

## Material Data Safety Sheet (MSDS) - **ARCOSOLV PM ACETATE**

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** ARCOSOLV PM ACETATE

**Chemical characterization:** Propylene Glycol Ether Esters

**CAS-No.:** 108-65-6

**Chemical Name:** 2-methoxy-1-methylethyl-acetate

**Synonyms:** 1-Methoxy-2-Propanol Acetate, PM Acetate, PMA

### COMPANY IDENTIFICATION

**Supplier:**

**Pon Pure Chemicals Group**

CHENNAI, TAMILNADU, INDIA

**24 Hour Health Emergency**

(91) 8939878447

(91) 9444038694

**Transportation Emergency Phone**

(91) 8939768680

Company Name	Place	EMERGENCY TELEPHONE NUMBER
Pon Pure Chemicals Group	India	Day Emergency – 044-26161803-26161809

### 2. HAZARDS IDENTIFICATION

#### **Emergency Overview**

**Physical state** - liquid

**Color** - Colorless.

**Odor** - Aromatic, fruity odor.

**Odor Threshold** - No Data Available.

#### **Potential health effects**

##### **Routes of exposure**

Eye, Inhalation, Skin.

##### **Acute effects**

See component summary.

*2-methoxy-1-methylethyl-acetate 108-65-6*

Moderate eye irritant. Mucous membrane irritant.

*2-methoxypropyl 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.

#### **Eyes**

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 effects**

See component summary.

*2-methoxy-1-methylethyl-acetate 108-65-6*

Repeated or prolonged exposure may irritate the mucous membranes.

*2-methoxypropyl acetate 70657-70-4*

Damages developing fetus. See chapter 11. Toxicological information

#### **Aggravated Medical Condition**

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

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b><u>Component</u></b>	<b><u>CAS-No.</u></b>	<b><u>EC-No.</u></b>	<b><u>Weight %</u></b>
2-methoxy-1-methylethyl-acetate	108-65-6	203-603-9	> 99.0
2-methoxypropyl acetate	70657-70-4	274-724-2	< 0.5

### **4. FIRST AID MEASURES**

#### **General advice**

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 2 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.

#### **Eyes**

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.

#### **Ingestion**

Risk of damage to lungs exceeds poisoning risk. Obtain emergency medical attention.

#### **Notes 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 should contact ophthalmologist.

## **5. FIRE-FIGHTING MEASURES**

### **Flammable properties**

#### **Flash point**

~ 47 °C (116.6 °F) (TCC)

#### **Autoignition temperature**

~ 272 °C (521.6 °F)

#### **Lower explosion limit**

~ 1.5 vol%

#### **Upper explosion limit**

~ 10 vol%

### **Extinguishing Media**

#### **Suitable extinguishing media**

SMALL FIRE: Use dry chemicals, CO<sub>2</sub>, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

#### **Unsuitable extinguishing media**

Do not use solid water stream.

### **Protective equipment and precautions for firefighters**

#### **Protective equipment and precautions for firefighters**

Do not enter fire area without proper protection. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

#### **Precautions for fire-fighting**

When heated above the flash point, releases flammable vapors. 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. Fine sprays/mists may be combustible at temperatures below normal flash point. Fight fire from a safe distance/protected location. Heat may build enough pressure to rupture closed containers/spreading

fire/increasing risk of burns/injuries. Use water spray/fog for cooling. Avoid frothing/steam explosion. Burning liquid may float on water. Although water soluble, may not be practical to extinguish fire by water dilution. Notify authorities immediately if liquid enters sewer/public waters.

#### **Hazardous combustion products**

Carbon Monoxide and other toxic vapors.

## **6. ACCIDENTAL RELEASE MEASURES**

### **Spills and leaks**

Flammable liquid. Release can cause fire or explosion. Liquids/vapors may ignite. Evacuate/limit access. Equip responders with proper protection. Extinguish all ignition sources. Stop leak if you can do it without risk. Slippery walking/spread granular cover or soak up. Prevent flow to sewer/public waters. Notify fire and environmental authorities.

### **Spills and leaks**

Soak up small spills with inert solids. Use suitable disposal containers. On water, material is soluble and may float or sink. Contain/collect rapidly to minimize dispersion. Disperse residue to reduce aquatic harm. Report per regulatory requirements.

## **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 this solvent is 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 inserted 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 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 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.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Controls

Local exhaust and general ventilation must be adequate to meet exposure limit(s).

### Personal protective equipment

#### 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.

#### Eyes

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.

