

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Benzaldehyde

Product Number : 12010  
Brand : Fluka

Company : Sigma-Aldrich Canada, Ltd  
2149 Winston Park Drive  
OAKVILLE ON L6H 6J8  
CANADA

Telephone : +19058299500  
Fax : +19058299292  
Emergency Phone # : 800-424-9300

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Artificial essential oil of almond

Formula : C7H6O  
Molecular Weight : 106.12 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
<b>Benzaldehyde</b>			
100-52-7	202-860-4	605-012-00-5	-

## 3. HAZARDS IDENTIFICATION

**Emergency Overview**  
**Target Organs**  
Central nervous system, Liver, Kidney

**WHMIS Classification**  
B3 Combustible Liquid  
D2B  
Combustible Liquid  
Irritant  
Sensitizer

**HMIS Classification**  
Health Hazard: 3  
Chronic Health Hazard: \*  
Flammability: 2  
Physical hazards: 1

**NFPA Rating**  
Health Hazard: 3  
Fire : 2  
Reactivity Hazard: 1

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## Potential Health Effects

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** Harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes 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. 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**  
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

**Flammable properties**  
**Flash point** 64 °C (147 °F) - closed cup  
**Ignition temperature** 190 °C (374 °F)

**Suitable extinguishing media**  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**  
Wear self contained breathing apparatus for fire fighting if necessary.

**Further information**  
Under fire conditions, material may decompose to form flammable and/or explosive mixtures in air.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**  
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

**Environmental precautions**  
Do not let product enter drains.

**Methods for cleaning up**  
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

**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.

**Storage**  
Keep container tightly closed in a dry and well-ventilated place. Store under nitrogen.  
Air, light, and moisture sensitive.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Benzaldehyde	100-52-7	STEL	4 ppm 17 mg/m3	2005-02-03	Canada, Occupational Health and Safety Act [R.S.O. 1990, c.1], Industrial Establishments (R.R.O. 1990, Reg 851),139

## 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**  
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** 5.9 at 20 °C (68 °F)

**Melting point** -26 °C (-15 °F)

**Boiling point** 177 - 179 °C (351 - 354 °F)

**Flash point** 64 °C (147 °F) - closed cup

**Ignition temperature** 190 °C (374 °F)

**Lower explosion limit** 1.4 %(V)

**Upper explosion limit** 8.5 %(V)

**Vapour pressure** 5 hPa (4 mmHg) at 45 °C (113 °F)

**Density** 1.050 g/cm3

**Water solubility** slightly soluble

**Partition coefficient: n-** log Pow: 1.5

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**octanol/water**

**Relative vapour density** 3.66  
-(Air = 1.0)

## 10. STABILITY AND REACTIVITY

**Storage stability**  
Stable under recommended storage conditions.

**Conditions to avoid**  
Air Exposure to moisture. Light. Heat.

**Materials to avoid**  
Strong oxidizing agents, Strong reducing agents, Strong bases, Alkali metals, Aluminium, Iron, phenols, Oxygen

**Hazardous decomposition products**  
Hazardous decomposition products formed under fire conditions. - Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**  
**LD50 Oral - rat - 1,300 mg/kg**  
Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Coma.  
**LD50 Dermal - rabbit - 1,250 mg/kg**

**Irritation and corrosion**  
**Skin - rabbit - Skin irritation - 24 h**  
**Eyes - rabbit - Mild eye irritation**

**Sensitisation**  
May cause allergic respiratory and skin reactions

**Chronic exposure**  
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.  
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.  
Laboratory experiments have shown mutagenic effects.

## Signs and Symptoms of Exposure

**Central nervous system depression, Prolonged or repeated exposure to skin causes defatting and dermatitis.**

## Potential Health Effects

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** Harmful if absorbed through skin. Causes skin irritation.  
**Eyes** Causes eye irritation.  
**Ingestion** May be harmful if swallowed.  
**Target Organs** Central nervous system, Liver, Kidney,

## 12. ECOLOGICAL INFORMATION

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## Elimination information (persistence and degradability)

**Biodegradability** Biotic/Aerobic

## Ecotoxicity effects

**Toxicity to fish** LC50 - Lepomis macrochirus - 1.07 mg/l - 96 h  
mortality LOEC - Pimephales promelas (fathead minnow) - 0.45 mg/l - 7 d  
**mortality NOEC - Pimephales promelas (fathead minnow) - 0.22 mg/l - 7 d**  
LC50 - Leuciscus idus (Golden orfe) - 62 mg/l - 48 h  
EC50 - Daphnia magna (Water flea) - 50 mg/l - 24 h

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

**Contaminated packaging**  
Dispose of as unused product.

## 14. TRANSPORT INFORMATION

**DOT (US)**  
UN-Number: 1990 Class: 9 Packing group: III  
Proper shipping name: Benzaldehyde

**IMDG**  
UN-Number: 1990 Class: 9 Packing group: III EMS-No: F-A, S-A  
Proper shipping name: BENZALDEHYDE  
Marine pollutant: No

**IATA**  
UN-Number: 1990 Class: 9 Packing group: III  
Proper shipping name: Benzaldehyde

## 15. REGULATORY INFORMATION

**TSCA Status**  
On TSCA Inventory

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

**WHMIS Classification**  
B3 Combustible Liquid  
D2B  
Combustible Liquid  
Irritant  
Sensitizer

## 16. OTHER INFORMATION

**Further information**

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