

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : 1-METHOXY-2-PROPANOL

1. Product and Company Identification

Product name: 1-Methoxy-2-propanol
Synonyms: alpha-Propylene glycol monomethyl ether; alpha-PGME
Item Numbers: E48010100

European Contact Details

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24 h Emergency telephone number:

Chemtrec: 1-800-424-9300

2. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
1-Methoxy-2-propanol	98.5	107-98-2	3	R10
2-Methoxypropanol	< 0.5	1589-47-5	Not applicable	Not applicable

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive (67/548/EEC, as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

3. Hazards Identification

EMERGENCY OVERVIEW

Colourless highly flammable liquid with sweet odour. Dangerous fire and explosion hazard. Avoid heat, sparks, and flame. Flash back may occur from vapours to a source of ignition. May cause eye, skin, respiratory tract and digestive tract irritation.

For short and long term exposure effects see Section 11 Toxicological data.

Eye Effects: May cause eye irritation.
Skin Effects: May cause skin irritation. May be harmful if absorbed through the skin
Ingestion/Oral Effects: May cause irritation of the digestive tract. May be harmful if swallowed.
Inhalation Effects: May cause respiratory tract irritation. May be harmful if inhaled.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

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NFPA Hazard codes		HMIS Hazard codes		Rating System
Health	1	Health	1	0 = No Hazard
Flammability	3	Flammability	3	1 = Slight Hazard
Instability	0	Reactivity	0	2 = Moderate Hazard
				3 = Serious Hazard
				4 = Severe Hazard

4. First Aid Measures

- Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.
- Skin:** Wash skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. If exposure is extensive or irritation persists, seek medical attention.
- Ingestion/Oral:** Wash mouth out with water. Seek medical attention immediately. Never give anything by mouth to an unconscious person.
- Inhalation:** Remove the victim to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention.
- Other Information:** None.

5. Fire Fighting Measures

- Extinguishing Media:** Water may be ineffective. Do not use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.
- Fire and Explosion Hazard:** Liquid and vapours are flammable. Vapours may form an explosive mixture with air. Vapours are heavier than air and may travel to a source of ignition and flash back. Vapours can spread along the ground and collect in low or confined areas.
- Special Protective Equipment for Fire Fighters:** Use MSHA/NIOSH (approved or equivalent) self-contained breathing apparatus in pressure-demand mode, and full protective gear. During a fire, irritating, corrosive and toxic gases may be generated by thermal decomposition or combustion of the product. Wear the appropriate protective clothing to prevent contact with skin and eyes.

For Flammability Properties - see Section 9

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6. Accidental Release Measures

Do not walk through or otherwise scatter or spread any spilled product. Put on the appropriate protective equipment (See Section 8) and clean up spills immediately. (Use spark-proof tools.) Isolate the area of the spill and dike well ahead of large spills for later recycling or disposal.

Ventilate enclosed areas. Use a suppressing foam to reduce vapours. (Water spray may reduce vapour but may not prevent ignition in closed spaces.)

Use inert material (for example, vermiculite, dry sand or earth) to absorb the spilled product, and then place it into a chemical waste container. Do not use combustible materials such as sawdust to absorb the product. Safely dispose of the recovered spilled product (See Section 13).

Avoid run-off into storm sewers, drains and ditches that lead to waterways.

7. Handling and Storage

Handling: Wear appropriate protective equipment. Use only in a well-ventilated area. Do not inhale fumes or vapours from the product. Earth (ground) and bond containers when transferring product. Use spark-proof tools and explosion proof equipment. Keep away from incompatible materials (See Section 10).

Empty containers retain product residue (liquid and/or vapour) and can be dangerous. Take precautionary measures against static discharges. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Do not get the product in eyes, on skin, or on clothing. Do not ingest the product. Do not eat, drink, or smoke in areas where this product is used. Wash thoroughly after handling. Immediately remove contaminated clothing and wash before reuse.

Storage: Store in tightly closed containers, in a dedicated flammables area. Store in a cool, dry, well-ventilated area away from incompatible materials (See Section 10). Keep away from heat, sparks, flames, and sources of ignition. Do not store in direct sunlight.

8. Exposure Controls/Personal Protection

Exposure Limits:

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
1-Methoxy-2-propanol	100 ppm 150 ppm - STEL	None Established	100 ppm (skin)

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Personal Protection:

- Engineering Measures: Use explosion proof ventilation equipment. Provide eyewash facilities and safety showers. Ensure adequate ventilation in areas where the product is used, to keep airborne concentrations low.
- Respiratory Protection: Wear suitable respiratory protection whenever workplace conditions warrant a respirator's use.
- Hand/Skin Protection: Wear appropriate protective and chemical-resistant gloves, clothing and splash protection, or fully encapsulating vapour protective clothing, as necessary to prevent exposure.
- Eye/Face Protection: Wear appropriate chemical safety goggles with full face shield.
- Hygiene Measures: Do not eat, drink or smoke while using the product. Wash hands after using the product and before eating, drinking or smoking. Immediately change contaminated clothing.
- Other/General Protection: Overalls should be laundered regularly.

