

**Methanol****14262-1L**

Version 1.1

Revision Date 04/08/2019

Print Date 04/22/2019

**SECTION 1. IDENTIFICATION**

Product name : Methanol

Number : 000000020240

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell International Inc.  
1953 South Harvey Street  
Muskegon, MI 49442

For more information call : 1-800-368-0050  
+1-231-726-3171 (Monday-Friday, 9:00am-5:00pm)

**In case of emergency call : Medical: 1-800-498-5701 or +1-303-389-1414**  
**: Transportation (CHEMTREC): 1-800-424-9300 or +1-703-**  
**527-3887**  
:  
: (24 hours/day, 7 days/week)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : liquid

Color : colourless

Odor : characteristic

**Classification of the substance or mixture**

Classification of the substance or mixture : Flammable liquids, Category 2  
Specific target organ toxicity - single exposure, Category 1,  
Eyes, Nervous system, Systemic toxicity

**GHS Label elements, including precautionary statements**

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Symbol(s)

:



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapour.  
Causes damage to organs.

Precautionary statements

: **Prevention:**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Keep container tightly closed.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
IF exposed: Call a POISON CENTER or doctor/ physician.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

**Storage:**

Store in a well-ventilated place. Keep cool.  
Store locked up.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified

: Repeated or prolonged exposure may irritate eyes, skin and respiratory system.

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**Carcinogenicity**

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, IARC, or OSHA.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Formula : CH<sub>4</sub>O

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Methanol	67-56-1	<=100.00 %

**SECTION 4. FIRST AID MEASURES**

General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately. Show this safety data sheet to the doctor in attendance.

Inhalation : Call a physician immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present.

Skin contact : After contact with skin, wash immediately with plenty of water. Call a physician immediately.

Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Call a physician immediately.

Ingestion : Immediately give large quantities of water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.

**SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media : Water spray

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	Alcohol-resistant foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	: Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during firefighting	: Flammable. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO2) Formaldehyde
Special protective equipment for firefighters	: Wear self-contained breathing apparatus and protective suit.
Further information	: Use water spray to cool unopened containers. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	: Ensure adequate ventilation. Remove all sources of ignition. Wear personal protective equipment. Unprotected persons must be kept away.
Environmental precautions	: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.
Methods and materials for containment and cleaning up	: Ventilate the area. No sparking tools should be used. Use explosion-proof equipment. Contain spillage, soak up with non-combustible absorbent

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material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

**SECTION 7. HANDLING AND STORAGE****Handling**

- Precautions for safe handling : Exhaust ventilation at the object is necessary.  
Use explosion-proof equipment.  
Wear suitable protective clothing and gloves.
- Advice on protection against fire and explosion : The heavy vapours can overcome a considerable distance up to the source of ignition.  
Use only in explosion-proof areas.  
Keep product and empty container away from heat and sources of ignition.  
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

**Storage**

- Conditions for safe storage, including any incompatibilities : Store in area designed for storage of flammable liquids.  
Protect from physical damage.  
Keep containers tightly closed in a dry, cool and well-ventilated place.  
Store in original container.  
Keep locked up or in an area accessible only to qualified or authorised persons.
- Further information on storage conditions : Product is hygroscopic.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.  
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.  
Do not swallow.  
Do not breathe vapours or spray mist.

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- Engineering measures : Use with local exhaust ventilation.  
Electrical equipment should be protected to the appropriate standard.
- Eye protection : Safety goggles
- Hand protection : Imperious butyl rubber gloves  
Gloves must be inspected prior to use.  
Replace when worn.
- Skin and body protection : Wear as appropriate:  
Solvent-resistant apron  
Flame retardant antistatic protective clothing.  
If splashes are likely to occur, wear:  
Protective suit
- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- Hygiene measures : When using do not eat, drink or smoke.  
Wash hands before breaks and immediately after handling the product.  
Keep working clothes separately.  
Do not swallow.  
Do not breathe vapours or spray mist.  
Avoid contact with skin, eyes and clothing.

