

Methanol

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 22 September 2005

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Supersedes: 01 March 2013

Version: 3.0



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Trade name : Methanol
Chemical name : methanol
EC index No. : 603-001-00-X
EC No. : 200-659-6
CAS No : 67-56-1
Formula : CH₃OH

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Solvent, Fuel, Feedstock

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Methanex Europe S.A.
Waterloo Office Park - Building P - Drève Richelle 161 - box 31
B-1410 Waterloo - BELGIUM
T +(32) 2 352 06 70 - F +(32) 2 352 06 99

1.4. Emergency telephone number

Emergency number : +44 (0) 1235 239 670 (24h/7d)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225
Acute Tox. 3 (Inhalation) H331
Acute Tox. 3 (Dermal) H311
Acute Tox. 3 (Oral) H301
STOT SE 1 H370

Full text of H-phrases: see section 16

Specific concentration limits:

(3 ≤ C < 10) STOT SE 2, H371
(C ≥ 10) STOT SE 1, H370

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11

T; R23/24/25

T; R39/23/24/25

Full text of R-phrases: see section 16

Specific concentration limits:

(3 ≤ C < 20) Xn;R20/21/22
(3 ≤ C < 10) Xn;R68/20/21/22
(C ≥ 10) T;R39/23/24/25
(C ≥ 20) T;R23/24/25

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour
H331 - Toxic if inhaled
H311 - Toxic in contact with skin
H301 - Toxic if swallowed
H370 - Causes damage to organs

Precautionary statements (CLP) :

P210 - Keep away from heat. - No smoking
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTRE or doctor
P403+P235 - Store in a well-ventilated place. Keep cool

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : Methanol
CAS No : 67-56-1
EC No. : 200-659-6
EC index No. : 603-001-00-X

Name	Product identifier	%
Methanol (Main constituent)	(CAS No.) 67-56-1 (EC No.) 200-659-6 (EC index No.) 603-001-00-X	>= 99.85

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a POISON CENTRE or doctor/physician. Methanol is toxic and flammable. Take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment and remove any sources of ignition).

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Obtain medical attention.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a POISON CENTRE or doctor/physician. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do. Continue rinsing. Ensure that folded skin of eyelids is thoroughly washed with water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Symptoms may include dizziness, headache, nausea and loss of coordination. CNS depression. Metabolic acidosis and severe visual effects can occur following an 8-24 hour latent period. Coma and death, usually due to respiratory failure, may occur if medical treatment is not received. Visual effects may include reduced reactivity and/or increased sensitivity to light, blurred, double and/or snowy vision, and blindness.

