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
Fax: +1 800-325-5052
Emergency Phone #: (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: C₅H₁₂O
Molecular Weight: 88.15 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentan-1-ol</td>
<td>71-41-0</td>
<td>200-752-1</td>
<td>603-006-00-7</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
</table>

Sigma - P8274 Sigma-Aldrich Corporation www.sigma-aldrich.com
**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)
- 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: 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**

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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

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### 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, or any other reproductive defects.

### 16. OTHER INFORMATION

**Further information**

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