



Safety Data Sheet

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Section 1 - Identification

1.1 Product Identifier

Product Name : Methanol

CAS No. : 67-56-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : 9920 Pacific Heights Blvd
Suit 150
San Diego
California -92121

1.4 Emergency Telephone number

Emergency phone : +1 (858) 245-0283

Section 2: Hazard Identification

2.1 Classification of the substance or the mixture

Classification (REGULATION (EC) No 1272/2008)

Flammable liquids	Category 2	H225:Highly flammable liquid and vapour.
Acute toxicity	Category 3	H301:Toxic if swallowed.
Acute toxicity	Category 3	H331:Toxic if inhaled.
Acute toxicity	Category 3	H311:Toxic in contact with skin.
Specific target organ toxicity - single exposure	Category 1	H370:Causes damage to organs.

2.2 Label elements

Label according Regulation (EC) 1272/2008

Hazard Pictogram



Signal Word:
DANGER

Hazard statements

- H225 Highly flammable liquid and vapour.
- H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
- H370 Causes damage to organs (Eyes, Central nervous system).

Precautionary statements

Prevention

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P280 Wear protective gloves/ protective clothing/eye protection/ face protection.

Response:

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P304+P340+P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

Reduced Labelling (<= 125 ml)

Hazard Pictogram



Signal Word:

DANGER

Hazard statements

H370	Causes damage to organs.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.

Precautionary Statements

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P304+P340+P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

Supplemental Hazard Statements	none
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2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 3: Composition/information on ingredients

3.1 Substance

Substance name	: Methyl alcohol
EC-No.	: 200-659-6
Index-No.	: 603-001-00-X

Section 4: First aid measures

4.1 Description of first aid measures

General advice

First aiders need to protect themselves. Show this safety data sheet to the doctor in Attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician.

If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: fresh air. Make victim drink ethanol (e.g. 1 drinking glass of a 40% alcoholic beverage). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour).

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3 Indications of any immediate medical attention and special treatment needed

No data available

Section 5: Firefighting measures

5.1 Extinguishing Media

- Suitable extinguishing media : Water
Foam
Carbon dioxide (CO₂)
Dry powder
- Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazard arising from the substance or mixture

- Specific hazards during fire fighting : Combustible.
- Pay attention to flashback.
Vapours are heavier than air and may spread along floors.
Development of hazardous combustion gases or vapours possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures.
- Hazardous combustion products : Carbon oxides

5.3 Advice for firefighters

- Special protective equipment for fire-fighters : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
- Further information : Remove container from danger zone and cool with water.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environment precautions

Environmental precautions : Do not let product enter drains.Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10).

Take up carefully with liquid-absorbent material (e.g.Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal considerations see section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Further information on storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorised persons.

Storage class (TRGS 510)

3, Flammable liquids

Packaging material :

Suitable material: Any Metal Drum

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

Section 8: Exposure controls – Personal protection

8.1 Control parameters

Occupational Exposure Limits

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
Methyl alcohol	Workers	Skin contact	Long-term systemic effects	40 mg/kg BW/d
	Consumers	Skin contact	Long-term systemic effects	8 mg/kgBW/d
	Consumers	Ingestion	Long-term systemic effects	8 mg/kgBW/d
	Workers	Skin contact	Acute systemic effects	40 mg/kgBW/d
	Consumers	Skin contact	Acute systemic effects	8 mg/kgBW/d
	Consumers	Ingestion	Acute systemic	8 mg/kgBW/d

			effects	
	Workers	Inhalation	Acute systemic effects	260 mg/m3
	Workers	Inhalation	Acute local effects	260 mg/m3
	Workers	Inhalation	Long-term systemic effects	260 mg/m3
	Workers	Inhalation	Long-term local effects	260 mg/m3
	Consumers	Inhalation	Acute systemic effects	50 mg/m3
	Consumers	Inhalation	Acute local effects	50 mg/m3
	Consumers	Inhalation	Long-term systemic effects	50 mg/m3
	Consumers	Inhalation	Long-term local effects	50 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
Methyl alcohol	Soil	23,5 mg/kg
	Marine water	15,4 mg/l
	Fresh water	15,4 mg/l
	Fresh water sediment	570,4 mg/kg
	Onsite sewage treatment plant	100 mg/kg

