

SILVER FERN CHEMICAL

Material Safety Data Sheet

GLYCOL ETHER DPM

SECTION 1: IDENTIFICATION

Product Name: Glycol Ether DPM

CAS Number: 34590-94-8

Chemical Name: Dipropylene Glycol Monomethyl Ether

Chemical Family: Propylene Glycol Ethers

Synonyms: DPM, Dipropylene Glycol Methyl Ether, DPGME

Company

Silver Fern Chemical, Inc.
2226 Queen Anne Avenue North
Suite #C
Seattle WA 98109, USA

Business Contact

Customer Service: 206-282-3376
info@silverfernchemical.com

24 Hour Emergency Contact

Infotrac 800-535-5053
Outside USA & Canada 352-323-3500

SECTION 2: HAZARD IDENTIFICATION

Emergency Overview This material is HAZARDOUS by OSHA Hazard Communication definition.

Signal Word: Caution.

Hazards: Moderately combustible liquid. Slight eye irritant.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 2

Reactivity: 0

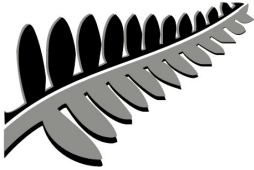
Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 2

Reactivity: 0



SILVER FERN CHEMICAL

Material Safety Data Sheet

GLYCOL ETHER DPM

Physical State: Liquid.

Color: Clear, colorless.

Odor: Ether-like odor.

Potential Health Effects

Routes of Exposure: Eye Skin. Inhalation

Signs and Symptoms of Acute Exposure:
See component summary.

Dipropylene Glycol Monomethyl Ether

Slight eye irritant. Breathing mist or vapors may cause mucous membrane or upper respiratory tract irritation. Excessive exposures may affect central nervous system (CNS), cause skin irritation and produce anesthetic or narcotic effects.

Skin: No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of skin exposure. No significant signs or symptoms indicative of any health hazard are expected to occur as a result of skin absorption exposure.

Inhalation: No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of inhalation exposure.

Eye: May cause minor eye irritation.

Ingestion: No significant signs or symptoms indicative of any health hazard are expected to occur as a result of ingestion.

Chronic Health Effects:
See component summary.

Dipropylene Glycol Monomethyl Ether

No adverse chronic health effects are expected from anticipated conditions of normal use of this material.

Conditions Aggravated by Exposure:
No known conditions are aggravated by this material.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Component Name:	CAS #.	EU Inventory Number:	Concentration by Wt./Mol%		
			Avg.	Min.	Max.
Dipropylene Glycol Monomethyl Ether	34590-94-8	EINECS 252-104-2			100.0



SILVER FERN CHEMICAL

Material Safety Data Sheet

GLYCOL ETHER DPM

SECTION 4: FIRST AID MEASURES

General: After adequate first aid, no further treatment is required unless symptoms reappear. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

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.

Skin: Remove contaminated clothing as needed. Wash skin thoroughly with mild soap and water. Flush with lukewarm water for 15 minutes. If sticky, use waterless cleaner first. Seek medical attention if discomfort persists.

Ingestion: If large quantity swallowed, give lukewarm water (pint/ 1/2 litre) if victim completely conscious/alert. Do not induce vomiting. Risk of damage to lungs exceeds poisoning risk. Obtain emergency medical attention.

Physician's Detoxification Procedures: Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: FIRE FIGHTING MEASURES

Classification: OSHA/NFPA Class IIIB combustible liquid.

Flash Point / Method: ~ 75 °C(167 °F)(TCC)

Auto-Ignition Temperature: No Data Available.

Flammable Limits:

UPPER: No Data Available.

LOWER: No Data Available.

Hazardous Combustion Products:

Carbon Monoxide and other toxic vapors.

Special Conditions to Avoid:

Heat from fire can generate flammable vapor. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Flammable vapors may be heavier than air and travel long distances along the ground before igniting and flashing back to vapor source. Fine sprays/mists may be combustible at temperatures below normal flash point.

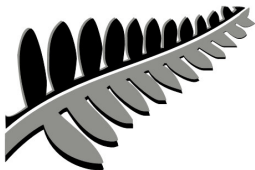
Extinguishing Media:

Suitable:

SMALL FIRE: Use dry chemical, CO₂, water spray or regular foam.

LARGE FIRE: Use water spray, water fog or regular foam. Do not use straight streams.

