

1. PRODUCT NAME: Glycol Ether DM
2. CHEMICAL NAME: 2-(2-methoxyethoxy) ethanol
3. SYNONYMS: Diethylene Glycol Monomethyl Ether
4. CAS NUMBER: 111-77-3
5. COMPOSITION: Dipropylene Glycol Monomethyl Ether - 100%

IN CASE OF
TRANSPORT EMERGENCY
CONTACT CHEMTREC
USA: 1-800-424-9300
INTERNATIONAL: 1-703-527-3887

6. PROPERTIES: Appearance: Liquid. Clear
Odor: Pleasant. Mild aromatic.
Odor Threshold: No value available.
pH: Not applicable.
Boiling Point/Boiling Range: 193.6 °C (380.48 °F)
Freezing Point/Melting Point: -65 °C (-85 °F) Melting point.
Flash Point: 83.9 °C (183.02 °F) closed cup
Auto-ignition: 192.85 °C (379.13 °F)
Flammability: Combustible liquid.
Lower Flammable Limit: 1.38 vol%
Upper Flammable Limit: 22.7 vol%
Explosive Properties: No Data Available.
Oxidizing Properties: No Data Available.
Vapor Pressure: 0.2 mm Hg @ 20 °C (68 °F)
Evaporation Rate: 0.015 (butyl acetate = 1)
Relative Density: 1.025 @ 20 °C (68 °F)
Relative Vapor Density: 4.1 (Air = 1.0)
Viscosity: ~ 3.89 mPa.s @ 20 °C (68 °F)
Solubility (Water): 100%
Partition Coefficient (Kow): -1.18 (estimated)
Additional Physical and Chemical Properties: No additional information available.

7. HAZARDS: Combustible liquid. Eye irritant. Skin irritant. Respiratory tract irritant. CNS depressant.

8. FIRE FIGHTING INFORMATION: Flammable Properties
Classification
Combustible liquid.
Flash Point:
83.9 °C (183.02 °F) closed cup
Auto-Ignition Temperature
192.85 °C (379.13 °F)
Lower Flammable Limit
1.38 vol%
Upper Flammable Limit
22.7 vol%
Extinguishing Media
Suitable: SMALL FIRE: Use dry chemicals, CO2, water spray or alcohol-resistant foam LARGE FIRE:
Use water spray, water fog or alcohol-resistant foam
Protection of Firefighters
Protective Equipment/Clothing: Wear an approved positive pressure self-contained breathing apparatus
and firefighter turnout gear.



Carolina International Sales Co., Inc

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Fire Fighting Guidance: Avoid sparks, heat, and open flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire.
Hazardous Combustion Products: Carbon oxides (CO, CO₂)

9. PERSONAL Engineering Controls

PROTECTION Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Emergency shower and eyewash facility should be in close proximity (ANSI Z358.1)

MEASURES: Personal Protection

Inhalation A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use.

Skin: Wear chemical resistant gloves such as rubber, neoprene or vinyl. Appropriate protective clothing should be worn to prevent skin contact.

Eye: Wear safety glasses as minimum eye protection. Conditions may warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987.

10. FIRST AID General:

PROCEDURES: Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific information refer to the Emergency Overview in Section 3 of this MSDS.

Skin:

Immediately flush affected area with plenty of water while removing contaminated clothing. Wash contaminated clothing before reuse. If irritation persists, get medical attention.

Inhalation:

If symptoms are experienced, move victim to fresh air. Seek medical attention if discomfort persists.

Eye:

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

Ingestion:

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to reduce risk of aspiration. Get medical attention immediately.

11. EXPOSURE None Listed

LIMITS:

12. TOXICOLOGICAL Diethylene glycol monomethyl ether 111-77-3

INFORMATION: Acute Toxicity - Lethal Doses

Rat > 2 GM/M³ 1 HOURS

LD50 (Oral) Rat 9.2 G/KG

Guinea Pig 4.2 G/KG

LD50 (Skin) Rabbit 20.2 G/KG

Reproductive Effects

Laboratory test indicate high doses may cause adverse reproductive effects in rats and mice.

Reproductive Effects

Animal studies indicate the potential for reproductive effects in males.

Carcinogenicity

Not listed by IARC, NTP, or OSHA.

13. **ECOLOGICAL INFORMATION:** Ecotoxicity:
This material is highly soluble in water. Limited toxicity tests and models indicate this material should exhibit low toxicity to aquatic organisms. The odor and flavor of this material may attract some wildlife and cause them to consume spilled material.
Environmental Fate and Pathway:
This material should biodegrade after an acclimation period, and it is not expected to be environmentally persistent. Due care should be taken to avoid accidental releases to aquatic or terrestrial systems. See component summary.
Persistence and Degradability:
Bioaccumulation: This material is highly soluble in water and should not bioaccumulate in aquatic or terrestrial organisms.
14. **DISPOSAL CONSIDERATIONS:** Dispose of all waste and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations. Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. The materials resulting from clean-up operations may be hazardous wastes and therefore, subject to specific regulations.
15. **CARCINOGENIC PROPERTIES & NOTIFICATIONS:** Not listed by IARC, NTP, or OSHA.
16. **TRANSPORT INFORMATION:** Special Requirements
If you reformulate or further process this material, you should consider re-evaluation of the regulatory status of the components listed in the composition section of this sheet, based on final composition of your product.
Proper Shipping Name Combustible liquid, n.o.s. (DIETHYLENE GLYCOL MONOMETHYL ETHER)
ID No. NA1993
Hazard Class Combustible Liquid
PG III
17. **HANDLING & STORAGE:** Handling
Do not handle near heat, sparks, or flame. Avoid contact with incompatible agents. Use only with adequate ventilation/personal protection. Avoid contact with eyes, skin and clothing. Do not enter storage area unless adequately ventilated. Metal containers involved in the transfer of this material should be grounded and bonded. It is recommended that any liquid product exposed to air not be highly concentrated by evaporation without first assuring that no peroxide is present.
Storage
Store containers in a cool, dry, ventilated, fire resistant area away from sources of ignition and incompatible materials. Keep container tightly closed and properly labeled.
18. **ACCIDENTAL RELEASE MEASURES:** Release Response
Contain spill with dike to prevent entry into sewers or waterways. For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spills, soak up with absorbent material and place in properly labeled containers for disposal. All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.



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19. REGULATORY INFORMATION: If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

Export notification required.

2-methoxyethanol (Ethylene glycol methyl ether) - CASRN 1 TSCA section 5

SARA 302/304

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA.

SARA 311/312

Based upon available information, this material is classified as the following health and/or physical hazards according to

Section 311 & 312:

Immediate (Acute) Health Hazard.

Delayed (Chronic) Health Hazard.

SARA 313

This material contains the following chemicals with known CAS numbers subject to the reporting requirements of SARA Title

III, Section 313 and 40 CFR 372:

Component Reporting Threshold

Diethylene Glycol Monomethyl Ether / CAS # 111-77-3 - 1.0%

2-Methoxyethanol / CAS# 109-86-4

State Reporting

This product contains the following ingredients for which the state of California has found to cause cancer, birth defects or

other reproductive harm, which would require a warning under the statute:

- 2-Methoxyethanol; developmental toxicity, male reproductive toxicity.