



Safety Data Sheet

Methyl hydrate

1. Identification

Product identifier	Methyl hydrate
Product code	1727
Other means of identification	Methanol. Methyl alcohol.
Recommended use of the chemical and restrictions on use	Organic solvent used in industrial processes.
Manufacturer	PRODUITS LUBRI-DELTA INC. 2215, Industriel Laval, Québec H7S 1P8 Tel. 800.465.5954 450.629.4555 Fax 514.383.4241 http://www.lubri-delta.com/accueil.asp http://www.lubri-delta.com/eng/
Emergency phone number	Canutec: 613-996-6666 QUEBEC ANTI-POISON CENTER AT 1-800-463-5060

2. Hazard identification

Summary	<p>FLAMABLE LIQUID! TOXIC! Keep away from heat, sparks and open flame. Avoid contact with skin, eyes and clothing. Do not breathe vapours, mists or aerosols. Do not ingest. If ingested consult physician immediately and show this Safety Data Sheet. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.</p>	
 B2	 D1B	 D2A D2B
	<p>Class B2 : Flammable Liquid Class D1B : Toxic material causing immediate and serious toxic effects Class D2A : Very toxic material causing other toxic effects Class D2B : Toxic material causing other toxic effects</p>	

3. Composition/information on ingredients

Common name	CAS	Weight % content
Methanol	67-56-1	60 - 100 %

4. First-aid measures

Inhalation	Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen by trained personnel. If a problem develops or persists, seek medical attention.
Skin contact	Flush with water for at least 15 minutes. Remove contaminated clothing and wash before reuse. Avoid touching eyes with contaminated body parts. If a problem develops or persists, seek medical attention.

Eye contact	IMMEDIATELY flush with plenty of water. Remove contact lenses. Flush with water for at least 15 minutes. Hold eyelids apart to rinse properly. If a problem develops or persists, seek medical attention.
Ingestion	DO NOT induce vomiting, unless recommended by medical personnel. If victim is conscious wash out mouth with water and give 1-2 glasses of water to drink. Never give anything by mouth if victim is unconscious or convulsing. If spontaneous vomiting occurs, keep head below hip level to prevent aspiration into the lungs. Seek medical attention or contact a Poison Centre immediately.
Other	No information available.
Symptoms	May cause slight irritation to eyes. Methyl Alcohol poisoning begins with a depression of the central nervous system leading to narcosis, followed by a symptomless period which usually lasts 12 to 24 hours. Metabolic acidosis sets in and then symptoms such as headaches, dizziness, nausea and vomiting occur.
Notes to the physician	Use Ethyl alcohol as an antidote for the treatment of methyl alcohol poisoning. If ingestion occurred in of less than 2 hours, proceed carefully with a gastric wash. Administer 50% Ethyl alcohol in a proportion of ½ to 1 ml per kg body weight, every 2 or 4 hours for 4 days. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire-fighting measures

Suitable extinguishing media	dried powder, carbon dioxide (CO ₂), alcohol resistant foam, water spray, Do not use direct water jet.
Specific hazards arising from the chemical	Very flammable liquid and vapours. The product burns emitting an almost invisible blue flame. May be ignited by heat, sparks, flame or static electricity. Vapours are heavier than air and may travel to an ignition source distant from the material handling point. The aqueous solutions of methanol can also be ignited. Contact with strong oxidizers may cause fire.
Special protective equipment	Firefighters must wear self contained breathing apparatus with full face mask. Firefighting suit may not be efficient against chemicals.
Special protective actions for fire-fighters	Use water spray to cool fire-exposed containers. Water may be ineffective to extinguish a fire, because mixtures of methyl alcohol and water are also flammable.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Do not touch spilled material. Make sure to wear personal protective equipment mentioned in this Safety Data Sheet.
Environmental precautions	Prevent entry in sewer and other enclosed area. For a large spill, consult the Department of Environment or the relevant authorities.
Methods and materials for containment and cleaning up	Remove sources of ignition. Ventilate the area well. Stop leak, if it's possible to do so without risk. Absorb with inert material (soil, sand, vermiculite) and place in an appropriate waste disposal clearly identified. Use non-sparking and antistatic tools. Dispose via a licensed waste disposal contractor. Finish cleaning by rinsing with water contaminated surface.

