

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended 2015/830.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name:	Methanol
Product No.	3016, 8045, 3041, 3400, 5279, 5370, 8046, 8047, 8402, 8404, 8814, 8818, 8898, 9049, 9063, 9069, 9073, 9077, 9079, 9093, 9097, 9263, 9822, 9830, 9863, C2955, C3004, C3041, C6712, C6745, C7669, 8820, DIA1306D, 8405, KP4063, 3004,6712, 6745, 7669, 2955, 3004, 2424, 9070
Synonyms, Trade Names:	Methyl alcohol
Additional identification	
Chemical name:	Methanol
Chemical formula:	CH3OH
INDEX No.	603-001-00-X
CAS-No.	67-56-1
EC No.	200-659-6
REACH Registration No.	01-2119433307-44-XXXX

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

Identified uses: For Laboratory, Research or Manufacturing Use.

Uses advised against: Not determined.

1.3 Details of the supplier of the safety data sheet

Avantor Performance Materials Poland S.A.
Sowinskiego 11str., 44-101 Gliwice,
Poland

Telephone: 48 32 239-20-00
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Contact person: Product Information Compliance
E-mail: export@avantormaterials.com

E-mail address of person responsible for this SDS: SDS@avantormaterials.com

1.4 Emergency telephone number: CHEMTREC: (44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Physical Hazards

Flammable liquids	Category 2	H225: Highly flammable liquid and vapour.
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Health Hazards

Acute toxicity (Oral)	Category 3	H301: Toxic if swallowed.
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Acute toxicity (Dermal)	Category 3	H311: Toxic in contact with skin.
Acute toxicity (Inhalation - vapour)	Category 3	H331: Toxic if inhaled.
Specific Target Organ Toxicity - Single Exposure	Category 1	H370: Causes damage to organs.

2.2 Label Elements

Contains:

Methanol



Signal Word:

Danger

Hazard Statement(s):

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

Precautionary Statements

Prevention:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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 [or shower].

Storage:

P405: Store locked up.

2.3 Other hazards

No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Methanol	50 - <100%	67-56-1	200-659-6	01-2119433307-44-XXXX	No data available.	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

SECTION 4: First Aid Measures

General:

Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

4.1 Description of first aid measures

Inhalation:	Move to fresh air.
Skin Contact:	Get medical attention if symptoms occur. Take off immediately all contaminated clothing. Rinse skin with water [or shower].
Eye contact:	If eye irritation persists: Get medical advice/attention. Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses.
Ingestion:	Rinse mouth. Get medical attention if symptoms occur. Never give liquid to an unconscious person.
4.2 Most important symptoms and effects, both acute and delayed:	May cause irritation to skin, eyes and respiratory tract.
4.3 Indication of any immediate medical attention and special treatment needed	
Hazards:	No information about adverse effects due to exposure.
Treatment:	Treat symptomatically. Symptoms may be delayed.

SECTION 5: Firefighting Measures

General Fire Hazards:	Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.
5.1 Extinguishing media	
Suitable extinguishing media:	Water Spray, Fog, CO ₂ , Dry Chemical, or Standard Foam
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
5.2 Special hazards arising from the substance or mixture:	Vapours may cause a flash fire or ignite explosively. Prevent buildup of vapours or gases to explosive concentrations.
5.3 Advice for firefighters	
Special fire fighting procedures:	No data available.
Special protective equipment for firefighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:	Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.
6.2 Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.
6.3 Methods and material for containment and cleaning up:	Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. In case of leakage, eliminate all ignition sources. Dyke far ahead of larger spill for later recovery and disposal.

6.4 Reference to other sections: No data available.

SECTION 7: Handling and Storage:

7.1 Precautions for safe handling: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Take precautionary measures against static discharges. Use non-sparking tools. Use explosion-proof [electrical/ventilating/lighting] equipment. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Wear protective gloves/protective clothing/eye protection/face protection. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. See Section 8 of the SDS for Personal Protective Equipment. Do not eat, drink or smoke when using the product. Wash at the end of each work shift and before eating, smoking or using the toilet.

7.2 Conditions for safe storage, including any incompatibilities: Store in a well-ventilated place. Store in a cool place. Store locked up.