**Exposure Guidelines**

Components	CAS-No.	Value	Control parameters	Update	Basis
Methanol	67-56-1	TWA : Time weighted average	262 mg/m3 (200 ppm)	10 2006	CAD AB OEL:Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

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Methanol	67-56-1	SKIN_DE S : Skin designati on:	Can be absorbed through the skin.	10 2006	CAD AB OEL:Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)
Methanol	67-56-1	STEL : Short term exposure limit	328 mg/m3 (250 ppm)	10 2006	CAD AB OEL:Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)
Methanol	67-56-1	SKIN_DE S : Skin designati on:	Can be absorbed through the skin.	07 2007	CAD BC OEL:Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)
Methanol	67-56-1	STEL : Short term exposure limit	(250 ppm)	07 2007	CAD BC OEL:Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

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Methanol	67-56-1	TWA : Time weighted average	(200 ppm)	07 2007	CAD BC OEL:Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)
Methanol	67-56-1	SKIN_DE S : Skin designati on:	Can be absorbed through the skin.	03 2011	CAD MB OEL:Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)
Methanol	67-56-1	STEL : Short term exposure limit	(250 ppm)	03 2011	CAD MB OEL:Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)
Methanol	67-56-1	TWA : Time weighted average	(200 ppm)	03 2011	CAD MB OEL:Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

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Methanol	67-56-1	STEL : Short Term Exposure Limit (STEL):	(250 ppm)	11 2010	CAD ON OEL:Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)
Methanol	67-56-1	TWA : Time weighted average	(200 ppm)	11 2010	CAD ON OEL:Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)
Methanol	67-56-1	SKIN_DE S : Skin designati on:	Can be absorbed through the skin.	12 2007	CAD ON OEL:Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)
Methanol	67-56-1	SKIN_DE S : Skin designati on:	Can be absorbed through the skin.	05 2009	CAD SK OEL:Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)
Methanol	67-56-1	15 MIN ACL : 15 minute average contamin ation limit:	(250 ppm)	05 2009	CAD SK OEL:Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

## SAFETY DATA SHEET

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Methanol	67-56-1	8 HR ACL : 8 hour average contamin ation limit:	(200 ppm)	05 2009	CAD SK OEL:Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)
Methanol	67-56-1	SKIN_DE S : Skin designati on:	Can be absorbed through the skin.	09 2017	OEL (QUE):Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)
Methanol	67-56-1	STEL : Short term exposure limit	328 mg/m3 (250 ppm)	09 2017	OEL (QUE):Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)
Methanol	67-56-1	TWA : Time weighted average	262 mg/m3 (200 ppm)	09 2017	OEL (QUE):Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state : liquid

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Color	: colourless
Odor	: characteristic
Odor threshold	: Note: no data available
pH	: Note: Not applicable
Melting point/range	: -98 °C
Boiling point/boiling range	: 64 - 65 °C at 1,013 hPa
Flash point	: 52 °F (11 °C) Method: DIN 51755
Evaporation rate	: Note: no data available
Flammability	: Not applicable
Lower explosion limit	: 5.5 %(V)
Upper explosion limit	: 50 %(V)
Vapor pressure	: 128 hPa at 20 °C(68 °F) 532 hPa at 50 °C(122 °F)
Vapor density	: Note: no data available
Density	: 0.79 g/cm <sup>3</sup> at 20 °C
Water solubility	: Note: completely miscible

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Partition coefficient: n-octanol/water	: log Pow: -0.71
Ignition temperature	: 455 °C Method: DIN 51794
Auto-ignition temperature	: Note: not auto-flammable
Decomposition temperature	: Note: At normal pressure may be distilled without decomposition.
Viscosity, dynamic	: ca. 0.55 mPa.s at 25 °C
Viscosity, kinematic	: Note: no data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Molecular weight	: 32.04 g/mol

