

SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product name: Methanol

Manufacturer:

Avantor Performance Materials, Inc.
3477 Corporate Parkway, Suite 200
Center Valley, PA 18034
U.S.A.

Product No.: 9070-J4, 9070-W2, 9070-03, 9070-07, 9070-3C, 9070-68, 9070-97, 9070-R, 9070-01, 9070-05, 9070-13, 9070-33, 9070-70, 9070-98

Telephone:

Customer Service: 855-282-6867

Contact Person: Environmental Health & Safety

e-mail: info@avantormaterials.com

Emergency telephone:

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

2 HAZARDS IDENTIFICATION

Emergency Overview:

Appearance:

Color:

Colorless

Form :

Liquid

Odor:

Characteristic

Signal words

DANGER!

Potential Health Effects:

General

May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous. Harmful if inhaled or absorbed through skin. Causes skin and eye irritation. High vapor concentrations may cause drowsiness and irritation of the eyes or respiratory tract. May cause harm to the unborn child. Prolonged exposure may cause chronic effects.

Potential Physical / Chemical Effects:

Flammable liquid and vapor.

Inhalation:

May cause respiratory irritation. May cause central nervous system effects.

Skin:

Causes skin irritation. Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.

Eye:

Causes eye irritation.

Ingestion:

May be fatal or cause blindness if swallowed. Cannot be made nonpoisonous. Even small amounts (30-250 ml methanol) may be fatal. Symptoms are stomach ache, nausea, vomiting, dullness, visual disorder and blindness.

Chronic Effects:

In serious cases absorption of methanol in the body may lead to damage to the eyesight. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. May cause central nervous system effects. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Routes of Exposure:	Skin and/or eye contact., Inhalation, Ingestion
Target Organs:	Liver, Central nervous system
OSHA Regulatory Status	This product is hazardous according to OSHA 29CFR 1910.1200.
Environment:	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3 COMPOSITION / INFORMATION ON INGREDIENTS

General information:

Hazardous Component(s):

Chemical name	CAS-No.	Concentration
METHYL ALCOHOL	67-56-1	99 - 100%

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

4 FIRST AID MEASURES

General:	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Inhalation:	Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Ingestion:	Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Notes to the physician:	
Treatment:	Symptoms may be delayed.

5 FIRE-FIGHTING MEASURES

Extinguishing media:	Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
Unusual Fire & Explosion Hazards:	Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.
Special Fire Fighting Procedures:	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.

Protective Measures:

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions:

Use personal protective equipment. Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions:

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

Spill Cleanup Methods:

Eliminate all ignition sources if safe to do so. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures:

Inform authorities if large amounts are involved.

7 HANDLING AND STORAGE

Handling:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharges. Wear appropriate personal protective equipment. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.

Storage:

Keep away from food, drink and animal feedingstuffs. Keep out of reach of children. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Chemical name	Type	Exposure Limit values	Source
METHYL ALCOHOL	TWA	200 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	250 ppm	US. ACGIH Threshold Limit Values (2011)
METHYL ALCOHOL	PEL	200 ppm 260 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	200 ppm 260 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	250 ppm 325 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Biological limit values

Chemical name	Exposure Limit values	Source
METHYL ALCOHOL (methanol: Sampling time: End of shift.)	15 mg/l (Urine)	ACGIH BEL (2011)

Protective Measures:

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. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Respiratory Protection:

In case of inadequate ventilation use suitable respirator. Positive-pressure, air-supplied respirator in areas where H₂S vapors may accumulate.

Eye protection:

Wear safety glasses with side shields (or goggles). Wear face shield if there is risk of splashes.

Skin and Body Protection:

Wear suitable protective clothing and gloves.

Hygiene measures:

Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands after handling. Do not eat, drink or smoke when using the product. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State:

Liquid

Form:

Liquid

Color:

Colorless

Odor:

Characteristic

Odor Threshold:

No data available.

pH:

No data available.

Freezing point:

-97.8 °C

Boiling Point:

64.7 °C (101.325 kPa)

Flash Point:

12 °C (Closed Cup)

Evaporation Rate:

No data available.