7. Handling and storage

Precautions for safe handling	Keep away from heat, sparks and open flame. Avoid all sources of ignition. Avoid static electricity build up. Use non-sparking and antistatic tools. Ground/bond all containers when transferring large quantities (5 gallons US or 20 L and more). Use only in well ventilated area. Do not breathe vapours, mists or aerosols. Avoid contact with skin, eyes and clothing. Wear eye protection, gloves and other protective clothing that are adapted to the task being performed and the risks involved. Keep only the
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quantities necessary for the work being performed in the work area. Keep containers tightly closed when not in use. Do not eat, do not drink and do not smoke during use. Wash hands, forearms and face thoroughly after handling this compound and before eating, drinking or using toiletries. Remove contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage and handling should follow the NFPA 30 Flammable and/or Combustible Liquids Code and the National Fire Code of Canada (NFCC). Ground or bond large containers. Store tightly closed and in properly labelled containers in a cool, dry and well ventilated place. Container must be stored in fireproof cabinet. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from oxidizing materials and incompatible materials (see section 10).

Storage temperature

10 to 25°C (50 to 77°F)

8. Exposure controls/personal protection

Immediately Dangerous to Life or Health

Methanol : 6000 ppm.

Methanol	STEL	250 ppm		ACGIH , BC, ON
		250 ppm	328 mg/m ³	AB , RSST
	TWA (8h)	200 ppm		ACGIH , BC, ON
		200 ppm	262 mg/m ³	AB , RSST

Appropriate engineering controls

Provide sufficient mechanical ventilation (general and/or local exhaust) to keep the airborne concentrations of vapours, mists, aerosols or dust below their respective occupational exposure limits.

Individual protection measures

Eye	If there is a risk of contact with eyes, wear chemical splash goggles. If risk of contact with eyes or the face wear chemical splash goggles and a face shield. If respiratory hazards exist, a full face respirator may be required instead.
Hands	Chemical-resistant, impervious gloves should be worn at all times when handling this chemical product. Wear nitrile or neoprene gloves. Before using, user should confirm impermeability. Discard gloves with tears, pinholes, or signs of wear. Gloves must only be worn on clean hands. Wash gloves with water before removing them. After using gloves, hands should be washed and dried thoroughly.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved. Wear normal work clothing covering arms and legs as required by employer code. Wear appropriate chemical impervious clothing. Wear a neoprene or synthetic apron to prevent contact with skin. To clean up a spill, if necessary, wear a synthetic polyethylene coveralls such as the Tychem (DuPont) or equivalent coveralls manufactured to provide protection against liquid chemical.
Respiratory	Respiratory protection equipment (RPE) must be selected, fitted, maintained and inspected in accordance with regulations and CSA Standard Z 94.4 and approved by NIOSH / MSHA. In case of insufficient ventilation or in confined or enclosed space and for an assigned protection factor (APF) up to 10 times of exposure limit, wear a half mask respirator with organic vapour cartridges. For an APF until maximum 100 times of exposure limit, wear a full face mask respirator with organic vapour cartridges.
Feet	Wear rubber boots to clean up a spill.