Unsuitable: Do not use solid water stream.



SILVER FERN CHEMICAL

Material Safety Data Sheet

GLYCOL ETHER DPM

Fire Fighting Instructions:

Protective Equipment/Clothing: Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear. Structural firefighters protective clothing will only provide limited protection.

INSTRUCTIONS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. 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. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Release Response: Eliminate all sources of ignition. All equipment used when handling this product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

SECTION 7: HANDLING AND STORAGE

Storage: Store only in tightly closed, properly vented containers away from heat, sparks, open flame and strong oxidizing agents. Storage under nitrogen atmosphere is recommended to minimize possible formation of highly reactive peroxides. Store in properly lined steel/stainless steel to avoid slight discoloration from mild steel/copper. Aluminum (5000 series alloys - U.S. Aluminum Association Standard) showed no corrosion after 30 days contact with ARCOSOLV® PM Acetate, ARCOSOLV® DPM, TPM, PTB, or PM at 71 °C (160 °F). Some plastics/rubbers are attacked by Glycol Ethers/Ether Esters. This product will absorb water if exposed to air.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Local exhaust in addition to general room ventilation may be required to meet exposure limit(s).

Personal Protection:

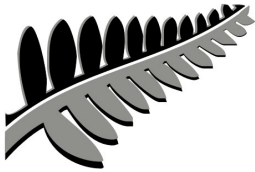
Inhalation: A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. If exposure can exceed the occupational exposure limit(s), use approved respiratory protection equipment.

Skin: Wear chemical resistant gloves such as: Butyl rubber. or Nitrile. Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn.

Eye: Use splash goggles when eye contact due to splashing or spraying liquid is possible.

Other Hygienic Practices:

Selection of appropriate personal protective equipment should be based on an evaluation of the performance



SILVER FERN CHEMICAL

Material Safety Data Sheet

GLYCOL ETHER DPM

characteristics of the protective equipment relative to the tasks(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Recommended Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing/wash thoroughly before reuse.

Occupational Exposure Limits:

Component Name	Source / Date	Value / Units	Type	Notation	Carcinogenic Listing*
Dipropylene Glycol Monomethyl Ether	US (ACGIH) / 2001	100 ppm 606 mg/m ³	8 HRS / TWA.	Skin.	N/L
	US (ACGIH) / 2001	150 ppm 909 mg/m ³	15 MIN / STEL.	Skin.	
	US (OSHA) / 2001	100 ppm 600 mg/m ³	8 HRS / TWA.	Skin.	

*1 = OSHA 2 = IARC 3 = NTP 4 = Others N/L = Not Listed See Section 11 for more information

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Density: ~ 950 kg/m³, @ (25 °C/77 °F)

Vapor: ~ 5.1, @ (16 - 32 °C/60 - 90 °F), (Air = 1.0)

Boiling Point: ~ 180 °C/356 °F, @ 760 mm Hg

Vapor Pressure: ~ 0.4 mm Hg, @ (25 °C /77 °F)

Viscosity: ~ 4 mPa.s, @ (25 °C/77 °F), (Brookfield).

Solubility: Solubility (Water): Complete (In All Proportions).

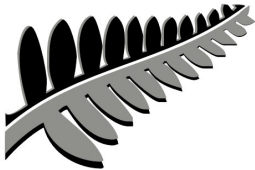
Octanol/Water Partition Coefficient in Kow: No Data Available.

Melting / Freezing Point: ~ -80 °C/-112 °F

Dry Point: ~ 192 °C

Evaporation Rate: ~ 0.02 (butyl acetate = 1)

Other Physical & Chemical Properties: Hygroscopic. Additional properties may be listed in Sections 3 and 5.



SILVER FERN CHEMICAL

Material Safety Data Sheet

GLYCOL ETHER DPM

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: This material is stable when properly handled and stored.

Conditions to Avoid: Extended contact with air or oxygen. Heat, sparks, open flame, other ignition sources, and oxidizing conditions. In contact with moisture, this hygroscopic (i.e. absorbs water from the air) material may degrade or become contaminated.

Incompatibility with: Air or oxygen. Strong oxidizing agents. May react with oxygen to form peroxides. However, there is no known evidence that it has nearly the peroxide forming potential as, for example, diethyl ether, etc.

Decomposition Products: Carbon Monoxide and other toxic vapors.

Hazardous Polymerization: Not expected to occur.

