

## MATERIAL SAFETY DATA SHEET

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Version 1.7

## Section 1 - Product and Company Information

Product Name 1-PENTANOL, REAGENTPLUS, >=99%  
Product Number 138975  
Brand SIAL

Company Sigma-Aldrich  
Address 3050 Spruce Street  
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832  
Fax: 800-325-5052  
Emergency Phone: 314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
1-PENTANOL	71-41-0	No

Formula C5H12O  
Synonyms Alcool amylique (French) \* Amyl alcohol \* n-Amyl alcohol \* Amyl alcohol, normal \* Amylol \* n-Butylcarbinol \* n-Amylalkohol (Czech) \* Pentanol \* Pentanol-1 \* n-Pentanol \* Pentan-1-ol \* 1-Pentanol \* Primary amyl alcohol

RTECS Number: SB9800000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Combustible (USA) Flammable (EU). Harmful.  
Harmful by inhalation. Irritating to eyes, respiratory system and skin. Repeated exposure may cause skin dryness or cracking.  
Lachrymator. Target organ(s): Central nervous system.

## HMIS RATING

HEALTH: 2\*  
FLAMMABILITY: 2  
REACTIVITY: 0

## NFPA RATING

HEALTH: 2  
FLAMMABILITY: 2  
REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

## ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

#### INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

#### DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

#### EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

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### Section 5 - Fire Fighting Measures

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#### FLAMMABLE HAZARDS

Flammable Hazards: Yes

#### FLASH POINT

120.2 °F 49 °C Method: closed cup

#### EXPLOSION LIMITS

Lower: 1.2 % Upper: 10 %

#### AUTOIGNITION TEMP

300 °C

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: 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.

#### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Emits toxic fumes under fire conditions.  
Combustible liquid.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

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### Section 7 - Handling and Storage

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#### HANDLING

User Exposure: Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE



Miscellaneous Data           N/A  
Solubility                    N/A

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## Section 11 - Toxicological Information

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### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation. Lachrymator.

Inhalation: Material is irritating to mucous membranes and upper respiratory tract. Harmful if inhaled.

Ingestion: May be harmful if swallowed.

### TARGET ORGAN(S) OR SYSTEM(S)

Central nervous system.

### SIGNS AND SYMPTOMS OF EXPOSURE

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

### TOXICITY DATA

Oral

Rat

5660 UL/KG

LD50

Remarks: Behavioral:Somnolence (general depressed activity).

Intraperitoneal

Rat

579 MG/KG

LD50

Intravenous

Rat

196 MG/KG

LD50

Oral

Mouse

200 mg/kg

LD50

Remarks: Behavioral:General anesthetic.

Intraperitoneal

Mouse

970 MG/KG

LD50

Intravenous  
Mouse  
184 MG/KG  
LD50

Skin  
Rabbit  
2830 UL/KG  
LD50

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

Intraperitoneal  
Rabbit  
140 MG/KG  
LD50

Intraperitoneal  
Guinea pig  
615 MG/KG  
LD50

Intraperitoneal  
Hamster  
626 MG/KG  
LD50

#### IRRITATION DATA

Skin  
Rabbit  
3,200 mg/kg  
24H  
Remarks: Severe irritation effect

Skin  
Rabbit  
20 mg  
24H  
Remarks: Moderate irritation effect

Eyes  
Rabbit  
81 mg  
Remarks: Severe irritation effect

Eyes  
Rabbit  
0.005 ml  
24H  
Remarks: Severe irritation effect

#### CHRONIC EXPOSURE - MUTAGEN

Species: Hamster  
Dose: 25 MMOL/L  
Cell Type: lung  
Mutation test: SLN

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#### Section 12 - Ecological Information

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ACUTE ECOTOXICITY TESTS

Test Type: EC50 Algae  
Species: Chlorella vulgaris  
Value: 1,410 mg/l

Test Type: EC50 Algae  
Time: 24 h  
Value: 1,100 mg/l

Test Type: EC50 Daphnia  
Species: Daphnia magna  
Time: 48 h  
Value: 341 mg/l

Test Type: LC50 Fish  
Species: Onchorhynchus mykiss (Rainbow trout)  
Time: 96 h  
Value: 370.0 - 490.0 mg/l

Test Type: LC50 Fish  
Species: Brachydanio rerio  
Time: 96 h  
Value: 530 mg/l

Test Type: LC50 Fish  
Species: Lepomis macrochirus (Bluegill)  
Time: 96 h  
Value: 650 mg/l

Test Type: LC50 Fish  
Species: Pimephales promelas (Fathead minnow)  
Time: 96 h  
Value: 472 mg/l

ELIMINATION

Elimination: 97 %

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Section 13 - Disposal Considerations

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APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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Section 14 - Transport Information

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DOT

Proper Shipping Name: PENTANOLS  
UN#: 1105  
Class: 3  
Packing Group: Packing Group III  
Hazard Label: Flammable liquid  
PIH: Not PIH

IATA

Proper Shipping Name: PENTANOLS  
IATA UN Number: 1105  
Hazard Class: 3  
Packing Group: III

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## Section 15 - Regulatory Information

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### EU DIRECTIVES CLASSIFICATION

Symbol of Danger: Xn

Indication of Danger: Harmful.

R: 10-20-37-66

Risk Statements: Flammable. Harmful by inhalation. Irritating to respiratory system. Repeated exposure may cause skin dryness or cracking.

S: 46

Safety Statements: If swallowed, seek medical advice immediately and show this container or label.

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Combustible (USA) Flammable (EU). Harmful.

Risk Statements: Harmful by inhalation. Irritating to eyes, respiratory system and skin. Repeated exposure may cause skin dryness or cracking.

Safety Statements: If swallowed, seek medical advice immediately and show this container or label.

US Statements: Lachrymator. Target organ(s): Central nervous system.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes

### CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

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## Section 16 - Other Information

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### DISCLAIMER

For R&D use only. Not for drug, household or other uses.

### WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.