Methanol

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)
Issue date: 2015-12-10 Revision date: 2021-09-21 Supersedes: 2015-12-10 Version: 1.1

SECTION 1: Identification

1.1. Product identifier

Product form	:	Substance
Substance name	:	Methanol
Substance type	:	Mono-constituent
Type of product	:	Pure substance
CAS-No.	:	67-56-1
Product code	:	LC16800, LC16810
Formula	:	CH4O
Synonyms	:	acetone alcohol / alcohol C1 / alcohol, methyl / carbinol / colonial spirits / columbian spirits / green wood spirits / manhattan spirits / methyl alcohol / methyl hydrate / methyl hydroxide / methylen / methylol / monohydroxymethane / pyroligneous spirit / pyroxylic spirit / wood alcohol / wood naphtha
Product group	:	Trade product

1.2. Recommended use and restrictions on use

Recommended uses and restrictions	:	Laboratory chemicals
Recommended use	:	Laboratory chemicals
Restrictions on use	:	Not for food, drug or household use

1.3. Supplier

Supplier
LabChem, Inc.
1010 Jackson's Pointe Ct.
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

Other
LabChem, Inc.
4410 Paletta Court
Burlington, Ontario L7L 5R2- Canada

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or +1-703-741-5970

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Flammable liquids, Category 2	H225	Highly flammable liquid and vapour.
Acute toxicity (oral), Category 3	H301	Toxic if swallowed.
Acute toxicity (dermal), Category 3	H311	Toxic in contact with skin.
Acute toxicity (inhalation:vapour) Category 3	H331	Toxic if inhaled.
Specific target organ toxicity — Single exposure, Category 1	H370	Causes damage to organs (central nervous system, optic nerve).

Full text of H-statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS CA labelling

Hazard pictograms (GHS CA) :

Signal word (GHS CA) : Danger

Hazard statements (GHS CA)	:	H225 - Highly flammable liquid and vapour. H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled H370 - Causes damage to organs (central nervous system, optic nerve).
Precautionary statements (GHS CA)	:	P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground/bond container and receiving equipment. P241 - Use explosion-proof electrical, ventilating, lighting equipment. P242 - Use only non-sparking tools. P243 - Take action to prevent static discharges. P260 - Do not breathe mist, vapours, spray. P264 - Wash exposed skin thoroughly after handling. P270 - Do not eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER, a doctor. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P311 - IF exposed or concerned: Call a POISON CENTER, a doctor. P311 - Call a POISON CENTER, a doctor. P312 - Call a POISON CENTER, a doctor if you feel unwell. P321 - Specific treatment (see Treatment on this label). P330 - Rinse mouth. P361+P364 - Take off immediately all contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO2) to extinguish. P403+P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up. P501 - Dispose of contents/container to Comply with applicable regulations.

2.3. Other hazards

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Chemical name/Synonyms	Product identifier	%	Classification (GHS CA)
Methanol (Main constituent)	acetone alcohol / alcohol C1 / alcohol, methyl / carbinol / colonial spirits / columbian spirits / green wood spirits / manhattan spirits / methyl alcohol / methyl hydrate / methyl hydroxide / methylen / methylol / monohydroxymethane / pyroligneous spirit / pyroxylic spirit / wood alcohol / wood naphtha	CAS-No.: 67-56-1	100	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 STOT SE 1, H370

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove the victim into fresh air. Immediately consult a doctor/medical service.

First-aid measures after skin contact : Wash immediately with lots of water. Remove clothing before washing. Soap may be used. Do not apply (chemical) neutralizing agents without medical advice. Consult a doctor/medical service.

First-aid measures after eye contact : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion, give alcohol to drink. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.html). Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital.

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Symptoms similar to those listed under ingestion.

Symptoms/effects after skin contact : Symptoms similar to those listed under ingestion.

Symptoms/effects after eye contact : Redness of the eye tissue. Lacrimation.

Symptoms/effects after ingestion	:	Nausea. Vomiting. AFTER INGESTION OF HIGH QUANTITIES: FOLLOWING SYMPTOMS MAY APPEAR LATER: Change in the haemogramme/blood composition. Central nervous system depression. Headache. Feeling of weakness. Abdominal pain. Muscular pain. Dizziness. Mental confusion. Drunkenness. Coordination disorders. Disturbed motor response. Disturbances of consciousness. Visual disturbances. Blindness. Respiratory difficulties. Cramps/uncontrolled muscular contractions.
Chronic symptoms	:	Red skin. Dry skin. Skin rash/inflammation. Headache. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.
Potential adverse human health effects and symptoms	:	Toxic in contact with skin. Toxic if swallowed. Toxic if inhaled.

