

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** 2-METHOXYETHANOL

**Other means of identification**

**Product No.:** P784

**Recommended use and restriction on use**

**Recommended use:** Not available.

**Restrictions on use:** Not known.

### Manufacturer/Importer/Supplier/Distributor Information

#### Manufacturer

Company Name: Avantor Performance Materials, Inc.  
Address: 3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:  
Contact Person: Environmental Health & Safety  
e-mail: info@avantormaterials.com

**Emergency telephone number:**

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

## 2. Hazard(s) identification

### Hazard Classification

#### Physical Hazards

Flammable liquids Category 3

#### Health Hazards

Acute toxicity (Oral) Category 4

Acute toxicity (Dermal) Category 4

Acute toxicity (Inhalation - vapor) Category 4

Toxic to reproduction Category 1B

### Label Elements

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Flammable liquid and vapor.  
Harmful if swallowed or in contact with skin.  
Harmful if inhaled.  
May damage fertility or the unborn child.

## Precautionary Statement

<b>Prevention:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.
<b>Response:</b>	IF SWALLOWED: Call a POISON CENTER/doctor/ if you feel unwell. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF exposed or concerned: Get medical advice/attention.
<b>Storage:</b>	Store in a well-ventilated place. Keep cool. Store locked up.
<b>Disposal:</b>	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

## 3. Composition/information on ingredients

### Substances

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
2-METHOXYETHANOL		109-86-4	100%

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

## 4. First-aid measures

<b>General information:</b>	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
<b>Ingestion:</b>	Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Inhalation:</b>	Move to fresh air. Get medical attention if symptoms persist.
<b>Skin Contact:</b>	Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.
<b>Eye contact:</b>	Flush thoroughly with water. If irritation occurs, get medical assistance.

### Most important symptoms/effects, acute and delayed

**Symptoms:** May cause reproductive effects. Harmful if inhaled. Harmful if swallowed.

## Indication of immediate medical attention and special treatment needed

**Treatment:** Symptoms may be delayed. Treat symptomatically.

## 5. Fire-fighting measures

**General Fire Hazards:** Flammable liquid and vapor.

### Suitable (and unsuitable) extinguishing media

**Suitable extinguishing media:** Use dry chemical, carbon dioxide (CO<sub>2</sub>), or a dry, non-combustible material such as dry sand or earth to extinguish flames.

**Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

**Specific hazards arising from the chemical:** 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. Heat may cause the containers to explode.

### Special protective equipment and precautions for firefighters

**Special fire fighting procedures:** 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. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** 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, protective equipment and emergency procedures:** ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. See Section 8 of the MSDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use only non-sparking tools. 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:** Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

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

## 7. Handling and storage

**Precautions for safe handling:** DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharge. Ground/bond container and receiving equipment. Use only 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. Avoid contact with eyes, skin, and clothing. Avoid inhalation of dust and vapors. Do not taste or swallow. Wash hands thoroughly after handling.

**Conditions for safe storage, including any incompatibilities:** Keep away from food, drink and animal feeding stuffs. 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

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
2-METHOXYETHANOL	TWA	0.1 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	0.1 ppm 0.3 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	25 ppm 80 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	25 ppm 80 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

#### Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
2-METHOXYETHANOL (2-Methoxyacetic acid: Sampling time: End of shift at end of work week.)	1 mg/g (Creatinine in urine)	ACGIH BEL (03 2013)

**Appropriate Engineering Controls** No data available.

### Individual protection measures, such as personal protective equipment

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

**Eye/face protection:** Wear safety glasses with side shields (or goggles).

#### Skin Protection

**Hand Protection:** Chemical resistant gloves

**Other:** Wear suitable protective clothing.

<b>Respiratory Protection:</b>	In case of inadequate ventilation use suitable respirator.
<b>Hygiene measures:</b>	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Take off contaminated clothing and wash before reuse.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Liquid
<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Mild
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	-85.1 °C
<b>Initial boiling point and boiling range:</b>	124.1 °C
<b>Flash Point:</b>	39 °C (Closed Cup)
<b>Evaporation rate:</b>	0.5 n-butyl acetate=1
<b>Flammability (solid, gas):</b>	No data available.

### Upper/lower limit on flammability or explosive limits

<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	0.83 kPa (20 °C)
<b>Vapor density:</b>	2.62 AIR=1
<b>Relative density:</b>	0.96 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Miscible with water.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	-0.77
<b>Auto-ignition temperature:</b>	286 °C
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

### Other information

<b>Molecular weight:</b>	76.09 g/mol (C <sub>3</sub> H <sub>8</sub> O <sub>2</sub> )
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## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of Hazardous Reactions:</b>	Hazardous polymerization does not occur. Highly reactive peroxides may be formed.
<b>Conditions to Avoid:</b>	Heat, sparks, flames. Contact with incompatible materials. Contact with air.
<b>Incompatible Materials:</b>	Caustics. Strong oxidizing agents.

