

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Methanol

Product Number : M3641
Brand : Sigma

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

Telephone : +1 9058299500
Fax : +1 9058299292
Emergency Phone # : 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CH₄O
Molecular Weight : 32.04 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Methanol			
67-56-1	200-659-6	603-001-00-X	-

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

Eyes, Kidney, Liver, Heart, Central nervous system

WHMIS Classification

B2 Flammable Liquid
D1A
D1B
D2B

Flammable Liquid
Highly toxic by inhalation
Toxic by ingestion
Toxic by skin absorption
Irritant

HMIS Classification

Health Hazard: 2
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 0

NFPA Rating

Health Hazard: 2
Fire: 3
Reactivity Hazard: 0

Sigma - M3641

Sigma-Aldrich Corporation
www.sigma-aldrich.com

Page 1 of 6

Potential Health Effects

Inhalation Toxic if inhaled. Causes respiratory tract irritation.
Skin Toxic if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Toxic 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. Take victim immediately to hospital. 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 11.0 °C (51.8 °F) - closed cup
Ignition temperature 455 °C (851 °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**

Wear respiratory protection. 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).

7. HANDLING AND STORAGE**Handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Sigma - M3641

Sigma-Aldrich Corporation
www.sigma-aldrich.com

Page 2 of 6

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.

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

Components	CAS-No.	Value	Control parameters	Update	Basis
Methanol	67-56-1	TWA	200 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]
		STEL	250 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]
		TWA	200 ppm 260 mg/m ³	2005-02-03	Canada, Occupational Health and Safety Act [R.S.O. 1990, c.1], Industrial Establishments (R.R.O. 1990, Reg 851), 139
		STEL	250 ppm 325 mg/m ³	2005-02-03	Canada, Occupational Health and Safety Act [R.S.O. 1990, c.1], Industrial Establishments (R.R.O. 1990, Reg 851), 139
		TWA	200 ppm 262 mg/m ³	2004-04-30	Canada, Occupational Health and Safety Code 218
		STEL	250 ppm 328 mg/m ³	2004-04-30	Canada, Occupational Health and Safety Code 218
		TWA	200 ppm 262 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
		STEL	250 ppm 328 mg/m ³	2000-01-12	Canada, Act Respecting Occupational Health and Safety [R.S.Q., c.2.1],

Sigma - M3641

Sigma-Aldrich Corporation
www.sigma-aldrich.com

Page 3 of 6

Regulation respecting Occupational Health and Safety (O.C.885-2001), Division XV, Sections 130-14

Personal protective equipment**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purposes combination (US) or type AXBEK (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 liquid
Colour colourless

Safety data

pH no data available
Melting point -98.0 °C (-144.4 °F)
Boiling point 64.0 - 65.0 °C (147.2 - 149.0 °F)
Flash point 11.0 °C (51.8 °F) - closed cup
Ignition temperature 455 °C (851 °F)
Lower explosion limit 6 %(V)
Upper explosion limit 36 %(V)
Vapour pressure 546.6 hPa (410.0 mmHg) at 50.0 °C (122.0 °F)
130.3 hPa (97.7 mmHg) at 20.0 °C (68.0 °F)
Density 0.79 g/cm³
Water solubility completely miscible
Partition coefficient: n-octanol/water log Pow: -0.77

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Sigma - M3641

Sigma-Aldrich Corporation
www.sigma-aldrich.com

Page 4 of 6

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

acids, Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents

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 - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg

Irritation and corrosion

Skin - rabbit - Skin irritation - 24 h
Eyes - rabbit - 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.

Signs and Symptoms of Exposure

Methyl alcohol may be fatal or cause blindness if swallowed., Cannot be made non-poisonous., Effects due to ingestion may include:, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Dizziness, Weakness, Confusion., Drowsiness, Unconsciousness, May cause convulsions.

Potential Health Effects

Inhalation Toxic if inhaled. Causes respiratory tract irritation.
Skin Toxic if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Toxic if swallowed.
Target Organs Eyes, Kidney, Liver, Heart, Central nervous system,

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

no data available

Ecotoxicity effects

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 19,000.00 mg/l - 96 h
LC50 - Cyprinus carpio (Carp) - 36,000.00 mg/l - 48 h
Toxicity to aquatic and other daphnic invertebrates. EC50 - Daphnia magna (Water flea) - 24,500.00 mg/l - 48 h

Sigma - M3641

Sigma-Aldrich Corporation
www.sigma-aldrich.com

Page 5 of 6

EC100 - Daphnia magna (Water flea) - 10,000.00 mg/l - 24 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. 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: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

IMDG

UN-Number: 1230 Class: 3 (6.1) Packing group: II EMS-No: F-E, S-D
Proper shipping name: METHANOL
Marine pollutant: No

IATA

UN-Number: 1230 Class: 3 (6.1) Packing group: II
Proper shipping name: Methanol

15. REGULATORY INFORMATION**TSCA Status**

On TSCA Inventory

DSL Status

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

WHMIS Classification

B2 Flammable Liquid
D1A
D1B
D2B

Flammable Liquid
Highly toxic by inhalation
Toxic by ingestion
Toxic by skin absorption
Irritant

16. OTHER INFORMATION**Further information**

Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only. 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.

Sigma - M3641

Sigma-Aldrich Corporation
www.sigma-aldrich.com

Page 6 of 6