

SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: SafeWork Australia Approved Code of Practice about the preparation of safety data sheets for hazardous chemicals (July 2020), which is an approved code of practice under section 274 of the Work Health and Safety Act

Issuing Date 05-Dec-2013 **Revision Number** 2 Revision Date 24-May-2022

Section 1: Identification

Product identifier

Product Name Methanol

Other means of identification

Proper shipping name **METHANOL**

67-56-1 **CAS No**

Synonyms Methyl alcohol, wood alcohol, methyl hydroxide

Pure substance/mixture Substance

32.04 Molecular weight

Other information Chemical Family - Alcohols

Recommended use of the chemical and restrictions on use

Recommended use Industrial use, Professional use, Consumer use:

> Solvent **Fuels** Raw material

Cleaning agent Laboratory reagent

Manufacturer

Use in oil and gas field drilling and production operations

Water treatment chemicals, wastewater Consumer use of cleaning agents and de-icers

Uses advised against None known

Banned and/or restricted This product contains one or more substance(s) subject to prohibition, authorisation or

restriction. Verify that requirements related to using, handling, and storing substances

subject to prohibition, authorisation or restriction are met.

Details of manufacturer or importer

Importer

Methanex Asia Pacific Limited Hexion Pty Ltd Level 4, 13-15 Lake St. Unit 3802, 38/F, The Lee Gardens 33 Hysan Avenue 3023 Caroline Springs Causeway Bay Victoria, Australia

Phone: 1300 666 368 Hong Kong Phone: 852-2918-1398 Fax: 852-2918-1331 Borg Manufacturing Pty Ltd

2 Wella Way

Somersby NSW 2250

Australia

Phone: 02 4340 9800

For further information, please contact

Emergency telephone number

Emergency telephone number Hexion Pty Ltd: 1800 033 111 / +61 3 9663 2130

NCEC: +61 2 8014 4558 (24h/7d), 18000 74234 (toll-free, Australia)

Poisons Information Centre: 13 11 26

Section 2: Hazard(s) identification

GHS Classification

Flammable liquids	Category 2
Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Vapours)	Category 3
Serious eye damage/eye irritation	Category 2
Reproductive toxicity	Category 2
Specific target organ toxicity — single exposure	Category 1

Label elements

Flame Skull and crossbones Health hazard



Signal word DANGER

Hazard statements

Highly flammable liquid and vapour
Toxic if swallowed
Toxic in contact with skin
Toxic if inhaled
Causes serious eye irritation
Suspected of damaging fertility or the unborn child
Causes damage to organs

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/clothing and eye/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapours/spray

Ground and bond container and receiving equipment

Use non-sparking tools

Take action to prevent static discharges

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container closed

Use explosion-proof electrical/ ventilating/ lighting/ equipment

Keep cool

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

Specific treatment (see supplemental first aid instructions on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention IF ON SKIN: Wash with plenty of water and soap

Call a doctor if you feel unwell

Take off immediately all contaminated clothing and wash it before reuse IF INHALED: Remove person to fresh air and keep comfortable for breathing

Call a doctor

IF SWALLOWED: Immediately call a doctor

Rinse mouth

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

Precautionary Statements - Storage

Store locked up

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

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification

Risk of blindness after swallowing the product.

Harmful to aquatic life.

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read carefully and follow all instructions.

Section 3: Composition/information on ingredients

Chemical name	CAS No	Weight-%
Methanol	67-56-1	100

Section 4: First aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required.

Emergency telephone number Poisons Information Centre, Australia: 13 11 26

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention. If breathing

has stopped, give artificial respiration. Get medical attention immediately. Immediate medical attention is required. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained

personnel should) give oxygen.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present

and easy to do. Continue rinsing. Get immediate medical attention.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Remove/Take off

immediately all contaminated clothing. Get immediate medical attention.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious

person. Get immediate medical attention.

Self-protection of the first aider

Do not breathe vapour or mist. Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms and effects, both acute and delayed

Symptoms Exposure may cause nausea, weakness and central nervous system effects, headache,

vomiting, dizziness, symptoms of drunkenness. Coma and death due to respiratory failure may follow severe exposures: Medical treatment necessary. A latent period of several hours may occur between exposure and the onset of symptoms. May cause redness and

tearing of the eyes. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to doctors

The severity of outcome following methanol ingestion may be more related to the time

between ingestion and treatment, rather than the amount ingested; therefore, there is a need for rapid treatment of any ingestion exposure. Call a Poison Center. Antidote: Fomepizole enhances elimination of metabolic formic acid. Antidote should be administered

by qualified medical personnel.

Section 5: Firefighting measures

Suitable Extinguishing Media

flash point. Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol-resistant foam.

Unsuitable extinguishing media Do not use straight streams. Do not scatter spilled material with high pressure water

streams.

Specific hazards arising from the chemical

Specific hazards arising from the chemical

Mixtures >20% methanol with water: flammable. Highly flammable liquid and vapour. Vapours are heavier than air and may spread along floors. Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. May burn with an almost invisible flame in bright

light.

