

SILVER FERN CHEMICAL

Material Safety Data Sheet

GLYCOL ETHER DPM ACETATE

SECTION 1: IDENTIFICATION

Product Name: GLYCOL ETHER DPM ACETATE

CAS Number: 88917-22-0

Chemical Family: Aliphatic Propylene Glycol Ether Esters

Chemical Name: Dipropylene glycol methyl ether acetate

Synonyms: 1-(2-Methoxy-Methyl-Ethoxy)-2-Propanol Acetate, DPM Acetate

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

Signal Word
CAUTION.

Hazards
Combustible. Suspect eye irritant. Suspect skin irritant.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 2

Reactivity: 0

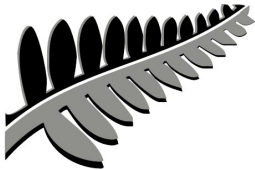
Personal Protection: E

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

Health: 0

Flammability: 2

Reactivity: 0



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Physical State

Liquid.

Color

Clear, colorless.

Odor

Ester-like odor.

Odor Threshold

No value available.

Potential Health Effects**Routes of Exposure**

Eye. Skin.

Signs and Symptoms of Acute Exposure

See component summary.

Dipropylene Glycol Methyl Ether Acetate 88917-22-0

May cause eye and skin irritation.

Skin

Although no appropriate human or animal health effects data are known to exist, this material is expected to be a skin irritant. Not expected to be a skin absorption hazard.

Inhalation

Although no appropriate human or animal health effects data are known to exist, this material is not expected to be an inhalation hazard.

Eye

May cause eye irritation.

Ingestion

Although no appropriate human or animal health effects data are known to exist, this material is not expected to be an ingestion hazard.

Chronic Health Effects

See component summary.

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No known chronic health effects.

Conditions Aggravated by Exposure

This material or its emissions may aggravate pre-existing eye disease. Pre-existing skin disorders



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SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS #</u>	<u>EU Inventory</u>	<u>Concentration Wt.%*</u>	<u>Risk</u>	<u>Symbol</u>
Dipropylene Glycol Methyl Ether Acetate	88917-22-0	Not Assigned	> 99.0	None	None

* Concentration of gaseous products or materials is given in Mole %
Compositions given are typical values not specifications.

SECTION 4: FIRST AID MEASURES

General

If you feel unwell, seek medical advice (show the label where possible).

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 ill effect or irritation develops.

Inhalation

If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain medical attention if breathing difficulty persists.

Eye

Immediately flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower lids. If pain or irritation persists, promptly obtain medical attention.

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.

Note to Physician

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

Flammable Properties

Classification: OSHA/NFPA Class IIIA Combustible Liquid.

Flash Point: ~ 86 °C (186.8 °F) (SETA)

Auto-Ignition Temperature: No Data Available.

Lower Flammable Limit: No Data Available.



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Upper Flammable Limit: No Data Available.

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: No additional information available.

Protection of Firefighters

Protective Equipment/Clothing: Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

Fire Fighting Guidance: When heated above the flash point, releases flammable vapors. Fine sprays/mists may be combustible at temperatures below normal flash point. When mixed with air and exposed to ignition source, vapors can burn in open or explode if confined. Vapors may be heavier than air. May travel long distances along the ground before igniting and flashing back to vapor source. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. 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.

Hazardous Combustion Products: Carbon Monoxide and other toxic vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

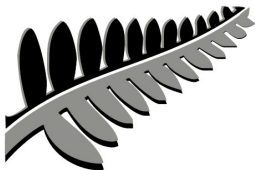
Release Response

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. Dike large spills and place materials in salvage containers. Water spray may reduce vapor; but may not prevent ignition in closed spaces.

