

# SAFETY DATA SHEET



## Section 1: Identification of the Substance/Mixture and of the Supplier

**Product Name:** Methanol  
**Proper Shipping Name** Methanol  
**Recommended use:** Solvent, fuel, feedstock  
**Restrictions of use:** Refer to Section 15  
**Company Details** Marketing Chemicals Ltd  
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Auckland. New Zealand  
**Telephone:** +64 9 634 3862 [8.00 am to 4.30pm – Monday to Friday]  
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National Poison Centre(24 hours): 0800 POISON [ 764 766]  
**Date of preparation** 3 September 2024 v2

## Section 2: Hazard Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

**EPA Approval No: HSR001186**

**Pictograms:**



**Signal Word: DANGER**

GHS Category	Hazard Code	Hazard Statement
Flammable Liquids Cat. 2	H225	Highly flammable liquid and vapour.
Acute oral toxicity Cat. 3	H301	Toxic if swallowed.
Acute dermal toxicity Cat. 3	H311	Toxic in contact with skin.
Acute Inhalation Tox. 3	H331	Toxic if inhaled.
Eye irritation Cat. 2	H319	Causes serious eye irritation.
Reproductive toxicity Cat. 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity – repeated exposure Cat. 1	H372	Causes damage to organs through prolonged or repeated exposure.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.

P103	Read label before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating, and lighting.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fumes, vapours or spray.
P264	Wash hands 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 clothing.
P281	Use personal protective equipment as required.

<b>Response code</b>	<b>Response Statement</b>
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P303 + P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P370 + P378	In case of fire: Use dry chemical powder, carbon dioxide, or water spray for extinction.
<b>Storage Code</b>	<b>Storage Statement</b>
P405	Store locked up.
P403 + P235	Store in a well-ventilated place. Keep cool.

### Section 3: Composition/Information on Ingredients

<b>Name</b>	<b>% by Wt.</b>	<b>CAS Number</b>
Methanol	99 – 100	67-56-1

### Section 4: First Aid Measures

**NOTES TO PHYSICIAN:** Acute exposure to methanol through either ingestion or inhalation of high concentrations can result in symptoms appearing between 40 minutes and 72 hours following exposure. Symptoms/signs are usually limited to the central nervous system (CNS), eyes, and gastrointestinal tract. Initial CNS effects (headache, vertigo, lethargy, confusion) may give the impression of ethanol intoxication. Blurred vision, decreased acuity (ability to see, hear, and understand) and photophobia (visual intolerance to light) are also common. Treatment with IPECAC or lavage is indicated for any patient presenting within 2 hours of ingestion. A profound metabolic acidosis occurs in severe poisoning and serum bicarbonate

levels are a more accurate measure of severity than serum methanol levels. Ethanol significantly decreases the toxicity of methanol because it competes for the same metabolic enzymes.

- Eyes:** Hold eyes open and rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do after the first 5 minutes. Continue rinsing for at least 15 minutes. Get medical attention if irritation persists.
- Skin:** Remove immediately all contaminated clothing and footwear. Wash affected area with plenty of water followed by soap and water. Get medical advice if irritation persists. Wash contaminated clothing/footwear before re-use.
- Ingestion:** Rinse mouth. Call a Poison Centre or doctor immediately for advice. Do Not DELAY. Swallowing methanol is potentially life threatening. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs.
- Inhalation:** Move person to fresh air and keep warm and at rest. Call a Poison Centre or doctor immediately for advice. If breathing is difficult, give oxygen.

**Most important symptoms and effects, both acute and delayed**

Symptoms:

<b>Ingestion</b>	Toxic if swallowed. nausea, headache, abdominal pain, vomiting and visual disturbances, confusion
<b>Inhalation</b>	Toxic if inhaled. headaches, drowsiness, nausea, confusion, and loss of consciousness, gastrointestinal and visual disturbances
<b>Skin</b>	Toxic in contact with skin. defatting of skin leading to dermatitis
<b>Eyes</b>	Causes serious eye irritation. tearing, redness, and burning
<b>Chronic</b>	Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

**For Further Information Telephone (24 Hours) The National Poison Centre: 0800 Poison [764 766]**

**Section 5: Fire Fighting Measures**

<b>Hazard Type</b>	Flammable liquid
<b>Hazards from products</b>	Methanol vapours may burn with an invisible or clear flame. Toxic gases and vapours may be generated; carbon monoxide, carbon dioxide, formaldehyde.
<b>Suitable Extinguishing media</b>	Use dry chemical powder, carbon dioxide, or water spray. For large fires use alcohol resistant foam. Do NOT use water in a jet.
<b>Precautions for firefighters and special protective clothing</b>	Vapours can accumulate in confined spaces resulting in toxicity and flammability hazards. Vapours can flow along surfaces to distant ignition sources and flash back. Closed containers may rupture violently and suddenly release large quantities of product. Cool fire exposed containers with water spray. Concentrations of >25% methanol in water can be ignited.
<b>HAZCHEM CODE</b>	2WE