Flammability (solid, gas):

Class IB Flammable Liquid

Flammability Limit - Upper (%)—:	36 %(V)
Flammability Limit - Lower (%)—:	7.3 %(V)
Vapor pressure:	16.93 kPa (25 °C)
Vapor density (air=1):	No data available.
Relative density:	0.7866 (25 °C) 4 °C
Solubility(ies)	
Solubility in Water:	Miscible with water.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	-0.77
Autoignition Temperature:	464 °F
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

10 STABILITY AND REACTIVITY

Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Heat, sparks, flames. Sunlight.
Incompatible materials:	Strong oxidizing agents. Contact with metals may evolve flammable hydrogen gas.
Hazardous decomposition products:	Thermal decomposition may release oxides of carbon. Formaldehyde. Toxic gas.

11 TOXICOLOGICAL INFORMATION

Product:

Acute Toxicity (Oral):	LD 50 (Rat): 5,628 mg/kg LD 50 (Rabbit): 14,400 mg/kg
Acute Toxicity (Dermal):	LD 50 (Rabbit): 15,800 mg/kg
Acute Toxicity (Inhalation):	LC 50 (Rat, 6 h): 87.5 mg/l
Inhalation:	No data available.
Ingestion:	Harmful if swallowed.
Skin corrosion/irritation:	No data available.
Serious eye damage/eye irritation:	Causes serious eye irritation.
Respiratory sensitizer/Skin sensitizer:	Not a skin sensitizer.
Carcinogenicity:	This substance has no evidence of carcinogenic properties.

Mutagenesis:	No mutagenic components identified
Reproductive toxicity:	Suspected of damaging fertility or the unborn child.
Other Effects:	None known.

12 ECOLOGICAL INFORMATION

Ecotoxicity:	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<u>Product:</u>	
Acute toxicity(Fish):	LC 50 (Fathead minnow (Pimephales promelas), 96 h): > 100 mg/l
Chronic Toxicity(Fish):	No data available.
Acute toxicity(Aquatic invertebrates):	EC 50 (Water flea (Daphnia magna), 48 h): > 10,000 mg/l
Chronic Toxicity(Aquatic invertebrates):	No data available.
Acute toxicity(Aquatic plants):	No data available.
Persistence and degradability:	Expected to be readily biodegradable.
Bioaccumulative potential:	No data available on bioaccumulation.
Mobility:	No data available.

13 DISPOSAL CONSIDERATIONS

Disposal Methods:	Discharge, treatment, or disposal may be subject to national, state, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.
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14 TRANSPORT INFORMATION

DOT

UN number:	UN 1230
Proper Shipping Name:	Methanol
Transport hazard class(es):	3
Subsidiary risk label:	—
Packing group:	II
Label(s):	3
Marine Pollutant	

IMDG - International Maritime Dangerous Goods Code

UN number:	UN 1230
UN proper shipping name:	METHANOL
Transport hazard class(es):	3
Subsidiary risk label:	6.1
Packing group:	II
Label(s):	3, 6.1
Marine Pollutant:	
EmS No.:	F-E; S-D

IATA

UN number:	UN 1230
Proper Shipping Name:	Methanol
Transport hazard class(es):	3
Subsidiary risk label:	6.1
Packing group:	II
Label(s):	3

15 REGULATORY INFORMATION

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
EU ELINCS List:	Not in compliance with the inventory.
Japan (ENCS) List:	On or in compliance with the inventory
EU No Longer Polymers List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Switzerland Consolidated Inventory:	Not in compliance with the inventory.
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

US Regulations

- **CERCLA Hazardous Substance List (40 CFR 302.4):**
- **Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):**
None
- **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**
None

SARA Title III

• **Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):**

None
None

• **Section 311/312 (40 CFR 370):**

☒ Acute (Immediate) ☒ Chronic (Delayed) ☒ Fire ☐ Reactive ☐ Pressure Generating

• **Section 313 Toxic Release Inventory (40 CFR 372):**

Chemical name	CAS-No.	Reporting threshold for other users	Reporting threshold for manufacturing and processing
METHYL ALCOHOL	67-56-1	10000 lbs	25000 lbs.

State Regulations

• **California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):**

No ingredient regulated by CA Prop 65 present.

• **Massachusetts Right-To-Know List:**

METHYL ALCOHOL Listed

• **New Jersey Right-To-Know List:**

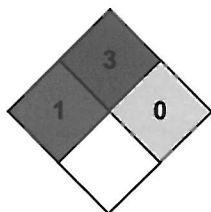
METHYL ALCOHOL Listed

• **Pennsylvania Right-To-Know List:**

METHYL ALCOHOL Listed

16 OTHER INFORMATION

NFPA Hazard ID



☒ Flammability
☒ Health
☐ Reactivity
☐ Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Revision Information:

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SDS No:

Disclaimer:

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