8.2 Exposure Controls

Personal protective equipment

Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Safety glasses

Hand protection
Material : butyl-rubber

Break through time	: 480 min
Glove thickness	: 0,7 mm
Protective index	: Full contact
Manufacturer	: Butoject® (KCL 898)
Material	: Viton®
Break through time	: 120 min
Glove thickness	: 0,7 mm
Protective index	: Splash contact
Manufacturer	: Vitoject® (KCL 890 / Aldrich Z677698, Size M)
Remarks	: This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Skin and body protection	: Flame retardant antistatic protective clothing.
Respiratory protection	: required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type:	: Filter type AX
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.	

Environmental exposure controls

Advice

Do not let product enter drains. Risk of explosion.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid (20 °C, 1.013 hPa)
Color	: Colourless
Odor	: characteristic
Melting point/range	: -98 °C
Boiling point/boiling range	: 64,7 °C
Flammability	: Not data available
Upper explosion limit / Upper flammability limit	: Upper explosion limit 44 %(V)
Lower explosion limit / Lower flammability limit	: Lower explosion limit 5,5 %(V)
Flash point	: 9,7 °C(10 hPa) Method: Regulation (EC) No. 440/2008, Annex, A.9, closed cup
Autoignition temperature	: 420 °C (1.013 hPa) Method: DIN 51794
Decomposition temperature	: Distillable in an undecomposed state at normal pressure.
pH	: Not data available
Viscosity, dynamic	: > 0,544 - < 0,59 mPa.s (25 °C)
Viscosity, kinematic	: 0,54 - 0,59 mm ² /s (20 °C)
Flow time	: No data available
Solubility(ies) Water solubility	: 1.000 g/l (20 °C) completely miscible
Partition coefficient: n- octanol/water	: log Pow: -0,77 (25 °C) Method: (experimental) (HSDB) Bioaccumulation is not expected.
Vapor pressure	: 169,27 hPa (25 °C)

Relative density : 0,79 - 0,8 (20 °C)
Density : 0,791 g/mL (25 °C)
Relative vapour density : 1,11

9.2 Other information

Explosives : Not classified as explosive.
Oxidizing properties : none
Burning rate : No data available
Self-ignition : 455,0 °C
1.013 hPa
Method: DIN 51794
Evaporation rate : 6,3
Method: Diethylether
1,9
Method: n-butyl acetate
Conductivity : < 1 µS/cm
Minimum ignition energy : 0,14 mJ
Molecular weight : 32,4 g/mol

Section 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

Conditions to avoid

Warming.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity estimate Oral - 100,1 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: Nausea, Vomiting

Acute toxicity estimate Inhalation - 4 h - 3,1 mg/l - vapour

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Symptoms: Irritation symptoms in the respiratory tract.

Acute toxicity estimate Dermal - 300,1 mg/kg

(Expert judgement)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

Remarks: (ECHA)

Remarks: Drying-out effect resulting in rough and chapped skin.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

Remarks: (ECHA)

Respiratory or skin sensitization

Sensitisation test: - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Intraperitoneal injection

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

Causes damage to organs. - Eyes, Central nervous system

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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.