**Section 6: Accidental Release Measures**

**SPILLS:** Highly flammable liquid. Can burn without visible flame. Vapor forms explosive mixture with air. Isolate hazard area and keep unnecessary and unprotected people away from area. Stay upwind and keep out of low-lying areas. Wear personal protective equipment. Avoid contact with skin and eyes. Shut off leak if safe to do so. Remove or isolate ignition sources. Contain spill. Avoid run off into drains or sewers. Do not contaminate watercourses or the ground. Take precautions against static discharge. Bound or ground (earth) all equipment. Ventilate contaminated area.

For large spills (more than a drum), recover liquid and transfer by mechanical means to labeled salvage tank that can be sealed for recovery or disposal of product. Allow residues to evaporate. Water can be used to disperse vapors and to clean spill area although prevent water from entering sewers or drains. Remove any contaminated soil and dispose of safely by waste management company

For small spills, absorb with an appropriate material, e.g. vermiculite, and dispose of waste safely in a labelled sealed container for recovery or disposal.

**Section 7: Handling And Storage**

**Handling & Storage:**

Read label before use. Use only in well-ventilated areas. Avoid breathing vapors or direct contact with product. Wear personal protective equipment. Remove ignition sources. Avoid sparks. Electrostatic charge may be generated during pumping with risk of fire. Restrict line viscosity to avoid generation of electrostatic discharge. Take precautions to use bonded or grounded (earthed) equipment. No Smoking. Do not use compressed air for filling, discharging or handling. Use only in well-ventilated area. Keep container closed when not in use. Wear personal protective equipment to prevent breathing of and contact with product. Wear gloves and protect eyes from splashes. Wash hands and exposed skin after handling.

Ensure all storage areas have adequate fire-fighting equipment. Store in closed original container in a secure cool dry well-ventilated place, away from sunlight, ignition sources, heat, incompatible substances, aerosols, other flammables, oxidizing agents, and corrosives, out of reach of children, and away from food, drink, and animal foodstuffs.

Take precautions to avoid accumulation of vapors in pits and confined spaces. All equipment must be grounded/bonded when transferring product to avoid static discharge. Ensure all ignition sources eliminated or purge storage tanks with inert gas such as nitrogen. Anhydrous methanol is non-corrosive to most metals at ambient temperatures except for lead, nickel, monel, cast iron and high silicon iron. Coatings of copper (or copper alloys), zinc (including galvanized steel) or aluminium are unsuitable for storage. Polyethylene, neoprene, phenolic resins, polyesters, natural rubber, butyl rubber, and polyvinyl chloride (unplasticised) shown more resistance to corrosion by methanol.

**Section 8: Exposure Controls/Personal Protection**

**WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

Substance	TWA		STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Methyl alcohol (skin, bio) [67-56-1]	200	262	250	328

Workplace Exposure Standard – Time Weighted Average (WES-TWA). *The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute average exposure standard.* Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

## Personal Protection Equipment



- Engineering Controls:** Use only in a well-ventilated area. If airborne concentrations unknown or exceed exposure limits, wear respiratory protective equipment. Where air-filtering respirators are unsuitable (e.g. air-borne concentrations are high, risk or oxygen deficiency, confined space) use positive pressure breathing apparatus.
- Eye / Face Protection:** Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye-flushing equipment immediately available.
- Body Protection:** PVC-coated gloves. Avoid skin contact. If skin contact or contamination of clothing is likely, protective clothing should be worn.
- Respiratory Protection:** Avoid breathing vapour or mist. Use NIOSH approved respiratory protection equipment appropriate to the material

## Section 9: Physical And Chemical Properties

<b>Appearance</b>	Liquid
<b>Colour</b>	Not available
<b>Odour</b>	Not available
<b>Odour Threshold</b>	Not available
<b>pH</b>	Not applicable
<b>Boiling Point</b>	64.7°C
<b>Melting Point</b>	Not available
<b>Freezing Point</b>	Not available
<b>Flash Point</b>	11°C
<b>Flammability</b>	Flammable
<b>Upper and Lower Explosive Limits</b>	6.0 to 36.5% (in air by volume)
<b>Vapour Pressure</b>	12.8 (kPa @ 20°C)
<b>Vapour Density</b>	1.105 (air = 1 @ 15°C)
<b>Specific Gravity</b>	0.82
<b>Water Solubility</b>	Completely
<b>Partition Coefficient:</b>	Not available
<b>Auto-ignition Temperature</b>	464°C
<b>Decomposition Temperature</b>	Not available
<b>Kinematic Viscosity</b>	Not available
<b>Particle Characteristics</b>	Not applicable
<b>Evaporation Rate (uBuAc=1)</b>	4.1

## Section 10: Stability And Reactivity

- Stability of the Substance:** Stable under normal storage and use conditions.
- Conditions to avoid:** Avoid heat, sparks, open flames and other ignition sources.