Goggles



Neoprene gloves (thin)



Nitrile gloves



Neoprene apron

9. Physical and chemical properties

Physical state	Liquid	Flammability	Flammable.
Colour	Colourless	Flammability limits	5.5 to 36.5%
Odour	Mild alcohol odor	Flash point	11.1 °C (52 °F) Setaflash closed cup
Odour threshold	4.2 ppm	Auto-ignition temperature	464 °C (867.2 °F)
pH	7	Sensibility to electrostatic charges	Yes
Melting point	-98 °C (-144.4 °F)	Sensibility to sparks and/or friction	N.Av.
Freezing point	-98 °C (-144.4 °F)	Vapour density	1.1 (Air = 1)
Boiling point	65 °C (149 °F)	Relative density	0.79 kg/L @ 20 °C (68 °F) (Water = 1)
Solubility	Fully soluble in water.	Partition coefficient n-octanol/water	-0.82 to -0.64
Evaporation rate	> Butyl Acetate	Decomposition temperature	N/Av.
Vapour pressure	12.3kPa (92.3 mm Hg) @ 20 °C (68 °F)	Viscosity	0.59 cSt @ 20 °C (68 °F)
Percent Volatile	100%	Molecular mass	32.04
N/Av.: Not Available N/Ap.: Not Applicable Und.: Undetermined N/E: Not Established			

10. Stability and reactivity

Reactivity	Contact with strong oxidizers may cause fire. It can attack some metals such as copper, zinc, magnesium, tin, lead and aluminum.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions (including polymerizations)	A dangerous reaction will not occur.
Conditions to avoid	Avoid heat, flame and sparks. Avoid contact with incompatible materials.
Incompatible materials	Strong oxidants, bleach, peroxides, perchlorates, halogens, nitric acid (HNO ₃), chromic acid, perchloric acid, nitrites, nitrates, isocyanates, water reactive materials, acetaldehyde.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.


11. Toxicological information

Numerical measures of toxicity	<p>Methanol Ingestion 183 mg/kg Human 5600 mg/kg Rat LD50 Inhalation 83.8 mg/l/4h Rat LC50 Skin 15800 mg/kg Rabbit LD50</p>
Likely routes of exposure	<p>Skin, eyes, inhalation, ingestion.</p>
Delayed, immediate and chronic effects	<p>Eye contact May cause slight irritation to eyes. Eye Irritation/Corrosion, Rabbit (OECD TG 405): 0.1 ml undiluted with not rinsed. Test Draize, mild irritating effect. An aqueous methanol 25% solution is not irritating.</p> <p>Skin contact Prolonged and repeated contact may cause drying and cracking of the skin. Skin Irritation (IUCLID), Rabbit : Not irritating (OECD TG 404). Case of methanol poisoning by the dermal route in human is very rare due to the high volatility of the product. Widespread contact with skin for several hours can cause large amounts of material to be absorbed and cause toxic effects similar to those for ingestion and death.</p> <p>Inhalation In the workplace, the product is rapidly absorbed by respiratory tract. Overexposure may cause irritation of the upper respiratory tract. High concentrations may cause central nervous system depression characterized by headache, dizziness, vertigo, drowsiness, blurred vision. The severity of symptoms may vary depending on exposure conditions. Excessive prolonged exposure may cause methanol poisoning with symptoms similar to those for ingestion exposure.</p> <p>Ingestion Nocive or fatal if swallowed. Accidental methanol poisoning occurs frequently by ingestion. Methyl Alcohol poisoning begins with a depression of the central nervous system leading to narcosis, followed by a symptomless period which usually lasts 12 to 24 hours. Metabolic acidosis sets in and then symptoms such as headaches, dizziness, nausea and vomiting occur. In more severe cases, this is followed with abdominal and muscle pain, breathing difficulties, loss of vision up to blindness. Apathy or delirium progressing sometimes rapidly to coma and death. Generally ingesting 60 ml (2 Oz) to 235 ml (8 Oz) of methanol is fatal to humans. The human minimum lethal dose of methanol is estimated between 300 and 1000 mg/kg.</p> <p>Respiratory or skin sensitization This product is not a skin or respiratory sensitizer. Skin sensitisation, Guinea pig: not sensitizing. (IUCLID)</p> <p>IARC/NTP Classification No ingredients listed.</p> <p>Carcinogenicity Not listed as a carcinogen by IARC, ACGIH, NIOSH, NTP or OSHA.</p> <p>Teratogenicity Exposure of pregnant rats to 20,000 ppm of methanol, seven hours a day for the duration of gestation or only between the 7th and 15th day of gestation caused a slight maternal toxicity and a high incidence of birth defects among newborns. However, under the same conditions, the dose of 5000 ppm has no effect (IUCLID). This material is not known to cause teratogenic effect.</p> <p>Mutagenicity This material is not known to cause mutagenic effect.</p> <p>Reproductive toxicity This material is not known to cause effects on reproduction.</p> <p>Specific target organ toxicity - single exposure Visual organs, central nervous system.</p> <p>Specific target organ toxicity - repeated exposure Visual organs, central nervous system.</p>
Interactive effects	<p>Ethanol, carbon tetrachloride, Toluene, dichloromethane, chloroform.</p>
Other information	<p>Humans are uniquely sensitive to the toxic effects of methanol.</p>



