



MATERIAL SAFETY DATA SHEET

Methanol

SECTION 1: IDENTIFICATION OF MATERIAL AND SUPPLIER

Product Name:	Methanol
Other Names:	METHYL ALCOHOL; CARBINOL; METHANOL;
Product Codes/Trade Names:	-
Recommended Use:	Manufacture of formaldehyde, acetic acid and dimethyl terephthalate, chemical synthesis (methyl amines, methyl chloride, methyl methacrylate), antifreeze; solvent for nitrocellulose, ethylcellulose, polyvinyl butyral, shellac, rosin, manila resin, dyes; nenaturant for ethanol; dehydrator for natural gas; fuel for utility plants (methyl fuel); feedstock for manufacture of synthetic proteins by continuous fermentation; source of hydrogen for fuel cells; home- heating-oil extender.
Applicable In:	Australia
Supplier:	ACB Group (ABN 79 724 186 134)
Address:	118 Swann Drive, Derrimut Victoria-3030
Telephone:	+61 3 93690220
Email Address:	info@acbgroup.com.au
Facsimile:	+61 3 93690883
Emergency Phone Number:	000 Fire Brigade and Police (available in Australia only).
Poisons Information Centre:	13 11 26 (available in Australia only).

This Material Safety Data Sheet (MSDS) is issued by the Supplier in accordance with National standards and guidelines from the Australian Safety and Compensation Council (ASCC, formerly National Occupational Health and Safety Commission - NOHSC). The information in it must not be altered, deleted or added to. The Supplier will not accept any responsibility for any changes made to its MSDS by any other person or organization. The Supplier will issue a new MSDS when there is a change in product specifications and/or ASCC standards, codes, guidelines, or Regulations.

SECTION 2: HAZARD IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE: Classified as **Hazardous** according to the criteria of the Australian Safety and Compensation Council ASCC (formerly NOHSC) Approved Criteria For Classifying Hazardous Substances [NOHSC:1008] 3rd Edition.

Methanol is classified as **Dangerous** Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

GHS Classification

- Flammable liquids (Category 2)
- Acute toxicity, Oral (Category 3)
- Acute toxicity, Inhalation (Category 3)
- Acute toxicity, Dermal (Category 3)
- Specific target organ toxicity - single exposure (Category 1)

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225
H301
H311
H331
H370

Highly flammable liquid and vapour.
Toxic if swallowed.
Toxic in contact with skin.
Toxic if inhaled.
Causes damage to organs.

Precautionary statement(s)

Prevention

P210
P233
P260

Keep away from heat/sparks/open flames/hot surfaces. – No. smoking.
Keep container tightly closed.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Response

P301 + P310

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P303 + P361 + P353

Rinse skin with water/ shower.

IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.

P304 + P340

comfortable for breathing.

IF INHALED: Remove victim to fresh air and keep at rest in a position

P307 + P311

P361

P370 + P378

extinction.

IF exposed: Call a POISON CENTER or doctor/ physician.

Remove/ Take off immediately all contaminated clothing.

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for

Storage

P403 + P233

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

2.3 Other hazards

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Synonyms	:	Methyl alcohol
Formula	:	CH ₄ O Molecular
Weight	:	32.04 g/mol
CAS-No.	:	67-56-1
EC-No.	:	200-659-6

Chemical Name:	Synonyms	Concentration:	Classification
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Methanol	-----	100%	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, _H311, H331, H370
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For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre.

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

Swallowed:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Eyes:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin:	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
Inhaled:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
First Aid Facilities:	First aid kits, safety showers, eye wash stations
Advice to Doctor:	Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 Indication of any immediate medical attention and special treatment needed no data available

SECTION 5: FIRE FIGHTING MEASURES

Advice for Fire Fighters	Wear self contained breathing apparatus for fire fighting if necessary.
Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use water spray to cool unopened containers.
Hazards from combustion products:	Carbon oxides
HAZCHEM Code:	•2WE

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedure:	Personal precautions, protective equipment and emergency procedures Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8. Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Methods and materials for containment and cleaning up Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Reference to other sections For disposal see section 13.
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SECTION 7: HANDLING AND STORAGE