**Materials to avoid:** Strong oxidizing agents, strong mineral or organic acids, and strong bases. Contact may result in a violent or explosive reaction. Corrosive to lead, aluminium, magnesium and platinum. May react with metallic aluminium or magnesium and generate hydrogen gas. May attack some forms of plastic, rubber and coatings.

**Hazardous Decomposition Products:**

**Conditions Contributing to Hazardous Polymerization** Not known

**Section 11: Toxicological Information**

**Acute Exposure**

**Eyes:** Causes serious eye irritation. Symptoms can include tearing, redness, and burning.

**Skin:** Toxic in contact with skin. May be absorbed through skin resulting in harmful effects as described for inhalation route of exposure. Prolonged contact may also result in defatting of skin leading to dermatitis and aggravation of any pre-existing skin conditions.

**Ingestion:** SPECIES: Human ;ENDPOINT: LD50 ;VALUE: 300 mg/kg  
Toxic if swallowed. Ingestion of even small amounts could potentially cause blindness and death. Symptoms/signs are usually limited to the central nervous system (CNS), eyes, and gastrointestinal tract. Effects of sub lethal dose can be nausea, headache, abdominal pain, vomiting and visual disturbances. Initial CNS effects (headache, vertigo, lethargy, confusion) may give the impression of ethanol intoxication. Blurred vision, decreased acuity (ability to see, hear, and understand) and photophobia (visual intolerance to light) are common.

**Inhalation:** Toxic if inhaled. May irritate the upper respiratory tract, cause headaches, drowsiness, nausea, confusion, and loss of consciousness, gastrointestinal and visual disturbances. Odor threshold is several times higher than the WES concentration. Exposure to high concentration may cause permanent effects, unconsciousness, and death.

**Chronic Exposure**

**Carcinogenicity** Not applicable.

**Reproductive Toxicity** Suspected of damaging fertility or the unborn child. Not applicable.

**Germ Cell Mutagenicity** Not applicable.

**Aspiration** Not applicable.

**STOT/SE** Not applicable.

**STOT/RE** Causes damage to organs through prolonged or repeated exposure.

**Section 12: Ecological Information**

Not expected to be a hazard to the environment

<b>Persistence and degradability</b>	No data available
<b>Bioaccumulation</b>	No data available
<b>Mobility in Soil</b>	No data available
<b>Other adverse effects</b>	No data available

Do not allow to enter waterways.

**Section 13: Disposal Considerations**

Recover and recycle (e.g. re-distillation) product whenever possible. Dispose of waste in accordance with Regional Authority or local council bylaws. Options may include via sewerage treatment facility (limitations on water-diluted concentration would apply) or via incineration. Do not allow to enter waterways.

## Section 14: Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2020 and SNZ HB 5433:2021



### Road, Rail, Sea and Air Transport

UN No	1230
Class - Primary	3
Subsidiary Risk	6.1
Packing Group	II
Proper Shipping Name	METHANOL
Marine Pollutant	No
Special Provisions	If the product's individual container is below 1L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

## Section 15: Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval Code: HSR001186

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	100L(>5L), 250L(<5L) 50L (open)
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	250L
Emergency Response Plan	100L
Secondary Containment	100L
Restriction of Use	None

### Restrictions of Use:

No person may use this substance described as a pesticide or a veterinary medicine. However, this substance may be used in the formulation of a pesticide or a veterinary medicine. For the purpose of this control—

- (a) **pesticide** includes, but is not limited to, a product intended for use as an acaricide, antifouling paint, avicide, fumigant, fungicide, insecticide, herbicide, miticide, molluscicide, piscicide, timber treatment preservative or vertebrate toxic agent

- (b) **veterinary medicine** has the same meaning given to it in the Agricultural Compounds and Veterinary Medicines Act 1997.

## Section 16: Other Information

### Glossary

EC <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

### References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2023 14<sup>th</sup> edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

### Disclaimer

Marketing Chemicals Ltd has taken care in compiling this information. No liability is accepted directly or indirectly from its application as conditions of use are outside the Company's control. End users are obliged to conform to relevant Local Government regulations.

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End of Safety Data Sheet.