

**Methanol****34860-4X4L**

Version 4.1

Revision Date 08/10/2018

Print Date 05/22/2019

**SECTION 1. IDENTIFICATION**

Product name : Methanol

Number : 000000011383

Product Use Description : Solvent

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, clear

Color : colourless

Odor : slight alcohol-like

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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.

**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**

Synonyms : Methyl Alcohol

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**

Inhalation : Call a physician immediately. Remove to fresh air. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.

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Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.

Ingestion : Call a physician immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

**Notes to physician**

Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Cool closed containers exposed to fire with water spray.

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 (CO<sub>2</sub>)  
Formaldehyde

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Wear personal protective equipment.  
Immediately evacuate personnel to safe areas.  
Keep people away from and upwind of spill/leak.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Do not breathe vapours or spray mist.  
Avoid contact with skin, eyes and clothing.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
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 : Wear personal protective equipment.  
Use only in well-ventilated areas.  
Keep container tightly closed.  
Do not smoke.  
Do not breathe vapours or spray mist.  
Avoid contact with skin, eyes and clothing.
- Advice on protection against fire and explosion : Keep away from fire, sparks and heated surfaces.  
Take precautionary measures against static discharges.  
Ensure all equipment is electrically grounded before beginning

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transfer operations.  
 Use explosion-proof equipment.  
 Keep product and empty container away from heat and sources of ignition.  
 No sparking tools should be used.  
 No smoking.

**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.  
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
 Keep away from heat and sources of ignition.  
 Keep away from direct sunlight.  
 Store away from incompatible substances.  
 Container hazardous when empty.  
 Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

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

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Engineering measures : Use with local exhaust ventilation.  
 Prevent vapour buildup by providing adequate ventilation during and after use.

Eye protection : Do not wear contact lenses.  
 Wear as appropriate:  
 Safety glasses with side-shields  
 If splashes are likely to occur, wear:  
 Goggles or face shield, giving complete protection to eyes

Hand protection : Solvent-resistant gloves  
 Gloves must be inspected prior to use.

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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 case of insufficient ventilation, wear suitable respiratory equipment.  
 For rescue and maintenance work in storage tanks use self-contained breathing apparatus.  
 Use NIOSH approved respiratory protection.
- 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 breathe vapours or spray mist.  
 Avoid contact with skin, eyes and clothing.  
 This material has an established AIHA ERPG exposure limit.  
 The current list of ERPG exposure limits can be found at [http://www.aiha.org/insideaiha/GuidelineDevelopment/ERPG/Documents/2011erpgweelhandbook\\_table-only.pdf](http://www.aiha.org/insideaiha/GuidelineDevelopment/ERPG/Documents/2011erpgweelhandbook_table-only.pdf).

**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

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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
Methanol	67-56-1	SKIN_DE S : Skin designati on:	Can be absorbed through the skin.	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Methanol	67-56-1	REL : Recomm ended exposure limit (REL):	260 mg/m3 (200 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Methanol	67-56-1	PEL : Permissi ble 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_FI NAL : Skin designati on (Final Rule Limit Limit applies):	Can be absorbed through the skin.	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

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Methanol	67-56-1	STEL : Short term exposure limit	325 mg/m <sup>3</sup> (250 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
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Methanol	67-56-1	TWA : Time weighted average	260 mg/m <sup>3</sup> (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, clear
Color	: colourless
Odor	: slight alcohol-like
Odor threshold	: Note: no data available
pH	: Note: Not applicable
Melting point/range	: Note: Not applicable
Boiling point/boiling range	: 64.7 °C
Flash point	: 52 °F (11 °C) Method: closed cup
Evaporation rate	: ca. 5 Method: Compared to Butyl acetate.

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Lower explosion limit	: 6 %(V)
Upper explosion limit	: 36 %(V)
Vapor pressure	: 129.32 hPa at 20 °C(68 °F)
Vapor density	: 1.11 Note: (Air = 1.0)
Density	: 0.792 g/cm <sup>3</sup> at 20 °C
Water solubility	: Note: completely soluble
Partition coefficient: n-octanol/water	: Note: no data available
Ignition temperature	: 464 °C
Decomposition temperature	: Note: No decomposition if used as directed.
Viscosity, dynamic	: Note: no data available
Viscosity, kinematic	: Note: no data available
Molecular weight	: 32.04 g/mol

**SECTION 10. STABILITY AND REACTIVITY**

Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous	: Hazardous polymerisation does not occur.

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## reactions

Conditions to avoid : Heat, flames and sparks.  
Keep away from direct sunlight.

Incompatible materials : Strong oxidizing agents  
Aluminium  
Magnesium  
May attack many plastics, rubbers and coatings.

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:  
Carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)  
Formaldehyde

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity : LD50: 5,628 mg/kg  
Species: Rat

Acute inhalation toxicity : LC50: 64000 ppm  
Exposure time: 4 h  
Species: Rat

Acute dermal toxicity : LD50: 15,800 mg/kg  
Species: Rabbit

Skin irritation : Species: Rabbit  
Classification: irritating  
Exposure time: 24 h

Eye irritation : Species: rabbit eye  
Classification: irritating

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- Repeated dose toxicity : Species: Rat  
Application Route: Inhalation  
Test substance: Methanol  
Note: Developmental Toxicity NOAEL (maternal toxicity)  
10,000 ppm NOAEL (developmental toxicity) 5,000 ppm  
Skeletal and visceral malformations.
- Genotoxicity in vitro : Note: In vitro tests did not show mutagenic effects
- Genotoxicity in vivo : Note: In vivo tests did not show mutagenic effects

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

- Toxicity to fish : LC50: 29,400 mg/l  
Exposure time: 96 h  
Species: Pimephales promelas (fathead minnow)
- Toxicity to daphnia and other aquatic invertebrates : LC50: 10,000 mg/l  
Exposure time: 24 h  
Species: Daphnia (water flea)
- Toxicity to bacteria : EC50: 43,000 mg/l  
Exposure time: 5 min  
Species: Photobacterium phosphoreum
- : EC50: 40,000 mg/l  
Exposure time: 15 min  
Species: Photobacterium phosphoreum
- : EC50: 39,000 mg/l  
Exposure time: 25 min

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Species: Photobacterium phosphoreum

**Further information on ecology**

Additional ecological information : Accumulation in aquatic organisms is unlikely.  
 The product is readily degradable in the environment.

**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  
 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

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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

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**

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**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

**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](http://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**

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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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Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group