**Hazardous Decomposition  
Products:**

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

**11. Toxicological information****Information on likely routes of exposure**

**Ingestion:** May cause irritation of the gastrointestinal tract. Harmful if swallowed.

**Inhalation:** Harmful if inhaled.

**Skin Contact:** May cause irritation. Harmful in contact with skin.

**Eye contact:** May cause temporary eye irritation.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)****Oral**

**Product:** LD 50 (Rat): 2,460 mg/kg  
LD 50 (Rabbit): 890 mg/kg  
LD 50 (Mouse): 2,560 mg/kg

**Dermal**

**Product:** LD 50 (Rabbit): 1,280 mg/kg

**Inhalation**

**Product:** No data available.

**Repeated Dose Toxicity**

**Product:** No data available.

**Skin Corrosion/Irritation**

**Product:** May cause skin irritation.

**Serious Eye Damage/Eye Irritation**

**Product:** May irritate eyes.

**Respiratory or Skin Sensitization**

**Product:** Not a skin sensitizer.

**Carcinogenicity**

**Product:** This substance has no evidence of carcinogenic properties.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogenic components identified

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**

No carcinogenic components identified

**Germ Cell Mutagenicity****In vitro**

**Product:** No mutagenic components identified

**In vivo**

**Product:** No mutagenic components identified

**Reproductive Toxicity**

**Product:** May damage fertility or the unborn child.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Aspiration Hazard**

**Product:** Not classified

**Other Effects:** None known.

<b>12. Ecological information</b>
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**Ecotoxicity:**
**Acute hazards to the aquatic environment:**
**Fish**

**Product:** No data available.

**Specified substance(s):**

2-METHOXYETHANOL LC 50 (Goldfish (*Carassius auratus*), 24 h): > 5,000 mg/l Mortality  
LC 50 (Rainbow trout, donaldson trout (*Oncorhynchus mykiss*), 96 h): 14,000 - 18,000 mg/l Mortality  
LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): > 10,000 mg/l Mortality  
LC 50 (Inland silverside (*Menidia beryllina*), 96 h): > 10,000 mg/l Mortality  
LC 50 (Carp (*Leuciscus idus melanotus*), 48 h): > 10,000 mg/l Mortality

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

2-METHOXYETHANOL LC 50 (Brine shrimp (*Artemia salina*), 24 h): > 10,000 mg/l Mortality  
LC 50 (Water flea (*Daphnia magna*), 24 h): > 10,000 mg/l Mortality

**Chronic hazards to the aquatic environment:**
**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**
**Biodegradation**

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

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative Potential**
**Bioconcentration Factor (BCF)**

**Product:** No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** Log Kow: -0.77

**Mobility in Soil:** No data available.

**Other Adverse Effects:** 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.

### 13. Disposal considerations

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

UN Number:	UN 1188
UN Proper Shipping Name:	Ethylene glycol monomethyl ether
Transport Hazard Class(es)	
Class(es):	3
Label(s):	3
Packing Group:	III
Marine Pollutant:	No

#### IMDG

UN Number:	UN 1188
UN Proper Shipping Name:	ETHYLENE GLYCOL MONOMETHYL ETHER
Transport Hazard Class(es)	
Class(es):	3
Label(s):	3
EmS No.:	F-E, S-D
Packing Group:	III
Marine Pollutant:	No

#### IATA

UN Number:	UN 1188
Proper Shipping Name:	Ethylene glycol monomethyl ether
Transport Hazard Class(es):	
Class(es):	3
Label(s):	3
Marine Pollutant:	No
Packing Group:	III

### 15. Regulatory information

#### US Federal Regulations

##### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

##### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

##### CERCLA Hazardous Substance List (40 CFR 302.4):



## Superfund Amendments and Reauthorization Act of 1986 (SARA)

### Hazard categories

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

### SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

### SARA 304 Emergency Release Notification

Chemical Identity	RQ
2-METHOXYETHANOL	

### SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
2-METHOXYETHANOL	500 lbs

### SARA 313 (TRI Reporting)

Chemical Identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
2-METHOXYETHANOL	10000 lbs	25000 lbs.

### Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

## US State Regulations

### US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

2-METHOXYETHANOL	Developmental toxin.
2-METHOXYETHANOL	Male reproductive toxin.

### US. New Jersey Worker and Community Right-to-Know Act

2-METHOXYETHANOL	Listed
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### US. Massachusetts RTK - Substance List

2-METHOXYETHANOL	Listed
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### US. Pennsylvania RTK - Hazardous Substances

2-METHOXYETHANOL	Listed
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### US. Rhode Island RTK

2-METHOXYETHANOL	Listed
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**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or 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
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

**16. Other information, including date of preparation or last revision**

**NFPA Hazard ID**



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

<b>Issue Date:</b>	11-10-2014
<b>Revision Date:</b>	No data available.
<b>Version #:</b>	1.0
<b>Further Information:</b>	No data available.

**Disclaimer:**

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