4.3. Immediate medical attention and special treatment, if necessary

Treatment	:	Immediately after ingestion, give a glass of strong drink, beer or wine to drink. Hospitalize at once for treatment with the right antidotes.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	:	Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if puddle cannot expand.

5.2. Unsuitable extinguishing media

Unsuitable extinguishing media	:	Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

5.3. Specific hazards arising from the hazardous product

Fire hazard	:	DIRECT FIRE HAZARD: Highly flammable liquid and vapour. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD: May be ignited by sparks.
Explosion hazard	:	DIRECT EXPLOSION HAZARD: Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD: may be ignited by sparks.
Hazardous decomposition products in case of fire	:	Upon combustion: CO and CO2 are formed.

5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	No flames, no sparks. Eliminate all sources of ignition. No naked lights. No smoking. Dike and contain spill.
Personal Precautions, Protective Equipment and Emergency Procedures	:	Chemical goggles or safety glasses. Protective clothing. Protective gloves.
Prevention Measures for Secondary Accidents	:	Ventilate area.

6.2. Methods and materials for containment and cleaning up

For containment	:	Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute combustible/toxic gases/vapours with water spray. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.

Methods for cleaning up	:	Take up liquid spill into a non combustible material e.g.: sand, earth, vermiculite slaked lime or soda ash. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Keep away from naked flames/heat. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Comply with the legal requirements. Clean contaminated clothing. Keep container tightly closed. Handle uncleaned empty containers as full ones. Do not discharge the waste into the drain. Do not use compressed air for pumping over.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible products	:	Strong oxidizers. Strong bases. Strong acids. Acid anhydrides. Acid chlorides.
Incompatible materials	:	Direct sunlight. Heat sources. Sources of ignition.
Heat and ignition sources	:	KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Storage area	:	Meet the legal requirements. Aboveground. Store in a dry area. Fireproof storeroom. Provide for a tub to collect spills. Provide the tank with earthing.
Prohibitions on mixed storage	:	KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) acids. (strong) bases. halogens. amines. water/moisture.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	SUITABLE MATERIAL: steel. stainless steel. iron. glass. MATERIAL TO AVOID: lead. aluminium. zinc. polyethylene. PVC.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methanol (67-56-1)	
Canada (Alberta) - Occupational Exposure Limits	
OEL TWA (mg/m³)	262 mg/m³
OEL TWA (ppm)	200 ppm
OEL STEL (mg/m³)	328 mg/m³
OEL STEL (ppm)	250 ppm
Canada (Quebec) - Occupational Exposure Limits	
VECD (mg/m³)	328 mg/m³
VECD (ppm)	250 ppm
VEMP (mg/m³)	262 mg/m³

Methanol (67-56-1)	
VEMP (ppm)	200 ppm
Canada (British Columbia) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Notations and remarks	Skin
Canada (Manitoba) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Canada (New Brunswick) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Canada (Nova Scotia) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Canada (Nunavut) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Canada (Northwest Territories) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Canada (Ontario) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Notations and remarks	Skin
Canada (Prince Edward Island) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Canada (Saskatchewan) - Occupational Exposure Limits	
OEL TWA (ppm)	200 ppm
OEL STEL (ppm)	250 ppm
Canada (Yukon) - Occupational Exposure Limits	
OEL TWA (mg/m³)	260 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL (mg/m³)	310 mg/m³

Methanol (67-56-1)	
OEL STEL (ppm)	250 ppm
USA - ACGIH - Occupational Exposure Limits	
Local name	Methanol
ACGIH OEL TWA [ppm]	200 ppm
ACGIH STEL (ppm)	250 ppm
Remark (ACGIH)	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI
Regulatory reference	ACGIH 2021
USA - ACGIH - Biological Exposure Indices	
Local name	METHANOL
Biological Exposure Indices (BEI)	15 mg/l Parameter: Methanol - Medium: urine - Sampling time: End of shift - Notations: B, Ns
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Methyl alcohol
OSHA PEL TWA [1]	260 mg/m³
OSHA PEL TWA [2]	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Keep concentrations well below lower explosion limits.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:
Safety glasses. Gloves. Chemical resistant apron.