Storage:	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Handling:	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards: National Occupational Exposure Standard (NES) Australian Safety & Compensation Council, ASCC (formerly NOHSC)

Component	CAS-No.	Value	Control parameters	Basis
Methanol	67-56-1	STEL	250 ppm 328 mg/m ³	Australia. Workplace Exposure Standards
	Remarks	Skin absorption ACGIH is the documentation source		
		TWA	200 ppm 262 mg/m ³	Australia. Workplace Exposure Standards
		Skin absorption ACGIH is the documentation source		

Notes:

All occupational exposures to atmospheric contaminants should be kept to as low a level as is workable (practicable) and in all cases to below the National Standard.

These Exposure Standards are guides to be used in the control of occupational health hazards.

These Exposure Standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

TWA (Time Weighted Average): the time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

STEL (Short Term Exposure Limit): the average airborne concentration over a 15 minute period that should not be exceeded at any time during a normal eight-hour work day.

N/A

Biological Limit Values:
ENGINEERING CONTROLS

Ventilation:

Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable/explosive vapours may accumulate poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Do NOT enter confined spaces where vapour may have collected. Maintain vapour levels below the recommended exposure standard. Keep containers closed when not in use.

Special Consideration for Repair &/or Maintenance of Contaminated Equipment:

Empty containers retain residue (liquid and/or vapour) and are dangerous. Do not pressure cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. Vapour is heavier than air – prevent concentration in hollows or sumps. Do not enter confined spaces where vapour may have collected. Keep containers closed when not in use.

PERSONAL PROTECTION
Personal Protection

RESPIRATOR: Wear an approved respirator with suitable Type 'A' filter for organic gases and vapours. At high vapour levels, wear an Air-line respirator (AS1715/1716). EYES: Chemical goggles to prevent splashing in the eyes (AS1336/1337). HANDS: Wear butyl, viton, neoprene, or PVC protective gloves

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Mobile clear colourless liquid
Odour:	Non-Residual
pH, at stated concentration:	N/A
Vapour pressure:	12.8 kPa (25°C) mm Hg (1 atmosphere)
Vapour Density:	1.11
Boiling Point/range (°C):	Typically 64.4-64.8 deg C
Freezing/Melting Point (°C):	-97.7 deg C
Specific Gravity (H₂O = 1):	0.793-0.796 (15°C)
FLAMMABLE MATERIALS	
<input type="checkbox"/> Flash Point:	11°C
<input type="checkbox"/> Flash Point Method:	Closed cup
<input type="checkbox"/> Flammable (Explosive) Limit - Upper:	36.5%
<input type="checkbox"/> Flammable (Explosive) Limit - Lower:	6%
<input type="checkbox"/> Auto ignition Temperature:	470°C
ADDITIONAL PROPERTIES	
<input type="checkbox"/> Residue on Evaporation	1 ppm m/m
<input type="checkbox"/> Volatile Organic Compounds Content (VOC)	(as specified by the Green Building Council of Australia) 100%

SECTION 10: STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials

Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

Reactivity

no data available

SECTION 11: TOXICOLOGICAL INFORMATION

Health effects information is based on reported effects in use from overseas and Australian reports.

Toxicological Data:

Information on toxicological effects

Acute toxicity

LDLO Oral - Human - 143 mg/kg

Remarks: Lungs, Thorax, or Respiration:Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

LD50 Oral - rat - 1,187 - 2,769 mg/kg

LC50 Inhalation - rat - 4 h - 128.2 mg/l

LC50 Inhalation - rat - 6 h - 87.6 mg/l

LD50 Dermal - rabbit - 17,100 mg/kg

Skin corrosion/irritation

Skin - rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Eyes - rabbit

Result: No eye irritation

Respiratory or skin sensitisation

Maximisation Test - guinea pig

Does not cause skin sensitisation.

(OECD Test Guideline 406)

Germ cell mutagenicity

Ames test

S. typhimurium

Result: negative

in vitro

assay

fibroblast

Result: negative

Mutation in mammalian somatic cells.

Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

mouse - male and female

Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Damage to foetus not classifiable

Specific target organ toxicity - single exposure

Causes damage to organs.

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification

Additional Information

RTECS: PC1400000

Methyl alcohol may be fatal or cause blindness if swallowed.

Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures.

Symptoms may be delayed., Damage of the:, Liver, Kidney

SECTION 12: ECOLOGICAL INFORMATION

Eco-toxicity: Toxicity

Toxicity to fish mortality LC50 - Lepomis macrochirus (Bluegill) - 15,400.0 mg/l - 96 h

NOEC - Oryzias latipes - 7,900 mg/l - 200 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - > 10,000.00 mg/l - 48 h

Toxicity to algae Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) - 22,000.0 mg/l - 96 h

Persistence and degradability

Biodegradability aerobic - Exposure time 5 d
Result: 72 % - rapidly biodegradable

Biochemical Oxygen Demand (BOD)

Chemical Oxygen Demand (COD)

Theoretical oxygen demand

600 - 1,120 mg/g

1,420 mg/g

1,500 mg/g

Bioaccumulative potential

Bioaccumulation
Cyprinus carpio
(Carp) - 72 d at
20 °C - 5 mg/l

Mobility in soil

Will not adsorb on soil.

Bioconcentration factor (BCF): 1.0

Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Other adverse effects

Additional ecological information

Avoid release to the environment.



Stability in water

at 19 °C83 - 91 % - 72 h

Remarks: Hydrolyses on contact with water. Hydrolyses readily.

SECTION 13: DIPOSAL CONSIDERATIONS

Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

UN number

ADR/RID: 1230

IMDG: 1230

IATA-DGR: 1230

UN proper shipping name

ADR/RID: METHANOL IMDG:

METHANOL IATA-DGR:

Methanol

Transport hazard class(es)

ADR/RID: 3 (6.1)

IMDG: 3 (6.1)

IATA-DGR: 3 (6.1)

Packaging group

ADR/RID: II

IMDG: II

IATA-DGR: II

Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA-DGR: no

Special precautions for user

no data available

SECTION 15: REGULATORY INFORMATION

Poisons Schedule:

6

EPG

16

AICS Name

Methanol

NZ Toxic substance

3

HSNO Hazard Classification

3.1B 6.1D

6.4A 6.8B

6.9A 9.3C

ERMA Approval code

HSR001186

SECTION 16: OTHER INFORMATION

For further information on this product, please contact:

ACB Group (ABN 79 724 186 134)

118 Swann Drive, Derrimut Victoria-3030, Australia.

Phone: +61 3 93690220

Fax: +61 3 93690883

ADDITIONAL INFORMATION

Australian Standards References:

AS 1020	The Control of undesirable static electricity.
AS 1076	Code of Practice for selection, installation and maintenance of electrical apparatus and associated equipment for use in explosive atmospheres (other than mining applications) – Parts 1 to 13.
AS/NZS 1336	Recommended Practices for Occupational Eye Protection
AS/NZS 1715	Selection, Use and Maintenance of Respiratory Protective Devices
AS/NZS 1716	Respiratory Protective Devices
AS 1940	The Storage and Handling of Flammable and Combustible Liquids.
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)
AS 2380	Electrical equipment for explosive atmospheres – Explosion Protection Techniques (Parts 1 to 9).
AS 3000	Electrical installations (known as the Australian/New Zealand Wiring Rules).

Other References:

NOHSC:2011(2003)	National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition, April 2003, National Occupational Health and Safety Commission.
NOHSC; 2012 (1994)	National Code of Practice for the Labelling of Workplace Substances, March 1994, Australian Government Publishing Service, Canberra.
NES	National Occupational Exposure Standards for workplace Atmospheric Contaminants (NES) Australian Safety and Compensation Council, ASCC (Formerly NOHSC) 1995 as amended.
ADG Code 6 th Edition	Australian Dangerous Goods Code 6 th Edition

AUTHORISATION

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END OF MSDS