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Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Repeated and/or prolonged skin contact may cause irritation.
Symptoms/injuries after eye contact	: Moderate eye irritant.
Symptoms/injuries after ingestion	: Ingestion of as little as 10 ml of methanol can cause blindness and 30 ml (1 ounce) can cause death if victim is not treated. Ingestion causes mild central nervous system (CNS) depression with nausea, headache, vomiting, dizziness, incoordination and an appearance of drunkenness. Metabolic acidosis and severe visual effects can occur following an 8-24 hour latent period. Coma and death, usually due to respiratory failure, may occur if medical treatment is not received. Visual effects may include reduced reactivity and/or increased sensitivity to light, blurred, double and/or snowy vision, and blindness.
Chronic symptoms	: Has caused teratogenic and fetotoxic effects, in the absence of maternal toxicity in animal studies.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. The severity of outcome following methanol ingestion may be more related to the time between ingestion and treatment, rather than the amount ingested. Therefore, there is a need for rapid treatment of any ingestion exposure. Antidote is fomepizole which enhances elimination of metabolic formic acid. This must be administered by a physician only. For specialist advice physicians should contact the Poison Control Centre.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Synthetic Fire fighting foam AR-FFF (3% solution). Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream. Water may be effective for cooling, diluting, or dispersing methanol, but may not be effective for extinguishing a fire because it will not cool methanol below its flash point. If water is used for cooling, the solution will spread if not contained. Mixtures of methanol and water at concentrations greater than 20% methanol are still considered flammable.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour. Can accumulate in confined spaces, resulting in a toxicity and flammability hazard. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases. Under fire conditions closed containers may rupture or explode. Flame may be invisible during the day. The use of infrared and/or heat detection devices is recommended.
Explosion hazard	: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid fire-fighting water entering the environment.
Protection during firefighting	: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing, gloves and eye or face protection.
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Wear suitable protective clothing and eye or face protection.
Emergency procedures	: Remove ignition sources. Ensure adequate ventilation. Avoid inhalation of vapours. Avoid contact with eyes, skin and clothing.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Methanol's main physical behavior if spilled to water is described as "dissolves/evaporates" in the European Behaviour Classification system for chemicals (reported in IMO (2011)). GESAMP hazard profile: methanol does not bioaccumulate and is readily biodegradable in the aquatic environment (IMO2011).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Stop leak if safe to do so. Remove all sources of ignition. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Wash spill area with soapy water. Large spills: Dike to collect large liquid spills. Alcohol resistant foams may be applied to spill to diminish vapour and fire hazard. Remove liquid by intrinsically safe pumps or vacuum equipment designed for vacuuming flammable materials (i.e. equipped with inert gases and ignition sources controlled). Place in suitable, covered, labelled containers.
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6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No naked lights. No smoking. Use only explosion-proof equipment. Use only non-sparking tools. Do not breathe Vapours.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment. Have appropriate fire extinguishers and spill cleanup equipment in or near storage area.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Ignition sources, Oxidising agents. Keep in fireproof place. Keep container tightly closed. Do not store in confined spaces.
- Storage area : Store at room temperature. Keep out of direct sunlight. Store in a dry area. Keep container in a well-ventilated place. Fireproof storeroom. Keep locked up. Provide the tank with earthing. Unauthorized persons are not admitted.
- Packaging materials : SUITABLE MATERIAL: Steel. Stainless steel. Iron. Glass. MATERIAL TO AVOID: Lead. Aluminium. zinc. Polyethylene. PVC.

7.3. Specific end use(s)

Solvent, Fuel, Feedstock.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methanol (67-56-1)		
EU	IOELV TWA (mg/m ³)	260 mg/m ³
EU	IOELV TWA (ppm)	200 ppm
EU	Notes	Skin
Austria	Local name	Methanol
Austria	MAK (mg/m ³)	260 mg/m ³
Austria	MAK (ppm)	200 ppm
Austria	MAK Short time value (mg/m ³)	1040 mg/m ³
Austria	MAK Short time value (ppm)	800 ppm
Austria	Remark (AT)	H
Belgium	Local name	Alcool méthylique
Belgium	Limit value (mg/m ³)	266 mg/m ³
Belgium	Limit value (ppm)	200 ppm
Belgium	Short time value (mg/m ³)	333 mg/m ³
Belgium	Short time value (ppm)	250 ppm
Belgium	Remark (BE)	D
Czech Republic	Local name	Methanol
Czech Republic	Expoziční limity (PEL) (mg/m ³)	250 mg/m ³
Czech Republic	Expoziční limity (PEL) (ppm)	189 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m ³)	1000 mg/m ³
Czech Republic	Expoziční limity (NPK-P) (ppm)	750 ppm
Czech Republic	Remark (CZ)	D
Denmark	Local name	Methanol
Denmark	Grænseværdie (langvarig) (mg/m ³)	260 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	200 ppm
Denmark	Grænseværdie (kortvarig) (mg/m ³)	520 mg/m ³
Denmark	Grænseværdie (kortvarig) (ppm)	400 ppm
Denmark	Anmærkninger (DK)	EH
Finland	Local name	Metanoli
Finland	HTP-arvo (8h) (mg/m ³)	270 mg/m ³
Finland	HTP-arvo (8h) (ppm)	200 ppm