7.3 Specific end use(s): No data available.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Methanol	TWA	200 ppm 266 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (2007)
	STEL	250 ppm 333 mg/m3	UK. EH40 Workplace Exposure Limits (WELs) (2007)
	TWA	200 ppm 260 mg/m3	EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU (12 2009)

DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
Methanol	General population	Dermal	Systemic, long-term; 8 mg/kg bw/day	Acute toxicity
			Systemic, short-term; 8 mg/kg bw/day	Acute toxicity
		Eyes	Local effect;	No data available
		Oral	Systemic, long-term; 8 mg/kg bw/day	Acute toxicity
	Workers	Inhalation	Local, long-term; 260 mg/m3	Acute toxicity
	General population		Systemic, long-term; 50 mg/m3	Acute toxicity
	Workers	Eyes	Local effect;	No data available
		Dermal	Systemic, long-term; 40 mg/kg bw/day	Acute toxicity
	General population	Oral	Systemic, short-term; 8 mg/kg bw/day	Acute toxicity

PNEC-Values

Critical component	Environmental compartment	PNEC-Values
Methanol	Sediment (freshwater)	77 mg/kg

	Sewage treatment plant	100 mg/l
	Sediment (marine water)	7,7 mg/kg
	Aquatic (freshwater)	20,8 mg/l
	Soil	100 mg/kg

8.2 Exposure controls

Appropriate Engineering Controls: No special requirements under ordinary conditions of use and with adequate ventilation.

Individual protection measures, such as personal protective equipment

General information: Use explosion-proof ventilation equipment. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection: Use personal protective equipment as required.

Skin protection

Hand Protection: Material: Chemical resistant gloves

Other: Wear suitable protective clothing.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Hygiene measures: When using do not smoke. Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product.

Environmental Controls: No data available.

SECTION 9: Physical And Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	Liquid
Form:	Liquid
Colour:	Colourless
Odour:	Characteristic
Odour Threshold:	No data available.
pH:	No data available.
Freezing point:	-97,8 °C
Boiling Point:	64 °C (101,3 kPa)
Flash Point:	11 - 12 °C (Closed cup)
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability limit - upper (%)	36 %(V)
Flammability limit - lower (%)	6 %(V)

Vapour pressure:	16,9 kPa (25 °C)
Vapour density (air=1):	1,11 (Air = 1)
Density:	0,8 g/ml (25 °C)
Relative density:	0,7866 (25 °C)
Solubility(ies)	
Solubility in Water:	1.000 g/l
Solubility (other):	ether: Miscible acetone: soluble benzene: Miscible chloroform: soluble Ethanol.: Miscible
Partition coefficient (n-octanol/water):	-0,77
Autoignition Temperature:	240 °C
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidising Properties:	No data available.

9.2 Other information

Molecular weight:	32,04 g/mol (CH ₃ OH)
VOC content:	EC Directive 2004/42: 800 g/l ~100 % (calculated)

SECTION 10: Stability and Reactivity

10.1 Reactivity:	No dangerous reaction known under conditions of normal use.
10.2 Chemical Stability:	Material is stable under normal conditions.
10.3 Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
10.4 Conditions to Avoid:	No special precautions. Heat, sparks, flames.
10.5 Incompatible Materials:	None known.
10.6 Hazardous Decomposition Products:	Not determined.

SECTION 11: Toxicological Information

Information on likely routes of exposure

Inhalation:	Toxic if inhaled.
Skin Contact:	Toxic in contact with skin.
Eye contact:	None known or expected under normal use.
Ingestion:	Toxic if swallowed.

11.1 Information on toxicological effects

Acute toxicity

Oral Product:	LD 50 (Rat): 5.628 mg/kg
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Dermal	
Product:	LD 50 (Rabbit) 15.800 mg/kg
Inhalation	
Product:	LC 50 (Rat, 1 h): > 145000 ppm LC 50 (Rat, 4 h): 64000 ppm
Repeated dose toxicity	
Product:	None known.
Skin Corrosion/Irritation:	
Product:	Not known.
Serious Eye Damage/Eye Irritation:	
Product:	Not known.
Respiratory or Skin Sensitisation:	
Product:	Not a skin nor a respiratory sensitizer.
Germ Cell Mutagenicity	
In vitro	
Product:	No mutagenic components identified
In vivo	
Product:	No mutagenic components identified
Carcinogenicity	
Product:	This substance has no evidence of carcinogenic properties.
Reproductive toxicity	
Product:	Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity - Single Exposure	
Product:	No data available.
Specific Target Organ Toxicity - Repeated Exposure	
Product:	None known.
Aspiration Hazard	
Product:	Not classified
Other Adverse Effects:	None known.