SECTION 7: HANDLING AND STORAGE

Handling

For industrial use only. Keep container tightly closed when not in use. The potential for peroxide formation is enhanced when these solvents are used in processes such as distillation. Use only non-sparking tools. Properly ground containers before beginning transfer. When transferring propylene glycol ethers with flash points at or below 60 °C (140 °F) into fixed site vessels, the vessel should be purged and inerted prior to transfer. Propylene glycol ethers may be transferred into air atmospheres if the temperature of the product and the ambient temperature within the shipping container are both at least 16.7 °C (30 °F) less than the product's flash point. After loading, nitrogen blanketing is required if the contents of the transportation container could exceed a temperature of 16.7 °C (30 °F) less than the product flash point during any subsequent transportation activities. If the product flash point is less than 16.7 °C (30 °F) above either the ambient temperature of the transportation container or the storage temperature of the product, the



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container should be purged and inerted with nitrogen prior to loading and nitrogen blanketed after loading. Handle empty containers with care. Flammable/combustible residue remains after emptying. The purging of all empty shipping containers, regardless of the flashpoint, is recommended when received with air atmospheres. Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair. Use adequate personal protective equipment. Observe precautions pertaining to confined space entry.

Storage

Store only in tightly closed, properly vented containers away from heat, sparks, open flame and strong oxidizing agents. This product will absorb water if exposed to air. 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 Glycol Ether PM Acetate, Glycol Ether DPM, TPM, PTB, or PM at 71 °C (160 °F). Some plastics/rubbers are attacked by Glycol Ethers/Ether Esters.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls

No special ventilation is recommended under anticipated conditions of normal use beyond that needed for normal comfort control.

Personal Protection

Inhalation: No occupational exposure limit(s) have been established for this material or its components. 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: Neoprene. Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn. The equipment must be cleaned thoroughly after each use.

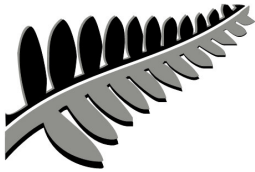
Eye: Eye protection such as chemical splash goggles and/or face shield must be worn when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor.

Additional Remarks

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(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. 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:



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Occupational Exposure Limits:

<u>Component Name</u>	<u>Source / Date</u>	<u>Value</u>	<u>Type</u>	<u>Notation</u>
Dipropylene Glycol Methyl Ether Acetate	US (OSHA) / 2001	100 ppm 600 mg/m ³ N/L		
	US (ACGIH)	100 ppm 606 mg/m ³		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid. Clear, colorless.

Odor: Ester-like odor.

Odor Threshold: No value available.

pH: Not applicable.

Boiling Point/Boiling Range: ~ 200 °C (392 °F) @ 760 mm Hg

Freezing Point/Melting Point: No Data Available.

Flash Point: ~ 86 °C (186.8 °F) (SETA)

Auto-ignition: No Data Available.

Flammability: OSHA/NFPA Class IIIA Combustible Liquid.

Lower Flammable Limit: No Data Available.

Upper Flammable Limit: No Data Available.

Explosive Properties: No Data Available.

Oxidizing Properties: No Data Available.

Vapor Pressure: ~ 0.05 mm Hg @ 25 °C (77 °F)

Evaporation Rate: No Data Available.

Relative Density: ~ 0.97(Water = 1.0 at 4°C (39.2°F))

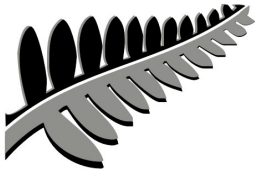
Relative Vapor Density: > 6 @ 60 - 90 °C (140 - 194 °F) (Air = 1.0)

Viscosity: ~ 2 mPa.s @ 25 °C (77 °F) (Brookfield).

Solubility (Water): Moderate (1 to less than 10 Percent).

Partition Coefficient (Kow): No Data Available.

Additional Physical and Chemical Properties: Volatile Characteristics: Negligible: <0.1% Additional properties may be listed in Sections 3 and 5.



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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. The potential for peroxide formation is enhanced when these solvents are used in processes such as distillation. Heat, sparks, open flame, other ignition sources, and oxidizing conditions. Ignition may occur at temperatures below those published in the literature as autoignition or ignition temperatures.

Substances to Avoid

Air or oxygen. Strong oxidizing agents. Strong acids. Strong bases. 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 INFORMATION

Product Summary

No additional toxicology information is available for this material. (See Component Toxicity Information).

