



Safety Data Sheet

Date of Issue: 26.06.2024

Date of Expiry: 26.06.2029

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
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Emergency phone number : 0800 243 622 (24 hours)

Product Name	Methanol
Product Code	32101 ,32108 , 32109
CAS No.	67-56-1

Recommended use : Laboratory Investigations

2: Hazard's identification

GHS Classification

Flammable Liquids (Category 2)
Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 3)
Eye irritation (Category 2)
Reproductive toxicity (Category 2)
Specific Target Organ Toxicity – repeated exposure (Category 1)

Hazard Symbol:



Signal Word : DANGER

Hazard Statement

H225 : Highly flammable liquid and vapour.
H301 : Toxic if swallowed.
H331 : Toxic if inhaled.
H311 : Toxic in contact with skin.
H319 : Causes serious eye irritation.
H361 : Suspected of damaging fertility or the unborn child <state specific effect if known> <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
H372 : Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

Precautionary Statements Prevention

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
- P260 Do not breathe mist or vapors.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

- P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
Rinse mouth.
- P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Other hazards - none

3: Composition/information on ingredients

Substances

Synonyms	:	Methyl alcohol
Formula	:	CH ₄ O
Molecular weight	:	32.04 g/mol
CAS-No.	:	67-56-1 <= 100 %

Component Concentration

Methanol – < = 100 %

4: First aid measures

General information:

Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation: Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention

5: Firefighting measures

General Fire Hazards: Static charges generated by emptying package in or near flammable vapor.
may cause flash fire.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical: Can be ignited easily and burns vigorously. Vapor from the solvent may accumulate in container headspace resulting in flammability hazard. Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters

Special firefighting procedures: Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire.

6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: In case of leakage, eliminate all ignition sources. Use non-sparking tools. All equipment used when handling the product must be grounded. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Dike for later disposal. Prevent entry into waterways, sewer, basements, or confined areas. Stop the flow of material if this is without risk. Inform authorities if large amounts are involved.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7: Handling and storage

Precautions for safe handling: DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take action to prevent static discharges. Use non-sparking tools. Use personal protective equipment as required. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash hands thoroughly after handling

Conditions for safe storage, including any incompatibilities: Keep away from food, drink and animal feeding stuffs. Keep out of reach of children. Keep container tightly closed in a cool, well-ventilated place. Store in a dry place.

8: Exposure controls/personal protection

Exposure controls

Ingredients with Workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Methanol	67-56-1	WES-STEL	250 ppm 328 mg/m3	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

Remarks	Exposure can also be estimated by biological monitoring Skin absorption.			
		WES- TWA	200 ppm 262 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Exposure can also be estimated by biological monitoring Skin absorption			

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	:	Liquid
Form	:	Liquid
Color	:	Colourless
Odor	:	Characteristic
Odor threshold	:	No data available.
pH	:	No data available.
Melting point/freezing point	:	-97.8 °C
Initial boiling point and boiling range	:	64 °C (101.3 kPa)
Flash Point	:	11 - 12 °C (Closed Cup)
Evaporation rate	:	No data available.
Flammability (solid, gas)	:	No data available.

Upper/lower limit on flammability or explosive limits :

Flammability limit - upper (%)	:	36 %(V)
Flammability limit - lower (%)	:	6 %(V)
Explosive limit - upper (%)	:	No data available.
Explosive limit - lower (%)	:	No data available.
Vapor pressure	:	16.9 kPa (25 °C)

Vapor density	:	1.11 (Air = 1)
Density	:	0.8 g/ml (25 °C)
Relative density	:	0.7866 (25 °C)
Solubility(ies)		
Solubility in water	:	1,000 g/l
Solubility (other)	:	ether: Miscible
Acetone	:	Soluble
Benzene	:	Miscible
Chloroform	:	Soluble
Ethanol	:	Miscible
Partition coefficient (n-octanol/water):	:	-0.77
Auto-ignition temperature	:	240 °C
Decomposition temperature	:	No data available.
Viscosity	:	No data available.

Other information

Liquid conductivity	:	0.45 µS/cm
Molecular weight	:	32.04 g/mol (CH ₃ OH)

10: Stability and reactivity

Reactivity: Contact with metals may evolve flammable hydrogen gas

Chemical Stability: Material is stable under normal conditions.