SECTION 12: Ecological Information

General information: Not regulated

12.1 Toxicity

Acute toxicity

Fish

Product: No data available.

Specified substance(s)

Methanol LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 15.400 mg/l
 LC 50 (Rainbow trout, donaldson trout (*Oncorhynchus mykiss*), 96 h): 19.500 - 20.700 mg/l
 LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 28.500 - 30.400 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

Methanol LC 50 (Cockle (*Cerastoderma edule*), 48 h): 1.000 mg/l
 EC 50 (Water flea (*Daphnia obtusa*), 48 h): 21.100 - 23.400 mg/l
 LC 50 (Water flea (*Daphnia magna*), 48 h): 2.461 - 4.395 mg/l

Chronic toxicity

Fish

Product: No data available.

Specified substance(s)

Methanol No data available.

Aquatic Invertebrates

Product: No data available.

Specified substance(s)

Methanol No data available.

Toxicity to aquatic plants

Product: No data available.

Specified substance(s)

Methanol No data available.

12.2 Persistence and Degradability

Biodegradation

Product: There is no data on the degradability of this product.

Specified substance(s)

Methanol No data available.

BOD/COD Ratio

Product Not determined.

Specified substance(s)

Methanol No data available.

12.3 Bioaccumulative Potential

Product: Not known.

Specified substance(s)

Methanol Green algae (*Chlorella fusca vacuolata*), Bioconcentration Factor (BCF): 28.400 (Static)

12.4 Mobility in Soil:

No data available.

Known or predicted distribution to environmental compartments

Methanol No data available.

12.5 Results of PBT and vPvB assessment:

Not available.

Methanol No data available.

12.6 Other Adverse Effects: No data available.

12.7 Additional Information: No data available.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

General information: No data available.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws. Do not allow to enter drains, sewers or watercourses.

SECTION 14: Transport Information

ADR

14.1 UN Number: UN 1230
 14.2 UN Proper Shipping Name: METHANOL
 14.3 Transport Hazard Class(es)
 Class: 3
 Label(s): 3, 6.1
 Hazard No. (ADR): 336
 Tunnel restriction code: (D/E)
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

RID

14.1 UN Number: UN 1230
 14.2 UN Proper Shipping Name: METHANOL
 14.3 Transport Hazard Class(es)
 Class: 3
 Label(s): 3, 6.1
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

IMDG

14.1 UN Number: UN 1230
 14.2 UN Proper Shipping Name: METHANOL
 14.3 Transport Hazard Class(es)
 Class: 3
 Label(s): 3, 6.1
 EmS No.: F-E, S-D
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

IATA

14.1 UN Number: UN 1230
 14.2 Proper Shipping Name: Methanol
 14.3 Transport Hazard Class(es):
 Class: 3
 Label(s): 3, 6.1
 14.4 Packing Group: II
 14.5 Environmental Hazards: No
 14.6 Special precautions for user: Not determined.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

SECTION 15: Regulatory information

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

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

Regulation (EC) No. 850/2004 on persistent organic pollutants: none

Regulation (EC) No. 649/2012 Import and export of dangerous chemicals: none

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended: none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use:

Chemical name	CAS-No.	Concentration
Methanol	67-56-1	100%

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

Directive 2012/18/EU (Seveso III): on the control of major accident hazards involving dangerous substances:

Chemical name	CAS-No.	Concentration
Methanol	67-56-1	100%

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work:

Chemical name	CAS-No.	Concentration
Methanol	67-56-1	100%

Listed on the Candidate List of substances of very high concern (SVHC) Regulation (EC) No. 1907/2006, REACH Article 59(1). Candidate List

Contains:

15.2 Chemical safety assessment:

No Chemical Safety Assessment has been carried out.

SECTION 16: Other Information

Revision Information: Not relevant.

References

PBT PBT: persistent, bioaccumulative and toxic substance.
vPvB vPvB: very persistent and very bioaccumulative substance.

Key literature references and sources for data: No data available.

Wording of the H-statements in sections 2 and 3

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

Training information: No data available.

Issue Date: 22.02.2021

SDS No.:

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