Reactions with Air and Water: May react with oxygen to form peroxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Product Summary:

See component summary.

Component Summary:

Dipropylene Glycol Monomethyl Ether

LD50 (Oral) Rat 5350 MG/KG

LD50 (Skin) Rabbit 9500 MG/KG

Target Organ Effects Kidneys.

SECTION 12: ECOLOGICAL INFORMATION

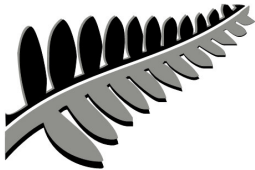
Ecotoxicity: This material is expected to be non-hazardous to aquatic species.

Toxicity to Fish:/Amphibians

<u>Test type</u>	<u>Species</u>	<u>Value / Units</u>
LC50 / 96 HOURS	fathead minnow	10,000 mg/l

Toxicity to Aquatic Invertebrates:

<u>Test type</u>	<u>Species</u>	<u>Value / Units</u>
EC50 / 48 HOURS	daphnia	5,000 mg/l



SILVER FERN CHEMICAL

Material Safety Data Sheet

GLYCOL ETHER DPM

Environmental Fate:

This material is volatile and water soluble. It may enter soil and may contaminate water. This material is likely to evaporate from dry soil but not from water. It is not expected to adsorb onto soils or sediments. Theo. BOD (Closed Bottle Test) 77 - 84% (28 day)

Bioaccumulation: No relevant studies identified.

Biodegradation: This material is expected to be readily biodegradable in acclimated systems.

SECTION 13: DISPOSAL CONSIDERATIONS

Contaminated product, soil, or water may be hazardous waste due to potential combustibility. Landfill at permitted sites. Use registered transporters. Burn concentrated liquids. Avoid flame-outs. Assure emissions comply with applicable regulations. Dilute aqueous waste will biodegrade. Avoid overloading/poisoning plant biomass. Assure effluent complies with applicable regulations.

SECTION 14: TRANSPORT INFORMATION

Special Requirements: Not regulated by U.S. Department of Transportation (USDOT) when shipped in packages of 119 gallons or less.

Proper Shipping Name: Combustible liquid, n.o.s. (dipropylene glycol methyl ether)

UN/NA ID: NA1993

NAER Guidebook: 128

Marine Pollutant: No

Labels: Combustible liquid.

DOT Hazard Class: Combustible liquid, PG III

IMDG Hazard Class: Not Regulated.

ICAO/IATA Hazard Class: Not Regulated.

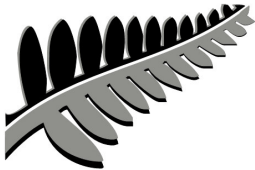
ADNR/VBG Hazard Class: Not Regulated.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

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

Regulatory Status: All components of this product are listed or are exempt from listing on the TSCA 8(b) inventory. If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.



SILVER FERN CHEMICAL

Material Safety Data Sheet

GLYCOL ETHER DPM

SARA - Section 313 Emissions Reporting: The material does not contain any chemical components with known CAS numbers that exceed the De Minimis reporting levels established by SARA Title III, Section 313 and 40 CFR 372.

Component Summary: Reporting Threshold

SARA - Section 311/312: Based upon available information, this material and/or components are classified as the following health and/or physical hazards according to Section 311 & 312: Fire Hazard.

State Reporting:

A **Volatile Organic Compound (VOC)** is any volatile compound of carbon excluding methane, carbon monoxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, 1,1-trichloromethane, methylene chloride, (FC-23), (CFC- 113), (CFC-22), (CFC-114), and (CFC-115). By this definition, this is a (VOC) material.

Massachusetts Substances List (MSL) - Hazardous substances on the MSL must be identified when present in materials at levels greater than state specified criterion. The criterion is: $\geq 1\%$. Components with CAS numbers present in this material at a level which could require reporting under the statute are: Dipropylene Glycol Monomethyl Ether / CAS# 34590-94-8.

Hazardous Substances listed by the State of Pennsylvania must be identified when present in materials at levels greater than the state specified criterion. The criterion is $\geq 1\%$. Components with CAS numbers in this material at a level which could require reporting under the statute are: Dipropylene Glycol Monomethyl Ether / CAS# 34590-94-8.

SECTION 16: OTHER INFORMATION

Created: 9/14/2001

Last Updated: 9/14/2001

DISCLAIMER OF RESPONSIBILITY

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