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Methanol (67-56-1)		
Finland	HTP-arvo (15 min)	330 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	250 ppm
Finland	Huomautus (FI)	iho
France	Local name	Alcool méthylique
France	VME (mg/m ³)	260 mg/m ³
France	VME (ppm)	200 ppm
France	VLE (mg/m ³)	1300 mg/m ³
France	VLE (ppm)	1000 ppm
France	Note (FR)	Peau
Germany	Local name	Methanol
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	270 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (ppm)	200 ppm
Germany	TRGS 900 Limitation of exposure peaks (mg/m ³)	1080 mg/m ³
Germany	TRGS 900 Limitation of exposure peaks (ppm)	800 ppm
Germany	Remark (TRGS 900)	DFG,EU,H,Y
Germany	TRGS 903 (BGW)	30 mg/l
Germany	Remark (TRGS 903)	(Urin; bei Langzeitexposition/Expositionsende bzw. Schichtende)
Greece	OEL TWA (mg/m ³)	260 mg/m ³
Greece	OEL TWA (ppm)	200 ppm
Greece	OEL STEL (mg/m ³)	325 mg/m ³
Greece	OEL STEL (ppm)	250 ppm
Hungary	Local name	METIL-ALKOHOL
Hungary	AK-érték	260 mg/m ³
Hungary	Megjegyzések (HU)	b, i; II.1.
Ireland	Local name	Methanol
Ireland	OEL (8 hours ref) (mg/m ³)	260 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	200 ppm
Ireland	Notes (IE)	Sk, IOELV
Italy	Local name	Metanolo
Italy	OEL TWA (mg/m ³)	260 mg/m ³
Italy	OEL TWA (ppm)	200 ppm
Latvia	Local name	Metanols (metilspirts, karbinols)
Latvia	OEL TWA (mg/m ³)	260 mg/m ³
Latvia	OEL TWA (ppm)	200 ppm
Lithuania	Local name	Metanolis (metilo alkoholis)
Lithuania	IPRV (mg/m ³)	260 mg/m ³
Lithuania	IPRV (ppm)	200 ppm
Lithuania	Remark (LT)	O
Netherlands	Local name	Methanol
Netherlands	Grenswaarde TGG 8H (mg/m ³)	133 mg/m ³
Netherlands	Grenswaarde TGG 8H (ppm)	200 ppm
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	520 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (ppm)	400 ppm
Netherlands	Remark (MAC)	H
Poland	Local name	Metanol (metylowy alkohol)
Poland	NDS (mg/m ³)	100 mg/m ³
Poland	NDSch (mg/m ³)	300 mg/m ³
Portugal	Local name	Metanol (Álcool metílico)
Portugal	OEL TWA (ppm)	200 ppm
Portugal	OEL STEL (ppm)	250 ppm
Romania	Local name	Alcool metilic
Romania	OEL TWA (mg/m ³)	260 mg/m ³
Romania	OEL TWA (ppm)	200 ppm

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Methanol (67-56-1)		
Romania	OEL STEL (ppm)	5 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	260 mg/m ³ poznámka K
Slovakia	NPHV (priemerná) (ppm)	200 ppm poznámka K 30 ppm (Metanol)
Spain	VLA-ED (mg/m ³)	266 mg/m ³ vía dérmica, VLB, VLI
Spain	VLA-ED (ppm)	200 ppm vía dérmica, VLB, VLI 15 ppm F, I " (Alcohol metílico en orina; Final de la jornada laboral 2)"
Spain	VLA-EC (mg/m ³)	333 mg/m ³ vía dérmica, VLB, VLI
Spain	VLA-EC (ppm)	250 ppm vía dérmica, VLB, VLI
Sweden	Local name	Methanol
Sweden	nivågränsvärde (NVG) (mg/m ³)	250 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	200 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	350 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	250 ppm
Sweden	Anmärkning (SE)	H
United Kingdom	Local name	Methanol
United Kingdom	WEL TWA (mg/m ³)	266 mg/m ³
United Kingdom	WEL TWA (ppm)	200 ppm
United Kingdom	WEL STEL (mg/m ³)	333 mg/m ³
United Kingdom	WEL STEL (ppm)	250 ppm
United Kingdom	Remark (WEL)	Sk
Norway	Local name	Metanol
Norway	Gjennomsnittsverdier (AN) (mg/m ³)	130 mg/m ³
Norway	Gjennomsnittsverdier (AN) (ppm)	100 ppm
Norway	Merknader (NO)	H
USA - ACGIH	Local name	Methanol
USA - ACGIH	ACGIH TWA (mg/m ³)	262 mg/m ³
USA - ACGIH	ACGIH TWA (ppm)	200 ppm
USA - ACGIH	ACGIH STEL (mg/m ³)	327 mg/m ³
USA - ACGIH	ACGIH STEL (ppm)	250 ppm
USA - ACGIH	Remark (ACGIH)	Headache; eye dam; dizziness; nausea