Hazardous combustion products Toxic gases or vapours. Carbon monoxide. Carbon dioxide (CO2). Formaldehyde.

Special protective actions for fire-fighters

Special protective equipment and precautions for fire-fighters

Personal precautions

Cool containers with flooding quantities of water until well after fire is out. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Hazchem code •2WE

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the

product must be grounded. Do not touch or walk through spilled material. Do not breathe

vapour or mist.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Avoid release to the environment. Dispose of contents/containers in accordance with local

regulations. Biodegradable at low concentrations. Soluble in water. When released, this product is expected to evaporate. Contact authorities in the event of pollution of soil and aquatic environment or discharge into drains. Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from

entering drains.

Methods and material for containment and cleaning up

Methods for containment Take precautionary measures against static discharge. Stop leak if you can do it without

risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material

and transfer to containers for later disposal.

Methods for cleaning up Small spill: Absorb or cover with dry earth, sand or other non-combustible material and

transfer to containers. Use non-sparking tools. Collect spillage. Large spill: Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent

material. Pick up and transfer to properly labelled containers.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling Use according to package label instructions. Use personal protection equipment. Keep

away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Do not breathe vapour or mist. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not enter confined area unless adequately

ventilated.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or

smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Do not breathe

vapour or mist.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from

heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static

electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with local regulations. Keep

unauthorised personnel away. Store locked up.

Incompatible materials Lead. Aluminium. Zinc. Oxidising agent. Strong acids. Strong bases. Polyethylene.

Polyvinyl chloride (PVC). Nitriles.

Section 8: Exposure controls and personal protection

Control parameters

Exposure Limits

Chemical name	Australia	New Zealand	ACGIH TLV
Methanol	TWA: 200 ppm	TWA: 200 ppm	STEL: 250 ppm
67-56-1	TWA: 262 mg/m ³	TWA: 262 mg/m ³	TWA: 200 ppm
	STEL: 250 ppm	STEL: 250 ppm	S*
	STEL: 328 mg/m ³	STEL: 328 mg/m ³	
		Skin	

Chemical name	European Union	United Kingdom	Germany MAK
Methanol	TWA: 200 ppm	TWA: 200 ppm	TWA: 100 ppm
67-56-1	TWA: 260 mg/m ³	TWA: 266 mg/m ³	TWA: 130 mg/m ³
	*	STEL: 250 ppm	Peak: 200 ppm
		STEL: 333 mg/m ³	Peak: 260 mg/m ³
		Sk*	*

Biological occupational exposure

limits

Chemical name	Australia	ACGIH	European Union
Methanol	-	15 mg/L - urine (Methanol) -	-
67-56-1		end of shift	

Appropriate engineering controls

Engineering controls Provide local exhaust ventilation. Handle product only in closed system or provide

appropriate exhaust ventilation. All equipment used when handling the product must be grounded. Ensure that eyewash stations and safety showers are close to the workstation

location.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Antistatic boots.

Hand protection Wear suitable gloves. Impervious gloves. Butyl rubber.

Respiratory protection Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or

other positive-pressure mode. Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards

of the product and the safe working limits of the selected respirator

Environmental exposure controls No information available.

Thermal hazards No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance
Physical state
Colour
Colour
Clear
Odour
Alcohol
Odour threshold
Clear
Alcohol
4.2 - 5960 ppm

Values
pHRemarks• Method
No data availableMelting point / freezing point-97.8 °CNo data availableInitial boiling point and boiling
range64.7 °CNo data available

Flash point11 °CNo data availableEvaporation rate4.1Butyl acetate = 1FlammabilityNo data available

Flammability Limit in Air

Upper flammability or explosive 36.5% No data available

limits

Lower flammability or explosive 5.5% No data available

limits

 Vapour pressure
 12.8 kPa
 @ 20 °C

 Vapour density
 1.1
 @ 20 °C (air = 1)

 Relative density
 0.791 - 0.793
 @ 20 °C

Water solubility

Miscible in water

No data available

No data available

Partition coefficient -0.77 log Pow

Autoignition temperature

Autoignition temperature

464 °C

No data available

No data available

No data available

Kinematic viscosity

No data available

No data available

No data available

No data available

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Explosive propertiesVapours may form explosive mixtures with air.

Oxidising properties No information available.

Other information

Softening point No information available

Molecular weight 32.04 VOC Content (%) 100%

Liquid Density

Bulk density

Particle characteristics

No information available
No information available
No information available

Section 10: Stability and reactivity

Reactivity

Reactivity Containers may rupture or explode if exposed to heat.

Chemical stability

Stability Stable under normal conditions. May form flammable/explosive vapour-air mixture.

Hygroscopic.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Heat, flames and sparks. Excessive heat. Containers may rupture or explode if exposed to

heat.

Incompatible materials

Incompatible materials Lead. Aluminium. Zinc. Oxidising agent. Strong acids. Strong bases. Polyethylene.

Polyvinyl chloride (PVC). Nitriles.

Hazardous decomposition products

Hazardous decomposition products Carbon monoxide. Carbon dioxide (CO2). May release flammable gases: Formaldehyde.

