

MATERIAL SAFETY DATA SHEET

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Version 1.2

Section 1 - Product and Company Information

Product Name	1-METHOXY-2-PROPANOL
Product Number	65692
Brand	FLUKA
Company	Sigma-Aldrich
Street Address	3050 Spruce Street
City, State, Zip, Country	SAINT LOUIS MO 63103 US
Technical Phone:	314 771 5765
Emergency Phone:	414 273 3850 Ext. 5996
Fax:	800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
1-METHOXY-2-PROPANOL	107-98-2	No

Formula	C4H10O2
Synonyms	Dowanol 33B * Dowanol PM * Dowanol PM glycol ether * Dowtherm 209 * Glycol ether PM * Methoxy ether of propylene glycol * 1-Methoxy-2-propanol * Methyl proxitol * Poly-Solve MPM * Propasol solvent M * Propylene glycol methyl ether * Propylene glycol monomethyl ether * alpha-Propylene glycol monomethyl ether * Propylene glycol monomethyl ether (ACGIH) * Propylenglykol-monomethylaether (German) * Ucar Solvent LM (Obs.)
RTECS Number:	UB7700000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Flammable. Irritant.

Irritating to eyes, respiratory system and skin. May form explosive peroxides.

Target organ(s): Liver. Kidneys.

HMIS RATING

HEALTH: 1*

FLAMMABILITY: 3

REACTIVITY: 0

NFPA RATING

HEALTH: 1

FLAMMABILITY: 3

REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

FLAMMABLE HAZARDS

Flammable Hazards: Yes

Organic Peroxide: Yes

EXPLOSION HAZARDS

Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions. Forms explosive mixtures in air. May form peroxides of unknown stability.

FLASH POINT

93 °F 34 °C Method: closed cup

EXPLOSION LIMITS

Lower: 1.8 % Upper: 16 %

AUTOIGNITION TEMP

278 °C

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Flammable liquid. Emits toxic fumes under fire conditions.

Specific Method(s) of Fire Fighting: Use water spray to cool fire-exposed containers.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep container closed. Keep away from heat, sparks, and open flame. Store in a cool dry place.

Unsuitable: Minimize exposure to air. If peroxide formation is suspected, do not open or move container.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

EXPOSURE LIMITS, RTECS

Country	Source	Type	Value
USA	ACGIH	STEL	150 PPM
USA	ACGIH	TWA	100 PPM
USA	MSHA Standard-air	TWA	100 PPM (360 MG/M3)
New Zealand OEL			
Remarks: check ACGIH TLV			
USA	NIOSH	TWA	100 PPM
		STEL	150 PPM

Section 9 - Physical/Chemical Properties

Appearance	Physical State: Clear liquid Color: Colorless	
Property	Value	At Temperature or Pressure
Molecular Weight	90.12 AMU	
pH	N/A	
BP/BP Range	118 - 119 °C	760 mmHg
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	10.9 mmHg	25 °C
Vapor Density	3.12 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	0.921 g/cm3	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	

Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	93 °F 34 °C	Method: closed cup
Explosion Limits	Lower: 1.8 % Upper: 16 %	
Flammability	N/A	
Autoignition Temp	278 °C	
Refractive Index	1.403	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water:Miscible.	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

Liver. Kidneys.

TOXICITY DATA

Inhalation

Rat

10,000 ppm

LC50

Intraperitoneal

Rat

3720 MG/KG

LD50

Subcutaneous

Rat

7800 MG/KG

LD50

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea.

Intravenous

Rat

4200 MG/KG

LD50

Remarks: Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea.

Oral

Mouse

11700 mg/kg

LD50

Remarks: Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea.

Intravenous

Mouse

5300 MG/KG

LD50

Remarks: Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea.

Oral

Dog

5000 mg/kg

LD50

Intravenous

Dog

2 GM/KG

LD50

Remarks: Behavioral:Convulsions or effect on seizure threshold.
Behavioral:Ataxia. Lungs, Thorax, or Respiration:Dyspnea.

Oral

Rabbit

5700 mg/kg

LD50

Skin

Rabbit

13000 mg/kg

LD50

Subcutaneous

Rabbit

5 GM/KG

LD50

Intravenous

Rabbit

1200 MG/KG

LD50

IRRITATION DATA

Skin

Rabbit

500 mg

Remarks: Open irritation test

Eyes

Rabbit
500 mg
24H
Remarks: Mild irritation effect

CHRONIC EXPOSURE - TERATOGEN

Species: Rat
Dose: 3000 PPM/6H
Route of Application: Inhalation
Exposure Time: (6-15D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system.

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 3000 PPM/6H
Route of Application: Inhalation
Exposure Time: (MULTIGENERATION)
Result: Maternal Effects: Other effects. Effects on Newborn:
Live birth index (# fetuses per litter; measured after birth).
Effects on Newborn: Physical.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: 1-Methoxy-2-propanol
UN#: 3092
Class: 3
Packing Group: Packing Group III
Hazard Label: Flammable liquid
PIH: Not PIH

IATA

Proper Shipping Name: 1-Methoxy-2-propanol
IATA UN Number: 3092
Hazard Class: 3
Packing Group: III

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION

R: 10
Risk Statements: Flammable.
S: 24
Safety Statements: Avoid contact with skin.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable. Irritant.
Risk Statements: Irritating to eyes, respiratory system and skin. May form explosive peroxides.
Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.
US Statements: Target organ(s): Liver. Kidneys.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2003 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.