Methanol (67-56-1)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	40 mg/kg bodyweight/day
Acute - systemic effects, inhalation	260 mg/m ³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	8 mg/kg bodyweight
Acute - systemic effects, inhalation	50 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	154 mg/l
PNEC aqua (marine water)	15.4 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	570.4 mg/l

8.2. Exposure controls

Appropriate engineering controls	: Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. Both local exhaust and good general room ventilation must be provided not only to control exposure but also to prevent formation of flammable mixtures. Emergency safety showers should be available in the immediate vicinity of any potential exposure. Use only explosion-proof equipment.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear Viton® /, Butyl rubber gloves. Gloves must be replaced after each use and whenever signs of wear or perforation appear. Butyl rubber. Breakthrough time (maximum wearing time) : > 8 hours. Viton. Breakthrough time (maximum wearing time) : 1-4 Hours. (EN374).
Eye protection	: Chemical goggles or safety glasses. A face shield may also be necessary. (EN166).
Skin and body protection	: Wear chemical resistant overall.

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Respiratory protection	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear a positive pressure full face self-contained breathing apparatus or a full face supplied air respirator.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Molecular mass	: 32.04 g/mol
Colour	: Colourless.
Odour	: alcohol odour.
Odour threshold	: 4.2 - 5960 ppm
pH	: Not applicable
Relative evaporation rate (butylacetate=1)	: 4.1
Melting point	: -97.8 °C
Freezing point	: -97.6 °C
Boiling point	: 64.7 °C
Flash point	: 11 °C
Auto-ignition temperature	: 464 °C
Decomposition temperature	: Not available
Flammability (solid, gas)	: Highly flammable liquid and vapour
Vapour pressure	: 12.8 kPa @ 20°C
Relative vapour density at 20 °C	: 1.1
Relative density	: 0.791 - 0.793 @ 20°C
Relative density of saturated gas/air mixture	: 1.0
Density	: 792 kg/m ³
Solubility	: Miscible with water.
Log Pow	: 0.82
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.8 cP (20 °C)
Explosive properties	: Vapours may form explosive mixture with air.
Oxidising properties	: Not oxidising.
Explosive limits	: 5.5 - 36.5 vol %

9.2. Other information

VOC content	: 100 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures. Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture. Hygroscopic.

10.3. Possibility of hazardous reactions

Under fire conditions closed containers may rupture or explode.

10.4. Conditions to avoid

Direct sunlight. High temperature. Open flame. Ignition sources.

10.5. Incompatible materials

Oxidizing agents. Strong acids. Strong bases. Methanol is not compatible with gasket and O-rings materials made of Buna-N and Nitrile.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. May release flammable gases. Formaldehyde.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Toxic if inhaled. Toxic in contact with skin. Toxic if swallowed.
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Methanol (67-56-1)	
LD50 oral rat	5600 mg/kg
LD50 dermal rabbit	15800 mg/kg
LC50 inhalation rat (ppm)	64000 ppm/4h rat

Skin corrosion/irritation	: Not classified Based on available data, the classification criteria are not met pH: Not applicable
Serious eye damage/irritation	: Moderate eye irritant Based on available data, the classification criteria are not met pH: Not applicable
Respiratory or skin sensitisation	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Causes damage to organs (Eyes) (central nervous system)
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Toxic if swallowed. Toxic in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

Methanol (67-56-1)	
LC50 fish	15400 - 29400 mg/l 96 h - Fish
EC50 Daphnia	> 10000 mg/l 48 h - Daphnia
EC50 other aquatic organisms 1	22000 mg/l 72h - <i>Selenastrum carpicornutum</i> (<i>Pseudokichnerela subcapitata</i>)

12.2. Persistence and degradability

Methanol (67-56-1)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Methanol (67-56-1)	
BCF fish 1	< 10 (<i>Leuciscus idus</i>)
Log Pow	0.82
Bioaccumulative potential	Bioaccumulation unlikely. Based on the n-octanol/water partition coefficient accumulation in organisms is not expected.

