



Material Safety Data Sheet

1-Pentanol

MSDS# 15280

Section 1 - Chemical Product and Company Identification

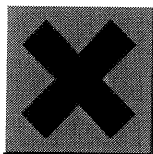
MSDS Name: 1-Pentanol  
Catalog Numbers: AC160600000, AC160600010, AC160600025, AC160600250, A394-4, A394-500, A394-J4, NC9855511  
Synonyms: Pentan-1-ol; n-Amyl alcohol; Pentyl alcohol.

Company Identification: Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
For information in the US, call: 201-796-7100  
Emergency Number US: 201-796-7100  
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

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CAS#: 71-41-0  
Chemical Name: 1-Pentanol  
%: 98+  
EINECS#: 200-752-1  
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Hazard Symbols: XN



Risk Phrases: 10 20 37 66

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Flammable liquid and vapor. Harmful if inhaled. Hygroscopic (absorbs moisture from the air). Aspiration hazard if swallowed. Can enter lungs and cause damage. May cause liver and kidney damage. Stench. Causes eye, skin, and respiratory tract irritation. Repeated exposure may cause skin dryness or cracking. Target Organs: Kidneys, central nervous system, liver, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.  
Skin: Causes skin irritation. May be harmful if absorbed through the skin. Repeated or prolonged exposure may cause drying and cracking of the skin.  
Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed. May cause central nervous system effects. May cause burning sensations, coughing, wheezing, laryngitis, shortness of breath and headache.  
Inhalation: Harmful if inhaled. Causes respiratory tract irritation. Inhalation may produce burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. May cause central nervous system effects.  
Chronic: May cause liver and kidney damage.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.  
Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing

contaminated clothing and shoes.

Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Possible aspiration hazard. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician:

### Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: 300 deg C ( 572.00 deg F)

Flash Point: 49 deg C ( 120.20 deg F)

Explosion Limits: Lower: 1.3 vol %

Explosion Limits: Upper: 10.5 vol %

NFPA Rating: health: 2; flammability: 3; instability: 1;

### Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Wear a self contained breathing apparatus and appropriate personal protection. (See Exposure Controls, Personal Protection section). Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

### Section 7 - Handling and Storage

Handling: Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area. Store protected from moisture.

### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1-Pentanol	none listed	none listed	none listed

OSHA Vacated PELs: 1-Pentanol: None listed

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a

Respirators: NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: colorless

Odor: stench

pH: 7 (25 g/L water)

Vapor Pressure: 2.6 mbar @ 20 deg C

Vapor Density: 3.0 (air=1)

Evaporation Rate: 0.18 (butyl acetate=1)

Viscosity: 4 mPa @ 20 deg C

Boiling Point: 137 - 139 deg C @ 760 mmHg

Freezing/Melting Point: -78 deg C (-108.40°F)

Decomposition Temperature: Not available

Solubility in water: Soluble

Specific Gravity/Density: 0.811

Molecular Formula: C<sub>5</sub>H<sub>12</sub>O

Molecular Weight: 88.15

#### Section 10 - Stability and Reactivity

Chemical Stability: Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials Strong oxidizing agents, alkali metals, alkaline earth metals.

Hazardous Decomposition Products Carbon monoxide, carbon dioxide.

Hazardous Polymerization Will not occur.

#### Section 11 - Toxicological Information

RTECS#: CAS# 71-41-0: SB9800000

RTECS:

**CAS# 71-41-0:** Draize test, rabbit, eye: 81 mg Severe;

Draize test, rabbit, eye: 5 uL/24H Severe;

Draize test, rabbit, skin: 3200 mg/24H Severe;

Draize test, rabbit, skin: 20 mg/24H Moderate;

LD50/LC50: Oral, mouse: LD50 = 200 mg/kg;

Oral, mouse: LD50 = 200 mg/kg;

Oral, rat: LD50 = 5660 uL/kg;

Oral, rat: LD50 = 370 mg/kg;

Skin, rabbit: LD50 = 2830 uL/kg;

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Carcinogenicity: 1-Pentanol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

#### Section 12 - Ecological Information

Other: Do not empty into drains.

#### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

#### Section 14 - Transport Information

US DOT

Shipping Name: PENTANOLS

Hazard Class: 3

UN Number: UN1105

Packing Group: III

Canada TDG  
Shipping Name: PENTANOLS  
Hazard Class: 3  
UN Number: UN1105  
Packing Group: III

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN

Risk Phrases:

R 10 Flammable.

R 20 Harmful by inhalation.

R 37 Irritating to respiratory system.

R 66 Repeated exposure may cause skin dryness or cracking.

Safety Phrases:

S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 71-41-0: 1

Canada

CAS# 71-41-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, D1B, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 71-41-0 is listed on Canada's Ingredient Disclosure List

**REVIEWED**

**DATE:** 29 March 2012

*Chuteford*

US Federal

TSCA

CAS# 71-41-0 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 12/12/1997

Revision #9 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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