

IN CASE OF TRANSPORTATION EMERGENCY CONTACT:

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## 1. IDENTIFICATION

PRODUCT NAME: GLYCOL ETHER PM ACETATE  
CAS NO: 108-65-6 MIXTURE  
CHEMICAL NAME: 1-METHOXY-2-PROANOL ACETATE  
SYNONYMS: PM ACETATE  
CHEMICAL FAMILY: PROPYLENE GLYCOL ETHER ESTERS

## 2. HAZARDS IDENTIFICATION

This material is HAZARDOUS by OSHA Hazard Communication definition.

Hazards

Moderately combustible liquid. May form reactive peroxides. May be irritating to the eyes, skin, and respiratory system.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2 Reactivity: 0

Personal Protection: E

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

Health: 1 Flammability: 2 Reactivity: 0

Physical State Liquid.

Color Colorless.

Odor Aromatic, fruity odor.

Odor Threshold No Data Available.

Potential Health Effects

Routes of Exposure

Eye. Inhalation. Skin.

Signs and Symptoms of Acute Exposure

Moderate health hazard. Moderate eye irritant. Mucous membrane irritant. Slight inhalation hazard. Slight ingestion hazard. Slight skin absorption hazard.

1-Methoxy-2-propanol acetate 108-65-6

Moderate eye irritant. Mucous membrane irritant.

2-Methoxy-1-propanol acetate 70657-70-4

Moderate eye irritant. Mucous membrane irritant.

**Skin**  
No significant signs or symptoms indicative of any health hazard are expected to occur as a result of skin contact. Possible systemic toxicity by skin absorption.

**Inhalation**  
Prolonged overexposure to either vapor or mist may cause coughing, shortness of breath, dizziness and drunkenness.

**Eye**  
May cause moderate irritation, including burning sensation, tearing, redness or swelling.

**Ingestion**  
Ingestion may cause gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting, lethargy, or diarrhea.

**Chronic Health Effects**  
Repeated or prolonged exposure may irritate the mucous membranes.  
1-Methoxy-2-propanol acetate 108-65-6

Repeated or prolonged exposure may irritate the mucous membranes.  
2-Methoxy-1-propanol acetate 70657-70-4  
Damages developing fetus. See section 11.

**Conditions Aggravated by Exposure**  
Any pre-existing disorders or diseases of the eye. This material may affect mucous tissue and/or aggravate mucous membrane dysfunction.

### 3. COMPOSITION

COMPONENT NAME:	CAS #	% BY WEIGHT
1-Methoxy-2propanol acetate	203-603-9	99 <=100.0
2-Methoxy-1-propanol acetate	274-724-2	<0.5

### 4. FIRST AID MEASURES

**General**  
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., After adequate first aid, no further treatment is required unless symptoms reappear.

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

**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**  
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 liter) 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 burns or allergic reactions conventionally after decontamination. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. If pain, blinking, tears, or redness continue, patient

## 5. FIRE FIGHTING MEASURES

Flammable Properties

Classification

OSHA/NFPA Class II combustible liquid.

Flash Point:

~ 47 °C (116.6 °F) (TCC)

Auto-Ignition Temperature

~ 272 °C (521.6 °F)

Lower Flammable Limit

~ 1.5 vol%

Upper Flammable Limit

~ 10 vol%

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Eliminate ignition sources. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

## 6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken if Material is Released or Spilled: Small spills: Absorb with materials such as: Sand, Vermiculite. Collect in suitable and properly labeled containers. Large spills: Contain spilled material if possible. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. No smoking in area. Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

## 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 oC (30 oF) 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 oC (30 oF) less than the product flash point during any subsequent transportation activities. If the product flash point is less than 16.7 oC (30 oF) above either the ambient temperature of the transportation container or the storage temperature of the product, the 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. 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. This product will absorb water if exposed to air.

Storage Period: Bulk

6 Months

Steel drums.

24 Months

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Engineering Controls**

Local exhaust and general ventilation must be adequate 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. No occupational exposure limits have been developed for this material.

Where exposure through inhalation may occur from use, approved respiratory protection equipment is recommended.

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:**

Component Name	Source / Date	Value	Type
1-Methoxy-2-propanol acetate	US (ACGIH) / 2004	N/L	
	US (OSHA) / 2003	N/L	
	WEEL / 2006	100 ppm	8
HRS/TWA			
2-Methoxy-1-propanol acetate	US (ACGIH) / 2004	N/L	
	US (OSHA) / 2003	N/L	

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid. Colorless.