Section 11: Toxicological information

Acute toxicity

Information on likely routes of exposure

Product Information

Inhalation Toxic by inhalation.

Eye contact Causes serious eye irritation.

Skin contact Toxic in contact with skin.

Ingestion Toxic if swallowed. MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED.

Symptoms Exposure may cause nausea, weakness and central nervous system effects, headache,

vomiting, dizziness, symptoms of drunkenness. Coma and death due to respiratory failure may follow severe exposures: Medical treatment necessary. A latent period of several hours may occur between exposure and the onset of symptoms. May cause redness and

tearing of the eyes. Coughing and/ or wheezing. Difficulty in breathing.

Numerical measures of toxicity - Product Information

Numerical measures of toxicityAcute Toxicity Estimate (ATE) values provided as a reflection of the hazard classification.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methanol	= 6200 mg/kg (Rat)	= 15840 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation. Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive toxicity Contains a known or suspected reproductive toxin. Suspected of damaging fertility or the

unborn child.

STOT - single exposure Causes damage to organs.

STOT - repeated exposureNo information available.

Target organ effects Central nervous system. Optic nerve.

Aspiration hazard No information available.

Section 12: Ecological information

Ecotoxicity

Aquatic ecotoxicity Avoid release to the environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Methanol	-	LC50: =28200mg/L	-	-
		(96h, Pimephales		
		promelas)		
		LC50: >100mg/L (96h,		
		Pimephales promelas)		
		LC50: 19500 -		
		20700mg/L (96h,		
		Oncorhynchus mykiss)		
		LC50: 18 - 20mL/L (96h,		
		Oncorhynchus mykiss)		
		LC50: 13500 -		
		17600mg/L (96h,		
		Lepomis macrochirus)		

Terrestrial ecotoxicty

Chemical name	Earthworm	Avian	Honeybees
Methanol	Acute Toxicity: LC50 > 1	-	-
	mg/cm2 (Eisenia foetida 48 h		
	filter paper)		
	Source: IUCLID		

Persistence and degradability

Persistence and degradability Readily biodegradable.

Bioaccumulative potential

Bioaccumulation Not expected to bioaccumulate. BCF: <10.

Component Information

Chemical name	Partition coefficient
Methanol	-0.77

Mobility

Mobility in soil Adsorbs on soil.

Mobility No information available.

Other adverse effects

Other adverse effects No information available.

Section 13: Disposal considerations

Waste treatment methods

Waste from residues/unused

products

Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Recover or recycle if possible. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

See section 8 for more information

Section 14: Transport information

<u>ADG</u>

UN number UN1230
Proper shipping name METHANOL

Transport hazard class(es) 3
Subsidiary hazard class 6.1
Packing group II
Special Provisions 279

Description UN1230, METHANOL, 3 (6.1), II

Limited quantity (LQ) 1 L
Hazchem code •2WE

<u>IATA</u>

Description UN1230, Methanol, 3 (6.1), II

IMDG

UN number or ID number UN1230 UN proper shipping name METHANOL

Transport hazard class(es) 3
Subsidiary hazard class 6.1
Packing group II
EmS-No F-E, S-D
Special Provisions 279

Marine pollutant

Description UN1230, METHANOL, 3 (6.1), II, (11°C C.C.)

Transport in bulk according to Annex II of MARPOL and the IBC Code

No information available

Section 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

<u>Australia</u>

See section 8 for national exposure control parameters

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Poison Schedule Number 6

Australian Industrial Chemicals Introduction Scheme (AICIS)

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Methanol - 67-56-1	Present	-

Illicit Drug Precursors/Reagents

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

Major hazard (accident/incident planning) regulation

Verify that licence requirements are met

Hazardous chemical Liquids that meet the criteria for Class 3 Packing Group II or III

Liquids with flash points <61°C kept above their boiling points at

ambient conditions

Threshold quantity (T)

50 000

200

National pollutant inventory

Subject to reporting requirement

Chemical name	National pollutant inventory
Methanol - 67-56-1	10 tonne/yr Threshold category 1

Banned and/or restricted

This product contains one or more substance(s) subject to prohibition, authorisation or restriction. Verify that requirements related to using, handling, and storing substances subject to prohibition, authorisation or restriction are met.

Chemical name	Carcinogen	Restricted substance
Methanol - 67-56-1	-	For spray painting at a concentration
		of >1% by volume

International Inventories

AICS	Listed.
TSCA	Listed.
DSI /NDSI	Listed

EINECS/ELINCS Listed.
ENCS Listed.
IECSC Listed.
KECL Listed.
PICCS Listed.

Legend:

AICS - Australian Inventory of Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

Section 16: Other information

Issuing Date 05-Dec-2013

Revision Date 24-May-2022

Revision Note Regulatory update. Change to classification. Updated format. SDS sections updated: 1 - 16.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value * Skin designation

C Carcinogen

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

Australian Industrial Chemicals Introduction Scheme (AICIS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme Organisation for Economic Co-operation and Development Screening Information Data Set World Health Organization

Disclaimer

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End of Safety Data Sheet