Possibility of hazardous reactions:

Risk of explosion with:

Oxidizing agents, perchloric acid, perchlorates, salts of oxyhalogenic acids, chromium(VI) oxide, halogen oxides, nitrogen oxides, nonmetallic oxides, chromosulfuric acid, chlorates, hydrides, zinc diethyl, halogens, powdered magnesium, hydrogen peroxide, Nitric acid, sulfuric acid, permanganic acid, sodium hypochlorite.

Exothermic reaction with:

acid halides, Acid anhydrides, Reducing agents, acids, Bromine, Chlorine, Chloroform, magnesium, tetrachloromethane.

Risk of ignition or formation of inflammable gases or vapours with:

Fluorine, Oxides of phosphorus, Raney-nickel.

Generates dangerous gases or fumes in contact with:

Alkaline earth metals, Alkali metals

Incompatible Materials: Strong oxidizing agents. Acids.

Hazardous Decomposition Products: Thermal decomposition may release oxides of carbon. Formaldehyde.

11: Toxicological information

Information on likely routes of exposure

Inhalation	:	Toxic by inhalation.
Skin Contact	:	Toxic in contact with skin.
Eye contact	:	Causes serious eye irritation.
Ingestion	:	Toxic if swallowed.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: LD 50 (Rat): 5,628 mg/kg
Dermal

Product: LD 50 (Rabbit) 15,800 mg/kg
Inhalation

Product: LC 50 (Rat, 1 h) > 145000 ppm
LC 50 (Rat, 4 h): 64000 ppm

Repeated dose toxicity

Product: In serious cases absorption of methanol in the body may lead to damage to the eyesight.

Skin Corrosion/Irritation

Product: Causes skin irritation.

Serious Eye Damage/Eye Irritation

Product: Causes eye irritation.

Respiratory or Skin Sensitization

Product: Not a skin sensitizer.

Carcinogenicity

Product: This substance has no evidence of carcinogenic properties.

Germ Cell Mutagenicity

In vitro

Product: No mutagenic components identified

In vivo

Product: No mutagenic components identified

Reproductive toxicity

Product: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Product: Central nervous system. Eyes.

Specific Target Organ Toxicity - Repeated Exposure

Product: None known.

Target Organs

Specific Target Organ Toxicity - Single Exposure: Central nervous system, Eyes

Aspiration Hazard

Product: No data available.

Specified substance(s):

Methanol: Not classified

Other effects: RTECS: PC1400000

Acute effects:, Headache, Dizziness, Drowsiness, narcosis, Blindness, Impairment of vision, irritant effects, Nausea, Vomiting, agitation, spasms, inebriation, Coma Drying-out effect resulting in rough and chapped skin.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects:

Acidosis, drop in blood pressure, agitation, spasms, inebriation, Dizziness, Drowsiness, Headache, Impairment of vision, Blindness, narcosis, Coma, Symptoms may be delayed.

Damage to:

Liver, Kidney, Cardiac, Irreversible damage of the optical nerve.

Other dangerous properties can not be excluded.

This substance should be handled with particular care

12: Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish: LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): > 100 mg/l

Aquatic Invertebrates

Product: EC 50 (Water flea (*Daphnia magna*), 48 h): > 10,000 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: Expected to be readily biodegradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: May accumulate in soil and water systems.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: -0.77

Mobility in soil: No data available.

Other adverse effects:

Additional ecological information

Avoid release to the environment.

Stability in water :

at 19 °C 83 - 91 % - 72 h

Remarks: Hydrolyzes on contact with water. Hydrolyzes readily.

- 2.2 yr

Remarks: reaction with hydroxyl radicals (IUCLID)

13: Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1230	1230	1230
14.2	UN Proper Shipping name	Methanol	Methanol	Methanol
14.3	Transport Hazard Class	3 (6.1)	3 (6.1)	3 (6.1)
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	No	No	No
14.6	Special precautions for user	None		

HAZCHEM Code : .2WE

15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

HSNO Approval Code: HSR001186

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

***Restricted to workplaces only.**

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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