12.4. Mobility in soil

Methanol (67-56-1)	
Mobility in soil	Mobile

12.5. Results of PBT and vPvB assessment

Methanol (67-56-1)	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

: Avoid release to the environment

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Methanol waste should be handled and stored in a similar manner to methanol products or mixtures. Avoid release to the environment. Collect methanol waste in secure and sealable containers. Refer to section 6 and 7 for information on accidental releases, handling and storage conditions. Methanol waste shall not be mixed together with other waste. Dispose methanol waste in a safe manner in accordance with local and/or national regulations. Use qualified hazardous waste companies to transport and dispose of methanol waste. Recycle wherever possible. Large volumes may be suitable for re-distillation. Empty containers may contain hazardous residue. Never weld, cut or grind empty containers. Empty containers should be rinsed appropriately with clean water. Rinse water should be disposed of as methanol waste.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 1230

14.2. UN proper shipping name

Proper Shipping Name (ADR/RID) : METHANOL

Proper Shipping Name (IATA) : METHANOL

Proper Shipping Name (IMDG) : METHANOL

: :

Transport document description (ADR) : UN 1230 METHANOL, 3 (6.1), II

14.3. Transport hazard class(es)

Class (ADR/RID) : 3

Class (IATA) : 3

Class (IMDG) : 3

Subsidiary risks (ADR) : 6.1

Subsidiary risk (IMDG) : 6.1

Subsidiary risk (IATA) : 6.1

Hazard labels (ADR/RID) : 3, 6.1



Hazard labels (IATA) : 3, 6.1



Danger labels (IMDG) : 3, 6.1



14.4. Packing group

Packing group (ADR/RID) : II

Packing group (IATA) : II

Packing group (IMDG) : II

14.5. Environmental hazards

Other information : Not classified.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

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14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Authorisations and/or restrictions on use (Annex XVII):

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Methanol
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	Methanol

VOC content : 100 %

15.1.2. National regulations

Water hazard class (WGK) : 1 - low hazard to waters

WGK remark : Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2)

Storage class (LGK) : LGK 3 - Flammable liquids

No ICPE	Installations classées Désignation de la rubrique	Code Régime	Rayon
1130.text	Toxiques (fabrication industrielle de substances et préparations) telles que définies à la rubrique 1000, à l'exclusion des substances et préparations visées explicitement ou par famille par d'autres rubriques de la nomenclature ainsi que du méthanol. La quantité totale susceptible d'être présente dans l'installation étant :		
1131.text	Toxiques (emploi ou stockage de substances et préparations) telles que définies à la rubrique 1000, à l'exclusion des substances et préparations visées explicitement ou par famille par d'autres rubriques de la nomenclature ainsi que du méthanol.		
1431.text	Liquides inflammables (fabrication industrielle de, dont traitement du pétrole et de ses dérivés, désulfuration)	A	3
1432.text	Liquides inflammables (stockage en réservoirs manufacturés de)		
1433.text	Liquides inflammables (installations de mélange ou d'emploi de)		
1434.text	Liquides inflammables (installation de remplissage ou de distribution, à l'exception des stations-service visées à la rubrique 1435)		

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

SECTION 16: Other information

Other information : The information above is believed to be accurate and represents the best information currently available to us. Users should make their own investigations to determine the suitability of the information for their particular purposes. This document is intended as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Methanex Corporation and its subsidiaries make no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Methanex Corp. will not be responsible for damages resulting from use of or reliance upon this information.

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 1	Specific target organ toxicity — single exposure, Category 1
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H331	Toxic if inhaled
H370	Causes damage to organs

Methanol

Safety Data Sheet

according to Regulation (EC) No. 453/2010



R11	Highly flammable
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
F	Highly flammable
T	Toxic

NCEC METHANEX SDS EU (REACH ANNEX II)

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