SECTION 1: Identification of the substance or mixture and of the company

Product identifier Methanol

UN/ID no UN1230

Synonyms Methyl alcohol, wood alcohol, methyl hydroxide

Other information Chemical Family - Alcohols

Recommended use Industrial use, Professional use, Consumer use:

Solvent
Fuels
Raw material
Cleaning agent
Laboratory reagent
Use in oil and gas field drilling and production operations
Water treatment chemicals, wastewater
Consumer use of cleaning agents and de-icers

Restrictions on use No information available

Details of the supplier of the safety data sheet:

Supplier

Methanex Chile SpA (Commercial Office)
Rosario Norte 100, 6° floor
Las Condes, Santiago
CHILE
Tel: + 56 2 2374 4000 Methanex Chile SpA (Punta Arenas Plant)
Km. 28,5 Route 9 North
Cabo Negro Industrial Complex
Punta Arenas
CHILE
Tel: +56 61 2712265

Non-Emergency Telephone Number No information available

24 Hour Emergency Phone Number CHEMTREC Chile (Santiago): +(56)-225814934

SECTION 2: Identification of the hazard or the hazards

Classification according to NCh 382

UN1230, METHANOL, 3 (6.1), II

Classification of the substance or mixture

Acute toxicity - Oral	Category 3 - (H301)
Acute toxicity - Dermal	Category 3 - (H311)
Acute toxicity - Inhalation (Vapors)	Category 3 - (H331)
Specific target organ toxicity (single exposure)	Category 1 - (H370)
Flammable liquids	Category 2 - (H225)

Label elements

Signal word
Danger

Hazard statements
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H370 - Causes damage to organs
H225 - Highly flammable liquid and vapor

Precautionary statements
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P321 - Specific treatment (see supplemental first aid instructions on this label)
P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Additional information
This product requires tactile warnings if supplied to the general public. This product requires child resistant fastenings if supplied to the general public.

Specific classification Not applicable.

Specific symbol Not applicable.

Other hazards
Risk of blindness after swallowing the product. Harmful to aquatic life.

SECTION 3: Composition/information on ingredients

Substance

Chemical name Methanol

Chemical name	Common name	Weight-%	CAS No
Methanol	Methyl alcohol	99.85	67-56-1

SECTION 4: First aid measures

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

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.

Skin contact Remove/Take off immediately all contaminated clothing. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention.

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. Get immediate medical attention.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.

Expected acute effects Toxic if swallowed, in contact with skin or if inhaled. Blindness. Coughing and/ or wheezing. Difficulty in breathing. Central nervous system effects. Symptoms of drunkenness.

Most important symptoms/effects, acute and delayed 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. Coughing and/ or wheezing. Difficulty in breathing.

Self-protection of the first aider 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. 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. Do not breathe vapor or mist.

Note to physicians 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 Use water spray to cool fire-exposed containers. Water will not cool methanol below its flash point. Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol Resistant Film Forming foam .? or .?1%.

Unsuitable extinguishing media No information available.

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

Specific hazards arising from the chemical Mixtures >20% methanol with water: flammable. Highly flammable liquid and vapor. Vapors 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.

Specific/special fire-fighting measures Methanol: Burns with invisible flame. Flame may not be visible in daylight. Cool containers with flooding quantities of water until well after fire is out. Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Steps to be taken in the event of accidental release/spillage

Personal precautions, protective equipment and emergency procedures

Personal precautions	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 vapor or mist.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.
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	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 labeled containers. Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff 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.
Recovery	Recover or recycle if possible.
Final disposal	Dispose of contents/containers in accordance with local regulations.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.
Reference to other sections	Safe handling: see Section 7. Personal protection equipment (PPE): see Section 8. Disposal: see Section 13.

SECTION 7: Handling and storage

Handling

Advice on safe handling	Do not enter confined area unless adequately ventilated. 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. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash before reuse. Do not breathe vapor or mist. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should 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 vapor or mist.