12. Ecological information

Ecological toxicity	Fish - Lepomis macrochirus - Bluegill Aquatic Invertebrate - Daphnia Magna, Water flea, fresh water Algae - Chlorella pyrenoidosa	LC50 15400 mg/L ; 96h (methanol) EC50 >10000 mg/L ; 48h (methanol) EC50 28400 mg/L ; 10-14 days (methanol)
Persistence	Not persistent in aquatic environment.	
Degradability	Readily biodegradable under aerobic and anaerobic conditions. (OECD Test Guideline 301D). His atmospheric degradation (OH radical attack) in air has a half-time T _{1/2} of 17 to 18 days. Biochemical Oxygen Demand (BOD): 600-1200 mg/g, data for methanol (IUCLID). Chemical Oxygen Demand (COD): 1400 mg/g, data for methanol (IUCLID).	
Bioaccumulative potential	It does not bioaccumulate in appreciable amounts in fish. Log Kow of -0,82 to -0,62 (methanol). Bioconcentration Factor (BCF) <10 (methanol).	
Mobility in soil	Based on the high solubility in water, a high mobility in soil is to be expected.	
Other adverse effects	This chemical does not deplete the ozone layer.	

13. Disposal considerations

Container 	Important! Prevent waste generation. Use in full. DO NOT dispose of residue in sewers, streams or drinking water supply. Residues and empty containers must be considered as hazardous waste. Observe all federal, state/provincial and municipal regulations. If necessary consult the Department of Environment or the relevant authorities. Dispose via a licensed waste disposal contractor. Unused organic solvents and wastes residues can be reprocessed (recycled) where there is a recovery program.
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14. Transport information

UN Number	UN 1230
UN Proper Shipping Name	METHANOL
Environmental hazards	This material is not listed as a marine pollutant.
Special precautions for user	No information available.
TDG - Transportation of Dangerous Goods (Canada)	
Transport hazard class(es)	  Class 3 Class 6.1
Packing group	II
Emergency response guidebook 2012	<u>131</u>
IMO/IMDG - International Maritime Transport	
Classification	UN 12630. METHANOL. Class 3 (6.1) PG II. Emergency schedules (EmS-No) F-E, S-D
IATA - International Air Transport Association	
Classification	UN 12630. METHANOL. Class 3 (6.1) PG II.

15. Regulatory information

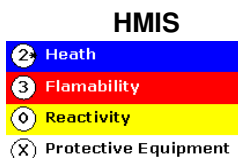
Other regulations

CANADA :

- Canada DSL and NDSL:
This product is on the Domestic Substances List (DSL).
- Canadian National Pollutant Release Inventory Substances (NPRI):
This material is listed.
- List of Toxic Substances Managed Under CEPA 1999 (annexe 1, Canadian Environmental Protection Act):
This material is not listed.