Section 12: Ecological information

12.1 Toxicity

Components:

Methanol:

Toxicity to fish	: LC50 (<i>Lepomis macrochirus</i> (Bluegill)): 15.400,0 mg/l End point: mortality Exposure time: 96 h Test Type: flow-through test Analytical monitoring: yes Method: US-EPA
Toxicity to daphnia and other aquatic invertebrates	: EC50 (<i>Daphnia magna</i> (Water flea)): 18.260 mg/l End point: Immobilization Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 (<i>Pseudokirchneriella subcapitata</i> (green algae)): ca. 22.000,0 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 201
Toxicity to microorganisms	: IC50 (activated sludge): > 1.000 mg/l

	Exposure time: 3 h
	Test Type: static test
	Analytical monitoring: yes
	Method: OECD Test Guideline 209
Toxicity to fish (Chronic toxicity)	: NOEC: 7.900 mg/l
	Exposure time: 200 h
	Species: Oryzias latipes (Orange-red killifish)
	Remarks: (External MSDS)

12.2 Persistence and degradability

Components:

Methanol:

Biodegradability	: Result: Readily biodegradable. Biodegradation: 99 % Exposure time: 30 d Method: OECD Test Guideline 301D
Biochemical Oxygen Demand (BOD)	: 600 - 1.120 mg/g Incubation time: 5 d Remarks: (IUCLID)
Chemical Oxygen Demand (COD)	: 1.420 mg/g Remarks: (IUCLID)
ThOD	: 1.500 mg/g Remarks: (Lit.)
BOD/ThOD	: 76 % Remarks: Closed Bottle test (IUCLID)
Stability in water	: Hydrolysis: 83 - 91 % at 19 °C(72 h) Remarks: Hydrolyses on contact with water. Hydrolyses readily. Degradation half life: 2,2 yr Remarks: reaction with hydroxyl radicals (IUCLID)
Photodegradation	: Degradation (direct photolysis): 50 % Degradation half life: 17,2 d

12.3 Bioaccumulated potential

Components:

Methanol:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 72 d
Temperature: 20 °C
Concentration: 5 mg/l
Bioconcentration factor (BCF): 1,0
Partition coefficient: n-octanol/water : log Pow: -0,77 (25 °C)
Method: (experimental)
Remarks: (HSDB)
Bioaccumulation is not expected.

12.4 Mobility in soil

Components:

Methanol:

Stability in soil : Remarks: Will not adsorb on soil.

12.5 Results of PBT and vPvB assessment

Product:

Assessment:-This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

Methanol:

Assessment : Not persistent, bioaccumulative, and toxic (PBT).

12.6 Endocrine disrupting properties

Product:

Assessment:-The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Components:

Methanol:

Additional ecological information : Avoid release to the environment.

Section 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Section 14: Transportation information

14.1 UN Number or ID number

ADR	UN 1230
IMDG	UN 1230
IATA	UN 1230

14.2 UN proper shipping name

ADR	METHANOL
IMDG	METHANOL
IATA	METHANOL

14.3 Transport hazard class(es)

Class

ADR	3
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IMDG	3
IATA	3
Subsidiary risks	
ADR	6.1
IMDG	6.1
IATA	6.1

14.4 Packaging group

ADR

Packing group	II
Classification Code	FT1
Hazard Identification Number	336
Labels	3(6.1)
Tunnel restriction code	(D/E)

IMDG

Packing group	II
Labels	3(6.1)
EmS Code	F-E, S-D

IATA (Cargo)

Packing instruction (cargo aircraft)	364
Packing instruction (LQ)	Y341
Packing group	II
Labels	Class 3 - Flammable liquids, Division 6.1 - Toxic substances

IATA_P (Passenger)

Packing instruction (passenger aircraft)	352
Packing instruction (LQ)	Y341
Packing group	II
Labels	Class 3 - Flammable liquids, Division 6.1 - Toxic substances

14.5 Environmental hazards

ADR

Environmentally hazardous no

IMDG

Marine pollutant no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

Section 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:

Number on list 3

Number on list 40

Number on list 69: If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

Regulation (EU) No 2024/590 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

Section 16: Other information

Full text of H-Statements

H370 Causes damage to organs.

H371 May cause damage to organs.

Further information

The information and recommendations in this SDS are to the best of our knowledge, information and belief accurate at the time of publication. Although utmost care is been taken in composition of this text, Highpuris LLC cannot be held responsible for any damage resulting from any possible error in this publication.