Other precautions (ventilation) Ensure adequate ventilation.

Prevention of contact with incompatible substances No information available.

Storage

Storage Conditions Keep unauthorized personnel away. 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 labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up.

Incompatible materials Lead. Polyethylene. Polyvinyl chloride (PVC). Nitriles.

Packaging materials No information available.

Specific use(s) Manufacture of substance. Formulation & (re)packing of substances and mixtures Distribution of formulations. Use as an intermediate. Use as a Process chemical Distribution of substance. Use as a Fuel (use in industrial settings). Use in Cleaning Agents (use in industrial settings). Use as laboratory reagent/agent (use in industrial settings). Use as wastewater treatment chemical (use in industrial settings). Use in Oilfield drilling and production operations (use in industrial settings). Use as a Fuel (use in professional settings). Use in Cleaning Agents (use in professional settings). Use as laboratory reagent/agent (use in professional settings). Use in Cleaning Agents Use in De-icing and Anti-icing agents (consumer use) (spray products). Use in Cleaning Agents Use in De-icing and Anti-icing agents (consumer use) (liquid products). Use as Fuel additive (consumer use) (outdoor use).

SECTION 8: Exposure controls / personal protection

Exposure guidelines

Chemical name	Chile	ACGIH TLV
Methanol 67-56-1	LPP: 175 ppm LPP: 229 mg/m^3 S* LPT: 250 ppm LPT: 328 mg/m^3	STEL: 250 ppm TWA: 200 ppm S*

Other information on limit values OEL values in accordance with Commission Directive 2000/39/EC of 8 June 2003, as amended, establishing a first list of indicative occupational exposure limit values in the implementation of Council Directive 98/24/EC

Biological occupational exposure limits

Chemical name	Chile	ACGIH
Methanol 67-56-1	7 mg/g Creatinine: urine (Methanol) - not critical	15 mg/L - urine (Methanol) - end of shift

Personal protective equipment

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

Hand protection Wear suitable gloves. Impervious gloves.

Eye/face protection	Tight sealing safety goggles.
Skin and body protection	Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing should 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 vapor or mist.
Environmental exposure controls	Avoid release to the environment. Prevent entry into waterways, sewers, basements or confined areas.
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.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear liquid
Physical state	Liquid
Color	Clear
Odor	Alcohol
Odor threshold	4.2 - 5960 ppm

Property	**Values**	**Remarks • Method**
pH		No data available
Melting point / freezing point	-97.8 °C	No data available
Initial boiling point and boiling range	64.7 °C	No data available
Flash point	11 °C	No data available
Evaporation rate	4.1	Butyl acetate = 1
Flammability		No data available
Flammability Limit in Air		
Upper flammability or explosive limits	36.5%	No data available
Lower flammability or explosive limits	5.5%	No data available
Vapor pressure	12.8 kPa	@ 20 °C
Vapor density	1.1	@ 20 °C (air = 1)
Relative density	0.791 - 0.793	@20°C
Water solubility	Miscible in water	No data available
Solubility(ies)		No data available
Partition coefficient	-0.77	log Pow
Autoignition temperature	464 °C	No data available
Decomposition temperature		No data available
Kinematic viscosity		No data available
Dynamic viscosity	0.8 cP	@ 20 °C
Explosive properties	Vapors may form explosive mixtures with air	
Oxidizing properties	No information available	

Other information

Molecular weight	32.04
VOC content	100%
Liquid Density	No data available
Bulk density	No data available

SECTION 10: Stability and reactivity

Chemical stability May form flammable/explosive vapor-air mixture.

Possibility of hazardous reactions None under normal processing.

Reactivity Containers may rupture or explode if exposed to heat.

Explosion data

Sensitivity to mechanical impact No information available.

Sensitivity to static discharge Yes.

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

Incompatible materials Lead. Polyethylene. Polyvinyl chloride (PVC). Nitriles.

