P235 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for  
 P501 extinction.  
 Store in a well-ventilated place. Keep cool.  
 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

Synonyms : Octyl alcohol  
 Capryl alcohol  
 Alcohol C8

Formula : C<sub>8</sub>H<sub>18</sub>O  
 Molecular weight : 130.23 g/mol  
 CAS-No. : 111-87-5  
 EC-No. : 203-917-6

#### Hazardous components

Component	Classification	Concentration
<b>Octan-1-ol</b>		
	Flam. Liq. 4; Skin Irrit. 2; Eye Irrit. 2A; Aquatic Acute 3; H227, H315, H319, H402	<= 100 %

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

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.

### 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

## 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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## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours 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. Discharge into the environment must be avoided.

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

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 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.

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.

Storage class (TRGS 510): Combustible 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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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Octan-1-ol	111-87-5	TWA	50.000000 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

### 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

Safety glasses with side-shields conforming to EN166 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: 0.4 mm  
Break through time: 480 min  
Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

Splash contact  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 30 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**

impervious 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 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).

### **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.

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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

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

- |   |   |
|---|---|
| a) Appearance                                   | Form: clear, liquid<br>Colour: colourless |
| b) Odour  | No data available                         |
| c) Odour Threshold                              | No data available                         |
| d) pH   | No data available                         |
| e) Melting point/freezing point                 | Melting point/range: -15 °C (5 °F) - lit. |
| f) Initial boiling point and boiling range      | 196 °C (385 °F) - lit.                    |
| g) Flash point                                  | 80 °C (176 °F) - closed cup               |
| h) Evaporation rate                             | No data available                         |
| i) Flammability (solid, gas)                    | No data available                         |
| j) Upper/lower flammability or explosive limits | Lower explosion limit: 0.8 %(V)           |
| k) Vapour pressure                              | 0.19 hPa (0.14 mmHg) at 25 °C (77 °F)     |
| l) Vapour density                               | 4.5 - (Air = 1.0)                         |
| m) Relative density                             | 0.827 g/cm <sup>3</sup> at 25 °C (77 °F)  |
| n) Water solubility                             | No data available                         |
| o) Partition coefficient: n-octanol/water       | log Pow: 2.80 - 3.15                      |

- 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

Relative vapour density 4.5 - (Air = 1.0)

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## 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

Heat, flames and sparks.

### 10.5 Incompatible materials

Acids, Acid chlorides, Oxidizing agents, acids, Acid chlorides, Oxidizing agents

### 10.6 Hazardous decomposition products

Other decomposition products - No data available  
In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - > 3,200 mg/kg

Inhalation: No data available

Dermal: No data available

No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: Skin irritation

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Moderate eye irritation

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

Hamster

Lungs

SLN

#### 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

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

#### **Additional Information**

RTECS: RH6550000

Central nervous system depression, Nausea, Headache, Vomiting, narcosis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

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## **12. ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Toxicity to fish	mortality LOEC - Pimephales promelas (fathead minnow) - 1.19 mg/l - 7 d
	mortality NOEC - Pimephales promelas (fathead minnow) - 1.19 mg/l - 7 d
	LC50 - Oncorhynchus mykiss (rainbow trout) - 17.7 mg/l - 96 h
	LC50 - Pimephales promelas (fathead minnow) - 13.3 mg/l - 96 h
Toxicity to algae	EC50 - Desmodium subspicatus (green algae) - 6.5 - 14.0 mg/l - 48 h

### **12.2 Persistence and degradability**

Biodegradability	aerobic - Exposure time 28 d Result: 92 % - Readily biodegradable
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Ratio BOD/ThBOD	32 - 62 %
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### **12.3 Bioaccumulative potential**

Does not bioaccumulate.

### **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**

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

No data available

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## **13. DISPOSAL CONSIDERATIONS**

### **13.1 Waste treatment methods**

#### **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.

**Contaminated packaging**  
Dispose of as unused product.

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#### 14. TRANSPORT INFORMATION

##### DOT (US)

NA-Number: 1993      Class: NONE      Packing group: III  
Proper shipping name: Combustible liquid, n.o.s. (Octan-1-ol)  
Reportable Quantity (RQ):

Poison Inhalation Hazard: No

##### IMDG

Not dangerous goods

##### IATA

Not dangerous goods

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#### 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, Chronic Health Hazard

##### Massachusetts Right To Know Components

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

##### Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Octan-1-ol	111-87-5	1989-08-11

##### New Jersey Right To Know Components

	CAS-No.	Revision Date
Octan-1-ol	111-87-5	1989-08-11

##### 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

##### Full text of H-Statements referred to under sections 2 and 3.

Aquatic Acute	Acute aquatic toxicity
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
H227	Combustible liquid.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H402	Harmful to aquatic life.

##### HMIS Rating

Health hazard:	1
Chronic Health Hazard:	*
Flammability:	2
Physical Hazard	0

**NFPA Rating**

Health hazard: 0  
Fire Hazard: 2  
Reactivity Hazard: 0

**Further information**

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**Preparation Information**

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

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