Odor: Aromatic, fruity odor.

Odor Threshold: No Data Available.

pH: Not applicable.

Boiling Point/Boiling Range: ~ 140 °C (284 °F) @ 760 mm Hg

Freezing Point/Melting Point: No Data Available.

Flash Point: ~ 47 °C (116.6 °F) (TCC)

Auto-ignition: ~ 272 °C (521.6 °F)

Flammability: OSHA/NFPA Class II combustible liquid.

Lower Flammable Limit: ~ 1.5 vol%

Upper Flammable Limit: ~ 10 vol%

Explosive Properties: No Data Available.

Oxidizing Properties: No Data Available.

Vapor Pressure: ~ 3.8 mm Hg @ 25 °C (77 °F)

Evaporation Rate: ~ 0.3 (butyl acetate = 1)

Relative Density: ~ 0.96 @ 25 °C (77 °F)

Relative Vapor Density: ~ 4.6 @ 15 - 32 °C (59 - 89.6 °F) (Air = 1.0)

Viscosity: ~ 1 mPa.s @ 25 °C (77 °F) (Brookfield).

Solubility (Water): Appreciable (10 Percent or more).

Partition Coefficient (Kow): No Data Available.

Additional Physical and Chemical Properties: Hygroscopic.

## 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

Strong oxidizing agents. Moisture and humidity. 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.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Ingestion

LD50, Rat > 5,000 mg/kg

#### Dermal

LD50, Rabbit > 5,000 mg/kg

#### Inhalation

No deaths occurred at this concentration. LC50, 6 h, Rat 24 mg/l

#### Eye damage/eye irritation

May cause pain disproportionate to the level of irritation to eye tissues. May cause slight eye irritation. May cause slight corneal injury.

#### Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin. Repeated contact may cause skin irritation with local redness.

#### Sensitization

#### Skin

Did not cause allergic skin reactions when tested in guinea pigs.

#### Respiratory

No relevant information found.

#### Repeated Dose Toxicity

In animals, effects have been reported on the following organs: Kidney. Liver. Nasal tissue.

#### Chronic Toxicity and Carcinogenicity

No relevant information found.

#### Developmental Toxicity

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

#### Reproductive Toxicity

No relevant information found.

#### Genetic Toxicology

In vitro genetic toxicity studies were negative.

## 12. ECOLOGICAL INFORMATION

### PRODUCT INFORMATION

#### Ecotoxicity

See component summary.

#### Environmental Fate and Pathway

See component summary.

### COMPONENT INFORMATION

1-Methoxy-2-propanol acetate 108-65-6

#### Ecotoxicity

No Data Available.

#### Acute toxicity to fish

LC50 / 96 HOURS fish. 161 mg/l NOEC /

96 HOURS fish. 100 mg/l

#### Acute toxicity to aquatic invertebrates

EC0 / 48 HOURS Daphnia magna. 500 mg/l EC50 /

48 HOURS Daphnia magna. > 500 mg/l

Environmental Fate and Pathway  
It may enter soil and may contaminate water.

Persistence and Degradability  
Biodegradation: This material is expected to be inherently biodegradable.

2-Methoxy-1-propanol acetate 70657-70-4

Ecotoxicity  
No Data Available.

Environmental Fate and Pathway  
No Data Available.

### 13. DISPOSAL CONSIDERATIONS

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

### 14. 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 Esters, n.o.s. (1-Methoxy-2-Propanol Acetate  
ID No. UN 3272  
Hazard Class 3  
PG III

#### ICAO/IATA

Proper Shipping Name: ESTERS, N.O.S.  
Technical Name: 1-METHOXY-2-ACETOXYPROPANE  
Hazard Class: 3  
ID Number: UN 3272  
Packing Group: PG III  
Cargo Packing Instruction: 310  
Passenger Packing Instruction: 309

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.

### 15. REGULATORY INFORMATION

#### OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard No  
Delayed (Chronic) Health Hazard Yes  
Fire Hazard Yes Reactive Hazard No  
Sudden Release of Pressure Hazard No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

## 16. OTHER INFORMATION

Hazard Rating System

NFPA

Health 1

Fire 2

Reactivity 0

Recommended Uses and Restrictions

Industrial solvent for cleaner and coating formulations.

The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this MSDS information may not be applicable.

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