Methanol

34966-4X4L

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

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.

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 : CH4O

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.

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

Most important symptoms/effects, acute and delayed : No information available.

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 (CO2) 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 (CO2) 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.

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 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. 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.

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), as amended
Methanol	67-56-1	SKIN_DES : Skin designation:	Can be absorbed through the skin.	10 2006	CAD AB OEL:Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
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), as amended

Methanol	67-56-1	SKIN_DES : Skin designation:	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)

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_DES : Skin designation:	Can be absorbed through the skin.	03 2011	CAD MB OEL:Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
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), as amended
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), as amended
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), as amended

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), as amended

Methanol	67-56-1	SKIN_DES : Skin designation:	Can be absorbed through the skin.	12 2007	CAD ON OEL:Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended

Methanol	67-56-1	SKIN_DES : Skin designation:	Can be absorbed through the skin.	05 2009	CAD SK OEL:Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

Methanol	67-56-1	15 MIN ACL : 15 minute average contamination limit:	(250 ppm)	05 2009	CAD SK OEL:Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

Methanol	67-56-1	8 HR ACL : 8 hour average contamination limit:	(200 ppm)	05 2009	CAD SK OEL:Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

Methanol	67-56-1	SKIN_DES : Skin designation:	Can be absorbed through the skin.	09 2017	OEL (QUE):Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended

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), as amended

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), as amended

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.
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/cm3 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

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	:	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 (CO2) 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	:	Note: Not classified due to data which are conclusive although insufficient for classification.
Eye irritation	:	Note: Not classified due to data which are conclusive although insufficient for classification.
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 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

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,

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 (IECSC)	:	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
WHMIS Components	:	Methanol	67-56-1
NPRI Components	:	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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