

Methanol

32213-2.5L

Version 1.7

Revision Date 11.06.2022

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

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

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms



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.

Precautionary statements : P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P284 Wear respiratory protection.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do

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P304 + P340

NOT induce vomiting.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308 + P313

IF exposed or concerned: Get medical advice/ attention.

2.3. Other hazards

Aspiration hazard if swallowed - can enter lungs and cause damage. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
methanol	67-56-1 603-001-00-X 200-659-6	Flam. Liq. 2; H225 Acute Tox. 3; H331; Inhalation Acute Tox. 3; H311; Dermal Acute Tox. 3; H301; Oral STOT SE 1; H370	100 %	STOT SE 2; H371:3 - < 10 % STOT SE 1; H370:>= 10 % STOT SE 1; H370:>= 10 % STOT SE 2; H371:3 - < 10 %

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately. Show this safety data sheet to the doctor in attendance.

Inhalation:

Call a physician immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present.

Skin contact:

After contact with skin, wash immediately with plenty of water. Call a physician immediately.

Eye contact:

Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Call a physician immediately.

Ingestion:

Immediately give large quantities of water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No data available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Flammable.

Vapours may form explosive mixtures with air.

Vapours are heavier than air and may spread along floors.

Vapors may travel to areas away from work site before igniting/flashing back to vapor source.

In case of fire hazardous decomposition products may be produced such as:

Carbon monoxide
Carbon dioxide (CO₂)
Formaldehyde

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Use water spray to cool unopened containers. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Remove all sources of ignition. Wear personal protective equipment. Unprotected persons must be kept away.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.

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6.3. Methods and materials for containment and cleaning up

Ventilate the area.

No sparking tools should be used.

Use explosion-proof equipment.

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Exhaust ventilation at the object is necessary. Use explosion-proof equipment. Wear suitable protective clothing and gloves.

Advice on protection against fire and explosion:

The heavy vapours can overcome a considerable distance up to the source of ignition. Use only in explosion-proof areas. Keep product and empty container away from heat and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

Hygiene measures:

When using do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Keep working clothes separately. Do not swallow. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.

Temperature class:

T1

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

Keep only in the original container, tightly closed, in a well ventilated place. Store at room temperature. (Ambient temperature: > 0 < 35°C) Protect from atmospheric moisture and water.

7.3. Specific end use(s)

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no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
methanol	EH40 WEL STEL	333 mg/m3 250 ppm		
methanol	EH40 WEL TWA	266 mg/m3 200 ppm		
methanol	EH40 WEL SKIN_DES			Can be absorbed through the skin.
methanol	EU ELV SKIN_DES			Can be absorbed through the skin.
methanol	EU ELV TWA	260 mg/m3 200 ppm		Indicative
methanol	EH40 WEL STEL	333 mg/m3 250 ppm	15 minutes	
methanol	EH40 WEL STEL	333 mg/m3 250 ppm	15 minutes	

STEL - Short term exposure limit
TWA - Time weighted average
SKIN_DES - Skin designation:

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
methanol	Consumers / Acute systemic effects		8mg/kg bw/d	Skin contact	
methanol	Workers / Acute systemic effects		40mg/kg bw/d	Skin contact	

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methanol	Consumers / Long-term systemic effects		8mg/kg bw/d	Skin contact	
methanol	Workers / Long-term systemic effects		40mg/kg bw/d	Skin contact	
methanol	Consumers / Acute local effects		50 mg/m3	Inhalation	
methanol	Workers / Acute local effects		260 mg/m3	Inhalation	
methanol	Consumers / Acute systemic effects		50 mg/m3	Inhalation	
methanol	Workers / Acute systemic effects		260 mg/m3	Inhalation	
methanol	Consumers / Long-term local effects		50 mg/m3	Inhalation	
methanol	Workers / Long-term local effects		260 mg/m3	Inhalation	
methanol	Consumers / Long-term systemic effects		50 mg/m3	Inhalation	
methanol	Workers / Long-term systemic effects		260 mg/m3	Inhalation	
methanol	Consumers / Acute systemic effects		8mg/kg bw/d	Ingestion	
methanol	Consumers / Long-term		8mg/kg bw/d	Ingestion	

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	systemic effects			
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Component	Environmental compartment / Value	Remarks
methanol	Sewage treatment plant: 100 mg/l	
methanol	Fresh water: 20,8 mg/l	Assessment factor: 10
methanol	Marine water: 2,08 mg/l	Assessment factor: 100
methanol	Fresh water sediment: 77 mg/kg	
methanol	Marine sediment: 7,7 mg/kg	
methanol	Soil: 100 mg/kg	Assessment factor: 100

8.2. Exposure controls

Occupational exposure controls

Do not breathe vapours/dust.
Take off all contaminated clothing immediately.
The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Engineering measures

Use with local exhaust ventilation.
Electrical equipment should be protected to the appropriate standard.

Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Recommended Filter type:

Organic gas and low boiling vapour type

Hand protection:

Glove material: butyl-rubber

Break through time: > 480 min

Glove thickness: 0,7 mm

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Butoject® 898

Gloves must be inspected prior to use.

Replace when worn.

Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:

Safety goggles

Skin and body protection:

Wear as appropriate:

Solvent-resistant apron

Flame retardant antistatic protective clothing.

If splashes are likely to occur, wear:

Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	characteristic
molecular weight	:	32,04 g/mol
Melting point/range	:	-98 °C

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Boiling point/boiling range	:	64 - 65 °C at 1.013 hPa
Flammability	:	Not applicable
Upper explosion limit	:	50 %(V)
Lower explosion limit	:	5,5 %(V)
Flash point	:	11 °C Method: DIN 51755
Auto-ignition temperature	:	455 °C Method: DIN 51794
Decomposition temperature	:	At normal pressure may be distilled without decomposition.
pH	:	Not applicable
Auto-ignition temperature	:	not auto-flammable
Viscosity, kinematic	:	No data available
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	log Pow -0,71
Vapour pressure	:	128 hPa at 20 °C
Vapour pressure	:	532 hPa at 50 °C
Density	:	0,79 g/cm ³ at 20 °C
Relative vapour density	:	No data available

9.2 Other Information

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Oxidizing properties : The substance or mixture is not classified as oxidizing.

Evaporation rate : No data available

Viscosity, dynamic : ca. 0,55 mPa.s
at 25 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

At normal pressure may be distilled without decomposition.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Heat, flames and sparks.
Keep away from direct sunlight.

10.5. Incompatible materials

Oxidizing agents

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)
Formaldehyde

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

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Classification based on Annex VI of regulation 1272/2008/EC.

Acute dermal toxicity:

Classification based on Annex VI of regulation 1272/2008/EC.

Acute inhalation toxicity:

Classification based on Annex VI of regulation 1272/2008/EC.

Skin irritation:

Species: Rabbit

Result: No skin irritation

Eye irritation:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitisation:

No data available

Germ cell mutagenicity:

Note: In vitro tests did not show mutagenic effects

Note: In vivo tests did not show mutagenic effects

Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

Solvent vapours have a narcotic effect if inhaled in high concentrations.

When swallowed, there is a danger of blindness.

Causes damage to organs (eyes, nervous system, systemic toxicity)

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

LC50

Species: *Lepomis macrochirus* (Bluegill sunfish)

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Value: 15.400 mg/l
Exposure time: 96 h

Toxicity to aquatic plants:
No data available

Toxicity to Microorganisms:
EC50
Species: Bacteria
Value: ca. 71.000 mg/l

Toxicity to aquatic invertebrates:
EC50
Species: Daphnia magna (Water flea)
Value: > 10.000 mg/l
Exposure time: 48 h

12.2. Persistence and degradability

Biodegradability:
Biodegradation: 99 %
Result: Readily biodegradable.
Method: OECD Test Guideline 301D

12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Biochemical Oxygen : Value: 1.120 mg/g
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Demand (BOD)
Chemical Oxygen Demand : Value: 1.500 mg/g
(COD)
Do not flush into surface water or sanitary sewer system.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:
Dispose according to legal requirements.

Packaging:
Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:
Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number

ADR/RID:1230

IMDG:1230

IATA:1230

14.2 UN proper shipping name

ADR/RID:METHANOL

IMDG:METHANOL

IATA:Methanol

14.3 Transport hazard class(es)

ADR/RID: 3 (6.1)

IMDG: 3 (6.1)

IATA: 3 (6.1)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID:no

Marine pollutant: no

14.6 Special precautions for user

IMDG Code segregation group according chapter 3.1.4.4 : NONE,

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14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC SEVESO III Listed in Regulation : Methanol	Quantity: 500.000 kg Quantity: 5.000.000 kg	
Regulation (EC) No. 1907/2006, Annex XVII		This product contains an ingredient according to Annex XVII of the REACH Regulation1907/2006/EC.
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606

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France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Industrial Chemicals Act (AIC), as amended
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

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China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

methanol : H225 Highly flammable liquid and vapour.
H331 Toxic if inhaled.
H311 Toxic in contact with skin.
H301 Toxic if swallowed.
H370 Causes damage to organs.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very bioaccumulative substance
PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a

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guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.