UNITED STATE OF AMERICA:

- Toxic Substance Control Act (TSCA) :
This material is listed.
- EPCRA Section 313 Toxic Chemicals:
This material is listed.
- EPCRA Section 302/304 Extremely Hazardous Substances:
This material is not listed.
- CERCLA Hazardous Substances:
Methanol (CAS no. 67-56-1).
- Clean Air Act (CAA 112b) HON - Hazardous Organic National Emission Air Pollutants:
Methanol (CAS no. 67-56-1).
- Clean Air Act (CAA 112b) HAP - Hazardous Air Pollutants:
Methanol (CAS no. 67-56-1).
- CAA 112(r) Regulated Chemicals for Accidental Release Prevention:
This material is not listed.
- California Proposition 65:
This product contains chemicals known to the State of California to cause birth defects or other reproductive harm.
Methanol (CAS no. 67-56-1).



Globally Harmonized System



Flammable liquids (Category 2)
Acute toxicity, oral (Category 3)
Acute toxicity, dermal (Category 3)
Acute toxicity, inhalation (Category 3)
Specific target organ toxicity, single exposure (Category 1)

DANGER

H225: Highly flammable liquid and vapour
H301 + H311 + H331: Toxic if swallowed, in contact with skin or if inhaled
H370: Causes damage to organs
P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.
P210: Keep away from heat, sparks, open flames and other ignition sources. No smoking.
P240: Ground or bond container and receiving equipment.
P241: Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P261: Avoid breathing vapours.
P264: Wash 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 and eye protection.
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P330: Rinse mouth.
 P303+361+353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water and soap or take a shower if necessary.
 P361+364: Remove/Take off immediately all contaminated clothing and wash before reuse.
 P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312: Call a POISON CENTER or doctor/physician if you feel unwell.
 P370+378: In case of fire: Use chemical foam, dry chemical or carbon dioxide for extinction.
 P403+P235+P233: Store in a well-ventilated place. Keep container tightly closed. Keep cool.
 P501: Dispose of contents and container to an approved waste disposal plant.

16. Other information

Date (YYYY-MM-DD)	PRODUITS LUBRI-DELTA INC. 2014-11-10
Version	01
Other information	<p>REFERENCES:</p> <ul style="list-style-type: none"> - Haz-Map, Information on Hazardous Chemicals and Occupational Diseases, http://hazmap.nlm.nih.gov/index.php - Service du répertoire toxicologique de la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), http://www.reptox.csst.qc.ca - TOXNET Databases, Toxicology Data Network, NIH U.S. National Library of Medicine, http://toxnet.nlm.nih.gov/ - Database, Institut National de Recherche et de Sécurité, http://www.inrs.fr/accueil/produits/bdd.html - IUCLID Chemical Dataset, European Chemical Substances Information System (ESIS), Joint Research Centre, http://esis.jrc.ec.europa.eu - OECD Existing Chemicals Database, Chemicals Screening Information Data Set (SIDS) for High Volume Chemicals, UNEP publications, http://webnet.oecd.org/HPV/UI/Search.aspx - IPCS INCHEM, Chemical Safety Information from Intergovernmental Organizations, Canadian Centre for Occupational Health and Safety (CCOHS), Copyright International Programme on Chemical Safety (IPCS), http://www.inchem.org - NIOSH Pocket Guide to Chemical Hazards, Centers for Disease Control and Prevention, NIOSH Publications, 2007, http://www.cdc.gov/niosh/npg/npg.html - High Production Volume (HPV) Chemical Challenge Program, U.S. EPA, http://www.epa.gov/hpv/ <p>ACGIH: American Conference of Governmental Industrial Hygienists AIHA: American Industrial Hygiene Association HMIS: Hazardous Materials Identification System NFPA: National Fire Protection Association OSHA: Occupational Safety and Health Administration (USA) NIOSH: National Institute for Occupational Safety and Health NTP: National Toxicology Program RSST: Règlement sur la santé et la sécurité du travail (Québec) GHS: Globally Harmonized System IARC: International Agency for Research on Cancer IDLH: Immediately Dangerous to Life or Health STEL: Short Term Exposure Limit (15 min) TWA: Time Weighted Averages WHMIS: Workplace Hazardous Materials Information System</p> <p>To the best of our knowledge, the information contained herein is accurate. However, neither Préventis System nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.</p>