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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : 4-Methyl-2-pentanol

Product Number : 109916  
Brand : Aldrich

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

Telephone : +18003255832  
Fax : +18003255052  
Emergency Phone # : (314) 776-6555

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**2. HAZARDS IDENTIFICATION****Emergency Overview****OSHA Hazards**

Combustible Liquid, Irritant

**GHS Label elements, including precautionary statements**

Pictogram



Signal word Warning

Hazard statement(s)

H226 Flammable liquid and vapour.  
H303 + H313 May be harmful if swallowed or in contact with skin.  
H371 May cause damage to organs.

Precautionary statement(s)

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

**HMIS Classification**

Health hazard: 2  
Flammability: 2  
Physical hazards: 0

**NFPA Rating**

Health hazard: 2  
Fire: 2  
Reactivity Hazard: 0

**Potential Health Effects**

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** May be harmful if swallowed.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : C<sub>6</sub>H<sub>14</sub>O  
Molecular Weight : 102.17 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>4-Methylpentan-2-ol</b>			
108-11-2	203-551-7	603-008-00-8	-

#### 4. 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.

#### 5. FIRE-FIGHTING MEASURES

##### 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 and materials for containment and 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

##### Precautions for safe handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

##### Conditions for safe 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		
4-Methylpentan-2-ol	108-11-2	TWA	25 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Danger of cutaneous absorption				
		STEL	40 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Danger of cutaneous absorption				
		TWA	25 ppm 100 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Skin notation				
		STEL	40 ppm 165 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Skin notation				
		TWA	25 ppm 100 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Skin designation The value in mg/m3 is approximate.				

### 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

Handle with 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

### Safety data

pH no data available  
Melting point 90 °C (194 °F)  
Boiling point 132 °C (270 °F)  
Flash point 41 °C (106 °F) - closed cup  
Ignition temperature no data available  
Lower explosion limit 1 %(V)

Upper explosion limit	5.5 %(V)
Vapour pressure	4.9 hPa (3.7 mmHg) at 20 °C (68 °F)
Density	0.802 g/mL at 25 °C (77 °F)
Water solubility	no data available
Relative vapour density	4.09

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Vapours may form explosive mixture with air.

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

no data available

### Hazardous decomposition products

no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 2,590 mg/kg

LD50 Dermal - rabbit - 2,876.5 mg/kg

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### 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

### Specific target organ toxicity - single exposure (GHS)

May cause damage to organs.

### Specific target organ toxicity - repeated exposure (GHS)

no data available

**Aspiration hazard**

no data available

**Potential health effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.

**Signs and Symptoms of Exposure**

Central nervous system depression, depression, narcosis, lowering of blood pressure due to cardiac depression, relaxing of smooth muscle in all regions and depressed skeletal muscle without influencing nerves.

**Additional Information**

RTECS: SA7350000

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**12. ECOLOGICAL INFORMATION****Toxicity**

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - > 100 mg/l

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

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**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. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

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

UN-Number: 2053 Class: 3 Packing group: III  
Proper shipping name: Methyl isobutyl carbinol  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN-Number: 2053 Class: 3 Packing group: III EMS-No: F-E, S-D  
Proper shipping name: METHYL ISOBUTYL CARBINOL  
Marine pollutant: No

**IATA**

UN-Number: 2053 Class: 3 Packing group: III  
Proper shipping name: Methyl isobutyl carbinol

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**15. REGULATORY INFORMATION**

**OSHA Hazards**

Combustible Liquid, Irritant

**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.

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
4-Methylpentan-2-ol	108-11-2	1993-04-24

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
4-Methylpentan-2-ol	108-11-2	1993-04-24

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
4-Methylpentan-2-ol	108-11-2	1993-04-24

**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****Further information**

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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 Co., 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.

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