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Heat, flames and sparks. Keep away from direct sunlight.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO <sub>2</sub> ) Formaldehyde

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**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity : LD50: 5,630 mg/kg  
Species: Rat

Acute inhalation toxicity : LC50: > 80 mg/l  
Exposure time: 4 h  
Species: Rat

Acute dermal toxicity : LD50: > 10,000 mg/kg  
Species: Rabbit

Skin irritation : Species: Rabbit  
Result: irritating

Eye irritation : Species: Rabbit  
Result: irritating

Sensitisation : Note: no data available

Repeated dose toxicity  
Methanol : Species: Rat  
Application Route: Inhalation  
Test substance: Methanol  
Developmental Toxicity  
NOAEL (maternal toxicity)  
10,000 ppm  
NOAEL (developmental toxicity)  
5,000 ppm  
Skeletal and visceral malformations.

Genotoxicity in vitro  
Methanol : Note: In vitro tests did not show mutagenic effects.

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Genotoxicity in vivo  
Methanol

: Note: In vivo tests did not show mutagenic effects

Further information

: Note: When swallowed, there is a danger of blindness.

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

Toxicity to fish

: LC50: 15,400 mg/l  
Exposure time: 96 h  
Species: Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia and other  
aquatic invertebrates

: EC50: > 10,000 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)

Toxicity to algae

: Note: no data available

Toxicity to bacteria

: EC50: ca. 71,000 mg/l  
Species: Bacteria

**Elimination information (persistence and degradability)**

Bioaccumulation

: Note: Bioaccumulation is unlikely.

Mobility

: Note: no data available

Biodegradability

: Result: Readily biodegradable.  
Value: 99 %  
Method: OECD Test Guideline 301D

**Further information on ecology**

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Biochemical Oxygen Demand (BOD) : Value: 1,120 mg/g  
Chemical Oxygen Demand (COD) : Value: 1,500 mg/g  
Additional ecological information : Do not flush into surface water or sanitary sewer system.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

**SECTION 14. TRANSPORT INFORMATION**

**TDG** UN/ID No. : UN 1230  
Proper shipping name : METHANOL  
Class : 3  
Packing group : II  
Hazard Labels : 3 (6.1)

**IATA** UN/ID No. : UN 1230  
Description of the goods : METHANOL  
Class : 3  
Packaging group : II  
Hazard Labels : 3 (6.1)  
Packing instruction (cargo aircraft) : 364  
Packing instruction (passenger aircraft) : 352  
Packing instruction (passenger aircraft) : Y341

**IMDG** UN/ID No. : UN 1230  
Description of the goods : METHANOL  
Class : 3  
Packaging group : II  
Hazard Labels : 3 (6.1)  
EmS Number : F-E, S-D  
Marine pollutant : no  
IMDG Code segregation group according chapter 3.1.4.4 : NONE,

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**SECTION 15. REGULATORY INFORMATION****Inventories**

US. Toxic Substances Control Act	: On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	: On the inventory, or in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)	: All components of this product are on the Canadian DSL
Japan. Kashin-Hou Law List	: On the inventory, or in compliance with the inventory
Korea. Existing Chemicals Inventory (KECI)	: On the inventory, or in compliance with the inventory
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	: On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances	: On the inventory, or in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	: On the inventory, or in compliance with the inventory

**National regulatory information**

US. EPA CERCLA Hazardous Substances (40 CFR 302)	: The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):
	Reportable quantity: 5000 lbs
	: Methanol

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**WHMIS****Components**

: Methanol

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**NPRI****Components**

: Methanol

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**SECTION 16. OTHER INFORMATION**

	<b>HMIS III</b>	<b>NFPA</b>
Health hazard	: 2*	1
Flammability	: 3	3
Physical Hazard	: 0	
Instability	:	0

\* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

**Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 08/11/2017

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group