

Shanghai Aladdin Biochemical Technology Co., Ltd.  
No. 809, Chuhua Branch Road, Fengxian District, Shanghai

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2024-01-16  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : 2-Methoxyethanol  
Product Number : M119725  
Brand : aladdin  
CAS-No. : 109-86-4

### 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 : Shanghai Aladdin Biochemical Tech Co., Ltd  
Address : 36 Xinjinqiao Road, Shanghai  
Telephone : 400-620-6333  
Fax : no data available

### 1.4 Emergency telephone number

Emergency Phone : 0532-83889090

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)  
Flammable liquids (Category 3), H226

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Acute toxicity, Dermal (Category 4), H312

Reproductive toxicity (Category 1B), H360FD

Specific target organ toxicity - single exposure (Category 1), Immune system, H370

Specific target organ toxicity - repeated exposure (Category 2), thymus, H373

For the full text of the H-Statements mentioned in this Section, see Section 16

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H226 Flammable liquid and vapor  
 H360 May damage fertility or the unborn child  
 H370 Causes damage to organs  
 H373 Causes damage to organs through prolonged or repeated exposure  
 H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled

Precautionary statement(s)

P201 Obtain special instructions before use.  
 P210 Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P233 Keep container tightly closed.  
 P240 Ground/bond container and receiving equipment.  
 P241 Use explosion-proof [electrical/ventilating/lighting/.../] equipment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.  
 P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
 P264 Wash hands [and ...] thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P303+P361+P353 IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].  
 P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor/...  
 P370+P378 In case of fire: Use ... to extinguish.  
 P405 Store locked up.  
 P403+P235 Store in a well-ventilated place. Keep cool.  
 P501 Dispose of contents/container to an approved waste disposal plant.  
 P301+P312+P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.  
 P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. if you feel unwell.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

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Synonyms	: Ethylene glycol monomethyl ether Methyl cellosolve Methyl glycol
Formula	: C3H8O2
Molecular weight	: 76.09
CAS No.	: 109-86-4
EC-NO.	: 203-713-7

Component	Classification	Concentration
2-Methoxyethanol	Flam. Liq. 3; Acute Tox. 4; Repr. 1B; STOT SE 1; STOT RE 2; H226, H302, H332, H312, H360FD, H370, H373	anhydrous, 99.8%

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Show this material 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: immediately make victim drink water (two glasses at most). Consult a physician.

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

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

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

no data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2) Foam Dry powder

Unsuitable extinguishing media

no data available

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures

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with air at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### 5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

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 Environmental precautions

Do not let product enter drains. Risk of explosion.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. 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

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 authorized persons.

### 7.3 Specific end use(s)

no data available

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Hazard composition and occupational exposure limits

Component	CAS No.	Value	Control parameters	Basis
2-Methoxyethanol	109-86-4	PC-TWA	15 mg/m <sup>3</sup>	Occupational exposure limits for workplace hazards - chemical hazards
		Note	Skin	

Biological limits

Component	CAS No.	parameters	Value	Biological specimens	Basis
2-Methoxyethanol	109-86-4	2-Methoxyethanol	1mg/g creatinine	urine	ACGIH - Biological Limits (BEI)
	Note	When you leave work on the last working day of the work week			

### 8.2 Exposure controls

Appropriate engineering controls

Replace contaminated clothing immediately. Use skin protective lotion. Wash hands and wash your face after using this substance.

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

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

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Recommended Filter type: Filter A-(P2)

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.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	form: liquid color: Colorless
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	-85.1°C
f) Initial boiling point and boiling range	125°C
g) Flash point	46.1°C
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	0.964-0.969
n) Water solubility	It is miscible with water and can be miscible with alcohols, ketones and hydrocarbons.
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

### 9.2 Other safety information

no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

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

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### 10.3 Possibility of hazardous reactions

Generates dangerous gases or fumes in contact with: Aluminum magnesium bases Zinc Risk of explosion with:  
Oxidizing agents Air Possible formation of: Peroxides

### 10.4 Conditions to avoid

Heating.

### 10.5 Incompatible materials

Aluminum, various plastics

### 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

LD50 Oral - Rabbit - 890 mg/kg Remarks: Behavioral:General anesthetic. Blood:Other hemolysis with or without anemia. (RTECS) Symptoms: Risk of aspiration upon vomiting., Aspiration may cause pulmonary edema and pneumonitis. Acute toxicity estimate Inhalation - Expert judgment - 4 h - 11 mg/l LD50 Dermal - Rabbit - 1.280 mg/kg Remarks: (RTECS)

Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation - 4 h (Directive 67/548/EEC, Annex V, B.4.)

Serious eye damage/eye irritation

Eyes - Rabbit Result: slight irritation (OECD Test Guideline 405)

Respiratory or skin sensitisation

Maximization Test - Guinea pig Result: negative (OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Chromosome aberration test Species: Mouse Application Route: Oral Method: OECD Test Guideline 475 Result: negative

Carcinogenicity

no data available

Reproductive toxicity

May damage the unborn child. May damage fertility.

Specific target organ toxicity - single exposure

Causes damage to organs. - Immune system

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure. - thymus

Aspiration hazard

no data available

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#### Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 90 d - NOAEL (No observed adverse effect level) - < 71 mg/kg - LOAEL (Lowest observed adverse effect level) - 71 mg/kg Remarks: (ECHA) RTECS: KL5775000 Effects due to ingestion may include: Changes in the blood count, Headache, Central nervous system depression, Ingestion of large amounts may cause: Damage of the: Liver, Kidney, Central nervous system To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Systemic effects: Changes in the blood count Headache Inhalation of high vapor concentrations can cause CNS-depression and narcosis. After absorption of large quantities: Damage to: Liver Kidney Central nervous system Other dangerous properties can not be excluded. This substance should be handled with particular care.

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish static test LC50 - Lepomis macrochirus (Bluegill sunfish) - > 10.000 mg/l - 96 h (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates semi-static test EC50 - Daphnia magna (Water flea) - 27.000 mg/l - 48 h (ISO 6341) Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 25.500 mg/l - 72 h (ISO 8692) Toxicity to bacteria static test EC50 - activated sludge - > 1.000 mg/l - 3 h (OECD Test Guideline 209)

### 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 20 d Result: 88 % - Readily biodegradable. Remarks: (ECHA)

### 12.3 Bioaccumulative potential

No bioaccumulation is to be expected (log Pow <= 4).

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

no data available

### 12.6 Other adverse effects

no data available

## SECTION 13:

### 13.1 Disposal considerations

Product

Dispose of the remaining and non recyclable solution to a licensed company.

Contaminated packaging

Dispose of as unused product.



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## SECTION 14: Transport information

### DOT (US)

UN number: 1188	Packing group: III	Class: 3
Proper shipping name: ETHYLENE GLYCOL MONOMETHYL ETHER	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: yes		

### IMDG

UN number: 1188	Packing group: III	EMS-No: no data available
Proper shipping name: ETHYLENE GLYCOL MONOMETHYL ETHER		

### IATA

UN number: 1188	Packing group: III	Class: 3
Proper shipping name: ETHYLENE GLYCOL MONOMETHYL ETHER		

## SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## SECTION 16: Other information

### Further information

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