9. Physical and Chemical Properties

Appearance and Odour	Colourless liquid, sweetish/ ethereal odour	Boiling point	118-119 / 244-246	°C/°F
pH (as supplied)	4 to 7 (200 g/l @ 20 °C)	Freezing Point	-97 / -143	°C/°F
Solubility in Water	Soluble	Auto Ignition	286 / 547	°C/°F
Volatile Content by Volume	≥ 98.5%	Flash Point	33 / 91	°C/°F
Specific Gravity	0.92			
Vapour Pressure (mbar)	14.5 @ 25 °C	Vapour Pressure (Torr)	10.9 @ 77 °F	

10. Stability and Reactivity

- Stability: Stable under normal handling and storage conditions.
- Material/Conditions to Avoid: Avoid ignition sources and excess heat. Keep away from strong oxidizing agents, acid chlorides and acid anhydrides.
- Hazardous Decomposition: Carbon monoxide and carbon dioxide are evolved during combustion.
- Hazardous Polymerisation: Will not occur.

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11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 3 Hazards Identification.

Animal data:

LD50 value: Oral, mouse: 11700 mg/kg. Oral, rabbit: 5700 mg/kg. Oral, rat: 6600 mg/kg
Dermal, rabbit: 13 g/kg

LC50 value: Inhalation, rat: LC50 = 10000 ppm/5H

Carcinogenicity:

No known carcinogenic effects.

12. Ecological Information

Persistence: The half-life has been predicted to be 24.5 H. The experimentally determined half-life was 3.1 H under smog conditions. Due to water solubility, rain would be expected to remove the product from the atmosphere.

Biodegradability: Limited data from screening tests indicate the product would probably biodegrade in water and soil.

Mobility: Limited data is available. The product would not be expected to volatilize from water

Bioaccumulation: The product is not expected to bioconcentrate in aquatic organisms as indicated by an estimated BCF of 0.25.

Ecotoxicity: LC50 (aquatic): 19202 mg/l (96 H)

Other Information: Aquatic ecotoxicity: Fathead Minnow: LC50 = 15886 mg/l (96 H)
Bluegill/Sunfish: LC50 = 21742 mg/l (96 H)
Water flea: EC50 = 10457 mg/l (96 H)

13. Disposal Considerations

If recycling is not practicable, dispose of the product and used containers in accordance with all local and national requirements.

Empty containers must be decontaminated before recycling.

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14. Transport Information

This product is classified as dangerous under transport regulations.

PARAMETER	EUROPEAN	CANADIAN TDG	UNITED STATES DOT
Proper Shipping Name	1-METHOXY-2-PROPANOL	1-METHOXY-2-PROPANOL	1-METHOXY-2-PROPANOL
Hazard Class	3	3	3
Identification Number	UN 3092	UN 3092	UN 3092
Shipping Label	FLAMMABLE LIQUID	FLAMMABLE LIQUID	FLAMMABLE LIQUID

Packing Group: III

15. Regulatory Information

European Regulatory Information

This product has been classified in accordance with the Dangerous Substances Directive (67/548/EEC, as amended) and the Preparations Directive (88/379/EEC, as amended), implemented in the UK as the Chemical (Hazard Information and Packing) Regulations 1994 (CHIP, as amended).

Classified as dangerous to supply : Yes

Risk Phrases : R 10 Flammable

Safety Phrases : S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Symbols : F

United States Regulatory Information

All materials contained in this product are on the U.S. Toxic Substances Control Act (TSCA).

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and 40 CFR Part 372.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

OSHA Regulatory Status: This material is classified as dangerous under OSHA regulations.

Canadian Regulatory Information

WHMIS Classification: E, D2B

All ingredients contained in this product are included on the Canadian DSL.

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16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and the EU Safety Data Sheet Directive 91/155/EEC.

Sources of information for this data sheet:

- Acros Organics "1-Methoxy-2-propanol" Material Safety Data Sheet. Revision # 1. Date 10/08/2004.

Glossary:

ACGIH - American Conference of Governmental Industrial Hygienists; ANSI - American National Standards Institute; BCF - Bioconcentration Factor; Canadian TDG - Canadian Transportation of Dangerous Goods; CAS - Chemical Abstracts Service; Chemtrec - Chemical Transportation Emergency Center (US); CHIP - Chemical (Hazard Information and Packing); DSL - Domestic Substances List; EC - Effective concentration; EH40 (UK) - HSE Guidance Note EH40 Occupational exposure limits; EPCRA - Emergency Planning and Community Right-to-Know Act; HMIS - Hazardous Material Information Service; LC - Lethal Concentration; LD - Lethal Dose; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; NIOSH - National Institute for Occupational Safety and Health; OSHA - Occupational Safety and Health Administration, US department of Labour; PEL - Permissible exposure limit; SARA (Title III) - Superfund Amendments and Reauthorization Act; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; STEL - Short Time Exposure Limit; TLV - threshold limit value; TSCA - Toxic Substances Control Act Public Law 94-469; US DOT - US Department of Transportation; WHMIS - Workplace Hazardous Materials Information System.

Revisions:

Nov 2007 - Data Sheet updated to reflect the latest supplier safety information.

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