Hazardous decomposition products Carbon monoxide. Carbon dioxide (CO2). Ketones. Formaldehyde.

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

SECTION 11: Toxicological information

Acute toxicity

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

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (oral) 100.00 mg/kg
ATEmix (dermal) 300.00 mg/kg
ATEmix (inhalation-vapor) 3 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methanol	= 6200 mg/kg (Rat)	= 15840 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h = 64000 ppm (Rat) 4 h

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation May cause mild to moderate irritation.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

Reproductive toxicity No information available.

STOT - single exposure Causes damage to organs.

STOT - repeated exposure No information available.

Target organ effects Central nervous system. Optic nerve.

Aspiration hazard No information available.

Interactive effects No information available.

Information on likely routes of exposure

Inhalation Toxic by inhalation.

Eye contact May cause irritation.

Skin contact Toxic in contact with skin.

Ingestion Toxic if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Ingestion causes 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. Coughing and/ or wheezing. Difficulty in breathing. Blindness.

SECTION 12: Ecotoxicological information

Ecotoxicity Avoid release to the environment. Harmful to aquatic life.

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)	-	-

Persistence and degradability Readily biodegradable.

Bioaccumulative potential Not expected to bioaccumulate.

Bioconcentration factor (BCF) <10

Component Information

Chemical name	Partition coefficient
Methanol	-0.77

Mobility in soil Adsorbs on soil.

Other adverse effects No information available.

SECTION 13: Information regarding the disposal of the substance or mixture

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 as hazardous substance.
Contaminated packaging	Recover or recycle if possible. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Labeled according to S.D. 148 “Sanitary Regulation on Hazardous Waste Management”.

SECTION 14: Transport information

Land

UN number or ID number	UN1230
UN proper shipping name	METHANOL
Transport hazard class(es)	3
Packing group	II
Description	UN1230, METHANOL, 3 (6.1), II

Maritime

UN number or ID number	UN1230
UN proper shipping name	METHANOL
Transport hazard class(es)	3
Subsidiary hazard class	6.1
Packing group	II
Description	UN1230, METHANOL, 3 (6.1), II, (11°C C.C.)
Marine pollutant	NP
Special Provisions	279
EmS-No	F-E, S-D

Air

UN number or ID number	UN1230
UN proper shipping name	Methanol
Transport hazard class(es)	3
Subsidiary hazard class	6.1
Packing group	II
Description	UN1230, Methanol, 3 (6.1), II
Special Provisions	A113
ERG Code	3L

SECTION 15: Information on the regulation

National regulations

The receiver should verify the possible existence of local regulations applicable to the chemical.
S.D. 298 “Regulation on Transport of Dangerous Cargoes by Streets and Roads”.
S.D. 43/60 “Regulation on Storage of Hazardous Substances”.
NCh 2190 Of 2019 “Land transport of dangerous goods - Hazard identification marks”.
NCh 382 Of. 2013 “Terminology and General Classification of Dangerous Goods”.
S.D. 594 “Regulation on Basic Sanitary and Environmental Conditions in Workplaces”.
S.D. 148 “Sanitary Regulation on Hazardous Waste Management”.

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

International Inventories

TSCA	Listed
DSL/NDSL	Listed
EINECS/ELINCS	Listed
ENCS	Listed
IECSC	Listed
KECL	Listed
PICCS	Listed
AICS	Listed

Legend:
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
AICS - Australian Inventory of Chemical Substances

SECTION 16: Other informations

Safety signal according to NCh 1411/4

Health hazards	Flammability	Instability	Special hazards
3	3	0	-

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

Full text of H-Statements referred to under section 3
H225 - Highly flammable liquid and vapor
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H370 - Causes damage to organs

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method
Health hazards not otherwise classified (HHNOC)	Calculation method

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
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
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)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Issuing Date	16-Sep-2016
Revision Date	12-Dec-2022
Reason for revision	Updated format. 2, 15, 16

Disclaimer
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End of Safety Data Sheet