Materials for protective clothing:
GIVE EXCELLENT RESISTANCE: butyl rubber. GIVE GOOD RESISTANCE: polyethylene/ethylenevinylalcohol. styrene-butadiene rubber. viton. GIVE LESS RESISTANCE: chloroprene rubber. chlorinated polyethylene. natural rubber. nitrile rubber/PVC. GIVE POOR RESISTANCE: leather. neoprene. nitrile rubber. polyethylene. PVA. polyurethane

Hand protection:
Protective gloves against chemicals (EN 374)

Eye protection:
Eye protection not required in normal conditions

Skin and body protection:
Protective clothing (EN 14605 or EN 13034)

Respiratory protection:
Full face mask with filter type AX at conc. in air > exposure limit. High vapour/gas concentration: self-contained breathing apparatus (EN 136 + EN 137)

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Colour	:	Colourless
Odour	:	Characteristic odour Mild odour Pleasant odour Alcohol odour Commercial/unpurified substance: irritating/pungent odour
Odour threshold	:	No data available
pH	:	No data available in the literature
Relative evaporation rate (butylacetate=1)	:	4.1
Relative evaporation rate (ether=1)	:	6.3
Molecular mass	:	32.04 g/mol
Melting point	:	-98 °C
Freezing point	:	No data available
Boiling point	:	65 °C (1013 hPa)
Flash point	:	10 °C (Closed cup, 1013 hPa, EU Method A.9: Flash-Point)
Critical temperature	:	240 °C
Auto-ignition temperature	:	455 °C (1013 hPa, DIN 51794: Self-ignition temperature, T1)
Decomposition temperature	:	No data available in the literature
Flammability (solid, gas)	:	No data available
Vapour pressure	:	128 hPa (20 °C)
Vapour pressure at 50 °C	:	552 hPa
Critical pressure	:	79547 hPa
Relative vapour density at 20 °C	:	1.1
Relative density	:	0.79 – 0.8 (20 °C)
Relative density of saturated gas/air mixture	:	1
Density	:	790 – 800 kg/m³ (20 °C)
Solubility	:	Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Water: ≥ 100 g/100ml (20 °C) Ethanol: complete Ether: complete Acetone: complete
Log Pow	:	-0.77 (Experimental value)
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	0.544 – 0.59 mPa·s (25 °C)
Explosive limits	:	5.5 – 36.5 vol % Lower explosive limit (LEL): 5.5 vol % Upper explosive limit (UEL): 36.5 vol %
Particle size	:	Not applicable (liquid)

9.2. Other information

Minimum ignition energy	:	0.14 mJ
Saturation concentration	:	166 g/m³
VOC content	:	100 %

Other properties : Clear. Hygroscopic. Volatile. Neutral reaction.

SECTION 10: Stability and reactivity

Reactivity : Violent to explosive reaction with (some) metal powders and with (strong) oxidizers. Violent exothermic reaction with (some) acids and with (some) halogens compounds.
Chemical stability : Hygroscopic.
Possibility of hazardous reactions : No additional information available
Conditions to avoid : Direct sunlight. High temperature. Incompatible materials. Open flame. Sparks. Overheating.
Incompatible materials : Strong oxidizers. Strong bases. Strong acids. Peroxides. Acid anhydrides. Acid chlorides.
Hazardous decomposition products : Carbon dioxide. Carbon monoxide.
Hardening time: : No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Toxic if swallowed.
Acute toxicity (dermal) : Toxic in contact with skin.
Acute toxicity (inhalation) : Toxic if inhaled.

Methanol (67-56-1)	
LD50 oral rat	1187 – 2769 mg/kg bodyweight (BASF test, Rat, Male / female, Experimental value, Aqueous solution, Oral, 7 day(s))
LC50 Inhalation - Rat	128 mg/l air (BASF test, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))
ATE CA (oral)	100 mg/kg bodyweight
ATE CA (Dermal)	300 mg/kg bodyweight
ATE CA (vapours)	3 mg/l/4h

