

Methanol**34966-4X4L**

Version 1.1

Revision Date 08/10/2018

Print Date 06/28/2019

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

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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

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.

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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.

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 : CH₄O

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

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- 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
 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

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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 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 |

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(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.

Engineering measures : Use with local exhaust ventilation.
 Electrical equipment should be protected to the appropriate standard.

Eye protection : Safety goggles

Hand protection : Impervious 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

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- 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	SKIN_DES : Skin designation:	Can be absorbed through the skin.	2008	ACGIH:US. ACGIH Threshold Limit Values
Methanol	67-56-1	STEL : Short term exposure limit	(250 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Methanol	67-56-1	TWA : Time weighted average	(200 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Methanol	67-56-1	STEL : Short term exposure limit	325 mg/m3 (250 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards

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Methanol	67-56-1	SKIN_DES : Skin designation:	Can be absorbed through the skin.	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Methanol	67-56-1	REL : Recommended exposure limit (REL):	260 mg/m3 (200 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Methanol	67-56-1	PEL : Permissible exposure limit	260 mg/m3 (200 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Methanol	67-56-1	SKIN_FINAL : Skin designation (Final Rule Limit applies):	Can be absorbed through the skin.	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Methanol	67-56-1	STEL : Short term exposure limit	325 mg/m3 (250 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Methanol	67-56-1	TWA : Time weighted average	260 mg/m3 (200 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
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

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Density	: 0.79 g/cm ³ at 20 °C
Water solubility	: Note: completely miscible
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

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.

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Incompatible materials : Oxidizing agents

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)
Formaldehyde

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

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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

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

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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**

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

DOT	UN/ID No.	: UN 1230
	Proper shipping name	: METHANOL
	Class	3
	Packing group	II
	Hazard Labels	3

IATA	UN/ID No.	: UN 1230
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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,

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

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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 67-56-1

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : The following components are subject to reporting levels established by SARA Title III, Section 313:
 : Methanol 67-56-1

SARA 311/312 Hazards : Fire Hazard
 Acute Health Hazard
 Chronic Health Hazard

CERCLA Reportable Quantity : 5000 lbs

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California Prop. 65

:



WARNING: This product can expose you to chemicals, listed below, known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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Massachusetts RTK

: Methanol

67-56-1

New Jersey RTK

: Methanol

67-56-1

Pennsylvania RTK

: Methanol

67-56-1

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
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.

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