

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 1-Pentanol

Product Number : P8274
Brand : Sigma

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

Telephone : +1 800-325-5832
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₅H₁₂O
Molecular Weight : 88.15 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Pentan-1-ol			
71-41-0	200-752-1	603-006-00-7	-

3. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs

Central nervous system

Other hazards which do not result in classification

Lachrymator.

NFPA Rating

Health Hazard: 2
Fire: 2
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Eyes May cause eye irritation.
Ingestion May be harmful if swallowed.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

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.

5. FIRE-FIGHTING MEASURES**Flammable properties**

Flash point 49 °C (120 °F) - closed cup

Ignition temperature 300 °C (572 °F)

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.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid breathing vapors, 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.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**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.

Storage

Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control	Update	Basis
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			parameters		
Pentan-1-ol	71-41-0	TWA	100 ppm	2008-01-01	USA. Workplace Environmental Exposure Levels (WEEL)

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

For prolonged or repeated contact use protective gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	colourless
Odour	characteristic

Safety data

pH	7
Melting point	-78 °C (-108 °F)
Boiling point	138 - 139 °C (280 - 282 °F)
Flash point	49 °C (120 °F) - closed cup
Ignition temperature	300 °C (572 °F)
Lower explosion limit	1.2 %(V) 1.6 %(V)
Upper explosion limit	10 %(V)
Vapour pressure	2.0 hPa (1.5 mmHg) at 20 °C (68 °F)
Density	0.81 g/mL at 25 °C (77 °F)
Water solubility	22.8 g/l at 25 °C (77 °F)
Partition coefficient: n-octanol/water	log Pow: 1.51
Relative vapour density	3.04 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents, Alkali metals, Strong acids, Halides, Aldehydes

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

Hazardous reactions

Vapours may form explosive mixture with air.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - mouse - 200 mg/kg

Remarks: Behavioral:General anesthetic.

LD50 Oral - rat - 3,670 mg/kg

LD50 Dermal - rabbit - 2,306 mg/kg

Remarks: Liver:Other changes. Kidney, Ureter, Bladder:Other changes.

Irritation and corrosion

Skin - rabbit - Skin irritation - 24 h

Sensitisation

Did not cause sensitization on laboratory animals.

Chronic exposure

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.

Signs and Symptoms of Exposure

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

Potential Health Effects

Inhalation

May be harmful if inhaled. May cause respiratory tract irritation.

Skin

May be harmful if absorbed through skin. May cause skin irritation. Repeated exposure may cause skin dryness or cracking.

Eyes

May cause eye irritation.

Ingestion

May be harmful if swallowed.

Target Organs

Central nervous system,

Additional Information

RTECS: SB9800000

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

Biodegradability aerobic
Result: 97 % - Readily biodegradable.

Ecotoxicity effects

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 370 - 490 mg/l - 96 h
Toxicity to daphnia EC50 - Daphnia magna (Water flea) - 341 mg/l - 48 h
and other aquatic
invertebrates.

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS**Product**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN-Number: 1105 Class: 3 Packing group: III
Proper shipping name: Pentanols
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG

UN-Number: 1105 Class: 3 Packing group: III EMS-No: F-E, S-D
Proper shipping name: PENTANOLS
Marine pollutant: No

IATA

UN-Number: 1105 Class: 3 Packing group: III
Proper shipping name: Pentanols

15. REGULATORY INFORMATION**DSL Status**

All components of this product are on the Canadian DSL list.

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.

Massachusetts Right To Know Components

Pentan-1-ol

CAS-No.
71-41-0Revision Date
2007-03-01**Pennsylvania Right To Know Components**

Pentan-1-ol

CAS-No.
71-41-0Revision Date
2007-03-01**New Jersey Right To Know Components**

Pentan-1-ol

CAS-No.
71-41-0Revision Date
2007-03-01**California Prop. 65 Components**

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

16. OTHER INFORMATION**Further information**

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