

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 2-Hexanone
 Product Number : 02473
 Brand : Fluka
 Company : Sigma-Aldrich Canada, Ltd
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 CANADA
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Butyl methyl ketone
 Formula : C₆H₁₂O
 Molecular Weight : 100.16 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Methyl butyl ketone			
591-78-6	209-731-1	606-030-00-6	-

3. HAZARDS IDENTIFICATION**Emergency Overview****Target Organs**

Nerves.

WHMIS Classification

B2 Flammable Liquid

Flammable Liquid

D2A

Reproductive hazard

HMIS Classification**Health Hazard:** 1**Chronic Health Hazard:** ***Flammability:** 3**Physical hazards:** 0**Potential Health Effects****Inhalation**

May be harmful if inhaled. May cause respiratory tract irritation. Vapours may cause drowsiness and dizziness.

Skin

May be harmful if absorbed through skin. May cause skin irritation.

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Eyes
IngestionMay cause eye irritation.
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

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 23 °C (73 °F) - closed cup

Ignition temperature 423 °C (793 °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. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. 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 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. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Methyl butyl ketone	591-78-6	STEL	10 ppm 40 mg/m ³	2004-04-30	Canada, Occupational Health and Safety Code 218
Remarks	Substance may be readily absorbed through intact skin				
		TWA	5 ppm 20 mg/m ³	2004-04-30	Canada, Occupational Health and Safety Code 218
	Substance may be readily absorbed through intact skin				
		STEL	10 ppm 40 mg/m ³	2004-04-30	Canada, Occupational Health and Safety Code 218
	Substance may be readily absorbed through intact skin				
		TWA	5 ppm 20 mg/m ³	2004-04-30	Canada, Occupational Health and Safety Code 218
	Substance may be readily absorbed through intact skin				
		TWA	5 ppm	2004-08-01	Canada, Worker's Compensation Act, Occupational Health and Safety Regulations (BC Reg 296/97 as amended), 7.2 [B.C. Reg. 382/2004, s.1]
	The term "skin" identifies substances that contribute significantly to the overall exposure by the skin route.				
		STEL	10 ppm	2004-08-01	Canada, Worker's Compensation Act, Occupational Health and Safety Regulations (BC Reg 296/97 as amended), 7.2 [B.C. Reg. 382/2004, s.1]
	The term "skin" identifies substances that contribute significantly to the overall exposure by the skin route.				
		TWA	1 ppm 4 mg/m ³	2005-02-03	Canada, Occupational Health and Safety Act [R.S.O. 1990, c.1],

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					Industrial Establishments (R.R.O. 1990, Reg 851), 139
		TWA	5 ppm 20 mg/m ³	2000-01-12	Canada, Act Respecting Occupational Health and Safety [R.S.Q., c.2.1], Regulation respecting Occupational Health and Safety (O.C.885-2001), Division XV, Sections 130-14

SKIN (percutaneous) : The designation "Pc" in the Designation and remarks column refers to the potentially significant contribution to the overall exposure by the cutaneous route. Exposure is by contact with vapours or, of probable greater significance, by direct skin contact with the substance. The cutaneous route includes mucous membranes and the eyes.

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

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form clear, liquid

Colour colourless

Safety data

pH no data available

Melting point -57 °C (-71 °F)

Boiling point 127 °C (261 °F)

Flash point 23 °C (73 °F) - closed cup

Ignition temperature 423 °C (793 °F)

Lower explosion limit 1.3 %(V)

Upper explosion limit 8.1 %(V)

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Vapour pressure 1,013 hPa (760 mmHg) at 127.5 °C (261.5 °F)
13 hPa (10 mmHg) at 39 °C (102 °F)

Density 0.812 g/mL at 25 °C (77 °F)

Water solubility slightly soluble

Partition coefficient: log Pow: 1.38

n-octanol/water

Relative vapour density 3.46

- (Air = 1.0)

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Oxidizing agents, Strong bases

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Hazardous reactions

Vapours may form explosive mixture with air.

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 2,590 mg/kg

LC50 Inhalation - rat - 4 h - 8000 ppm

LD50 Dermal - rabbit - 4,800 mg/kg

Irritation and corrosion

Skin - rabbit - Mild skin irritation - 24 h

Eyes - rabbit - Mild eye irritation - 24 h

Sensitisation

no data available

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.

Developmental Toxicity - rat - Inhalation
Specific Developmental Abnormalities: Gastrointestinal system. Specific Developmental Abnormalities: Urogenital system.

Reproductive toxicity - rat - Inhalation

Effects on Newborn: Live birth index (# fetuses per litter; measured after birth). Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Behavioral.

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

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12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

no data available

Ecotoxicity effects

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 428 mg/l - 96 h

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. 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: 1224 Class: 3 Packing group: III

Proper shipping name: Ketones, liquid, n.o.s. (Methyl butyl ketone)

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 1224 Class: 3 Packing group: III EMS-No: F-E, S-D

Proper shipping name: KETONES, LIQUID, N.O.S. (Methyl butyl ketone)

Marine pollutant: No

IATA

UN-Number: 1224 Class: 3 Packing group: III

Proper shipping name: Ketones, liquid n.o.s. (Methyl butyl ketone)

15. REGULATORY INFORMATION

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DSL Status

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

WHMIS Classification

B2 Flammable Liquid

Flammable Liquid

D2A

Reproductive hazard

16. OTHER INFORMATION**Further information**

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