COMPONENT INFORMATION

Dipropylene Glycol Methyl Ether Acetate 88917-22-0

Irritation

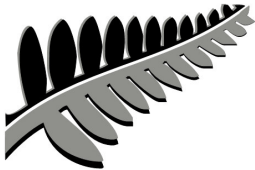
Skin May be irritating to the skin.
Eye May cause eye irritation.

Target Organ Effects

Eye. Skin.

Repeated Dose Toxicity

No known chronic health effects.



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SECTION 12: ECOLOGICAL INFORMATION

PRODUCT INFORMATION

Ecotoxicity

No Data Available.

Environmental Fate and Pathway

It is soluble in water. It is not expected to adsorb onto soils or sediments.

Persistence and Degradability

Bioaccumulation: This material is not expected to bioaccumulate.

COMPONENT INFORMATION

Dipropylene Glycol Methyl Ether Acetate 88917-22-0**Ecotoxicity**

No Data Available.

Environmental Fate and Pathway

It is soluble in water. It is not expected to adsorb onto soils or sediments.

Persistence and Degradability

Bioaccumulation: This material is not expected to bioaccumulate.

SECTION 13: DISPOSAL CONSIDERATIONS

Contaminated product, soil, water, container residues and spill cleanup materials containing allyl alcohol are hazardous wastes. Comply with federal, state, or local regulations for disposal.

SECTION 14: TRANSPORT INFORMATION

Special Requirements

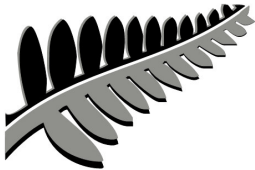
Not regulated by U.S. Department of Transportation (USDOT) when shipped in packages of 119 gallons or less. If you reformulate or further process this material, you should consider re-evaluation of the regulatory status of the components listed in the composition section of this sheet, based on final composition of your product.

Proper Shipping Name Combustible liquid, n.o.s. (Dipropylene Glycol Methyl Ether Acetate)

ID No. NA1993

Hazard Class Combustible Liquid

PG III



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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 Status:

<u>Country</u>	<u>Inventory</u>
Australia	AICS X
Canada	DSL X
Canada	NDSL
China	IECS X
European Union	EINECS @
European Union	ELINCS X
European Union	NLP
Japan	ENCS @
Korea	ECL X
Philippines	PICCS X
United States	TSCA X

X = All components are included or are otherwise exempt from inclusion on this inventory.

@ = See corresponding regulatory guidelines for additional information.

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.

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: Fire Hazard.

SARA 313

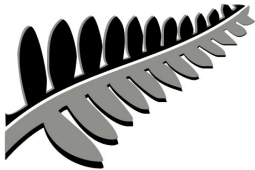
This material does not contain any chemical components with known CAS numbers that exceed the De Minimis reporting levels established by SARA Title III, Section 313 and 40 CFR 372.

Component

Reporting Threshold

State Reporting

This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition.



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Massachusetts Substances List (MSL) - Extraordinarily hazardous substances must be identified when present in materials at levels greater than state specified criterion. The criterion is $\geq 0.0001\%$. Hazardous Substances (MSL-HS) on the MSL must be identified when present in materials at greater than the state specified criterion. The criterion is $\geq 1\%$. Components with CAS numbers present in this material, at levels specified in Section 2 - Composition do not require reporting under the statute.

Special Hazardous Substances (PA-SHS) must be identified when present in materials at levels greater than the state specified criterion. The criterion is $\geq 0.01\%$. Hazardous Substances (PA-HS) must be identified when present in materials at levels greater than the state specified criterion. The criterion is $\geq 1\%$. Environmental Hazards (PA-EH) must be identified when present in materials at levels greater than the state specified criterion. The criterion is $\geq 0.01\%$. Components with CAS numbers present in this material, at levels specified in Section 2 - Composition, do not require reporting under the statute.

SECTION 16: OTHER INFORMATION

Created: 1/18/2007

Last Updated: 1/18/2007

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