Skin corrosion/irritation : Not classified
pH: No data available in the literature
Serious eye damage/irritation : Not classified
pH: No data available in the literature
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Causes damage to organs (central nervous system, optic nerve).
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Likely routes of exposure : Inhalation. Skin and eyes contact.
Potential adverse human health effects and symptoms : Toxic in contact with skin. Toxic if swallowed. Toxic if inhaled.
Symptoms/effects after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Symptoms similar to those listed under ingestion.
Symptoms/effects after skin contact : Symptoms similar to those listed under ingestion.
Symptoms/effects after eye contact : Redness of the eye tissue. Lacrimation.
Symptoms/effects after ingestion : Nausea. Vomiting. AFTER INGESTION OF HIGH QUANTITIES: FOLLOWING SYMPTOMS MAY APPEAR LATER: Change in the haemogramme/blood composition. Central nervous system depression. Headache. Feeling of weakness. Abdominal pain. Muscular pain. Dizziness. Mental confusion. Drunkenness. Coordination disorders. Disturbed motor response. Disturbances of consciousness. Visual disturbances. Blindness. Respiratory difficulties. Cramps/uncontrolled muscular contractions.

Chronic symptoms : Red skin. Dry skin. Skin rash/inflammation. Headache. Disturbed tactile sensibility. Visual disturbances. Sleeplessness. Gastrointestinal complaints. Cardiac and blood circulation effects.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air : Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Not harmful to crustacea (Daphnia). Not harmful to fishes. Groundwater pollutant. Inhibition of activated sludge. Nitrification of activated sludge is inhibited. Not harmful to algae. Not harmful to bacteria.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Methanol (67-56-1)	
LC50 fish 1	15400 mg/l (EPA 660/3 - 75/009, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	18260 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 96 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)
EC50 96h - Algae [1]	22000 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
BCF fish 1	1 – 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
Log Pow	-0.77 (Experimental value)
Log Koc	-0.89 – -0.21 (log Koc, Calculated value)

12.2. Persistence and degradability

Methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 – 1.12 g O □/g substance
Chemical oxygen demand (COD)	1.42 g O □/g substance
ThOD	1.5 g O □/g substance

12.3. Bioaccumulative potential

Methanol (67-56-1)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
BCF fish 1	1 – 4.5 (72 h, Cyprinus carpio, Static system, Fresh water, Experimental value)
Log Pow	-0.77 (Experimental value)
Log Koc	-0.89 – -0.21 (log Koc, Calculated value)

12.4. Mobility in soil

Methanol (67-56-1)	
Surface tension	No data available in the literature
Ecology - soil	Highly mobile in soil.
Log Koc	-0.89 – -0.21 (log Koc, Calculated value)
Log Pow	-0.77 (Experimental value)

12.5. Other adverse effects

Ozone : Not classified

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations : Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.

Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

14.1. UN number

UN-No. (TDG) : UN1230
DOT NA No : UN1230
UN-No. (IMDG) : 1230
UN-No. (IATA) : 1230

14.2. UN proper shipping name

Proper Shipping Name (TDG) : METHANOL
Proper Shipping Name (DOT) : Methanol
Proper Shipping Name (IMDG) : methanol
Proper Shipping Name (IATA) : methanol

14.3. Transport hazard class(es)

TDG
Transport hazard class(es) (TDG) : 3 (6.1)
Hazard labels (TDG) : 3, 6.1

DOT
Transport hazard class(es) (DOT) : 3
Hazard labels (DOT) : 3

IMDG
Transport hazard class(es) (IMDG) : 3 (6.1)
Danger labels (IMDG) : 3, 6.1

:

IATA

Transport hazard class(es) (IATA) : 3 (6.1)
Danger labels (IATA) : 3, 6.1

:

14.4. Packing group

Packing group : II
Packing group (DOT) : II
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

TDG

UN-No. (TDG) : UN1230
TDG Special Provisions : 43 - Despite section 2.1 of Part 2 (Classification), these dangerous goods are assigned to this classification based on human experience.
Explosive Limit and Limited Quantity Index : 1 L
Excepted quantities (TDG) : E2
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 1 L

DOT

UN-No.(DOT) : UN1230
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location	:	B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other	:	40 - Stow ‘‘clear of living quarters’’

IMDG

Transport regulations (IMDG)	:	Subject to the provisions
EmS-No. (Fire)	:	F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	:	S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
MFAG-No	:	19

IATA

Transport regulations (IATA)	:	Subject to the provisions

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. National regulations

Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

Methanol (67-56-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16: Other information

SDS Major/Minor	:	None
Issue date	:	12-10-2015
Revision date	:	09-21-2021
Supersedes	:	12-10-2015

Full text of H-statements:

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.

SDS Canada LabChem

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.