### 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. Take off contaminated clothing and wash before reuse.

### Occupational Exposure Limits

Consult local authorities for acceptable exposure limits

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	: liquid Colorless.
<b>Odor</b>	: Aromatic, fruity odor.
<b>Threshold</b>	: No Data Available.
<b>pH</b>	: Not applicable.
<b>Boiling point/boiling range</b>	: ~ 140 °C (284 °F) @ 760 mm Hg
<b>Melting/freezing point</b>	: No Data Available.
<b>Flash point</b>	: ~ 47 °C (116.6 °F) (TCC)
<b>Autoignition temperature</b>	: ~ 272 °C (521.6 °F)
<b>Flammability</b>	
<b>Lower explosion limit</b>	: ~ 1.5 vol%

<b>Upper explosion limit</b>	: ~ 10 vol%
<b>Explosive properties</b>	: No Data Available.
<b>Oxidizing properties</b>	: No Data Available.
<b>Vapor pressure</b>	: ~ 3.8 mm Hg @ 25 °C (77 °F)
<b>Evaporation rate</b>	: ~ 0.3 (butyl acetate = 1)
<b>Relative density</b>	: ~ 0.96 @ 25 °C (77 °F)
<b>Relative vapor density</b>	: ~ 4.6 @ 15 - 32 °C (59 - 89.6 °F)(Air = 1.0)
<b>Viscosity</b>	: ~ 1 mPa.s @ 25 °C (77 °F) (Brookfield).
<b>Water solubility</b>	: Appreciable (10 Percent or more).
<b>Partition coefficient: n-octanol/water:</b>	No Data Available.
<b>Other physico-chemical properties:</b>	Hygroscopic. Additional properties may be listed in Sections 2 and 5.

## 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 this solvent is 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.

### Materials 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.

### Hazardous 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

### Product information

#### Product Summary

See component summary.

### COMPONENT INFORMATION

2-methoxy-1-methylethyl-acetate 108-65-6

**Acute toxicit**

		8,532	MG/KG
<u>LD50 (Oral)</u>	rat		BWT
<u>LD50 (Skin)</u>	rat	> 5,000	MG/KG

**Target**

**Organs**

Eye & Skin.

**Repeated dose toxicity**

No known chronic health effects.

2-methoxypropyl acetate 70657-70-4

**Target Organs**

Eye. Damages developing fetus.

**Repeated dose toxicity**

2-Methoxy-1-propanol has been shown to cause developmental effects in offspring of female rabbits exposed to 0, 145, 225, 350, and 545 ppm by inhalation during pregnancy. 145 ppm was the no observed effect level (NOEL) in this study. The acetate of 2-methoxy-1-propanol also has been tested for developmental effects. Information for the acetate is pertinent since the acetate portion of this molecule is quickly removed in a living organism to yield 2-methoxy-1-propanol. The offspring of rats exposed to concentrations of 0, 110, 550, or 2,700 ppm developed vertebral incisions at the highest exposure level, in the presence of maternal toxicity. Rabbits exposed to 0, 36, 145, or 550 ppm of 2-methoxy-1-propanol acetate bore offspring that showed malformations of sternum, paws, major blood vessels and the heart at the highest exposure level. A concentration of 145 ppm was the no observed effect level (NOEL) for adverse developmental effects from the acetate of 2-methoxy-1-propanol.

**Reproductive effects**

Damages developing fetus.

**Carcinogenicity**

Not listed by IARC, NTP, OSHA or EPA.

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**12. ECOLOGICAL INFORMATION**

**Product information**

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**Ecotoxicity**

See component summary.

**Environmental fate and pathways**

See component summary.

## COMPONENT INFORMATION

*2-methoxy-1-methylethyl-acetate 108-65-6*

### **Ecotoxicity**

No Data Available.

#### Acute Fish toxicity

LC50 / 96 HOURS *Oryzias latipes* (Orange-red killifish) > 100 mg/l

NOEC / 96 HOURS *Oryzias latipes* (Orange-red killifish) 556 mg/l

#### Acute toxicity to aquatic invertebrates

EC50 / 48 HOURS *Daphnia magna* (Water flea) 373 mg/l

NOEC / 48 HOURS *Daphnia magna* (Water flea) 278 mg/l

### **Environmental fate and pathways**

It may enter soil and water.

#### Persistence and degradability

Biodegradation: Expected to be biodegradable

*2-methoxypropyl acetate 70657-70-4*

### **Ecotoxicity**

No Data Available.

### **Environmental fate and pathways**

No Data Available.

## 13. DISPOSAL CONSIDERATIONS

Contaminated product, soil, or water may be hazardous waste. (See applicable local, state, and international regulations, specifications or other requirements). Landfill solids at permitted sites. Use registered transporters. Burn concentrated liquids. Avoid flame-outs. Assure emissions comply with applicable regulations. Dilute aqueous waste may biodegrade. Avoid overloading/poisoning plant biomass. Assure effluent complies with applicable regulations.

## 14. TRANSPORT INFORMATION

### **Special Provisions**

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)

UN327

**ID No.** 2

**Hazard class** 3

**Packing group** III



## 15. REGULATORY INFORMATION

### Notification status

Manufacture, Storage and Import of Hazardous Chemicals Rule, 1989.

## 16. OTHER INFORMATION

### Disclaimer

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