

Arcosolv

PM Solvent

CAS No. 107-98-2

Molecular Weight = 90.1

Description

Arcosolv PM is a colorless, liquid with low toxicity, having a mild, pleasant odor. It is completely water soluble, miscible with a number of organic solvents, and has good solvency for a number of substances.

Product Identification

| | |
|------------------|---|
| Chemical Name | 1-Methoxy-2-Propanol |
| Chemical Family | Propylene Glycol Ether |
| Other Names | Methoxy Propanol Propylene Glycol Methyl Ether 1-Methoxy-2-Hydroxypropane 2-Methoxy-1-Methyl Ethanol |
| Chemical Formula | C ₄ H ₁₀ O ₂ |

Product Specifications

| Property | Specifications | Test Method |
|-------------------------------------|--------------------|------------------------|
| Acidity, wt. % as Acetic acid, max. | 0.01 | ASTM E-202; USP XXI |
| Water, wt. %, max. | 0.10 | ASTM E-202; E-203 |
| Color, APHA, max. | 10 | ASTM E-202; D-1209 |
| GC Purity, wt. %, min. | 99.5 | ACC 8314 |
| Appearance | Clear | |
| PM-2 Isomer, wt. % max. | 0.49 0.29 in EU | |

For the most current product specification, please call 1-888-777-0232 or your local sales contact.

Typical Properties

| | |
|---|-------------|
| • Autoignition temperature (°F) | 532 |
| • Density (pounds per gallon at 25°C) | 7.6 |
| • Distillation @ 760mm Hg, IBP, min | 117°C |
| • Distillation @ 760mm Hg, DP, max. | 125°C |
| • Evaporation Rate (BuAc = 100) | 66 |
| • Flammable Limits (Lower/Upper Vol. %) | 3/12 |
| • Flash Point (Tag Closed Cup) °C (°F) | 32(89) |
| • Percent Primary Alcohol | <2% |
| • Solubility by weight in water at 20°C | Complete |
| • Solubility Parameter (Total Hansen) | 11.1 |
| • Specific Gravity @ 25/25°C | 0.918-0.921 |
| • Surface Tension (Dynes/cm) @ 25°C(77°F) | 26.5 |
| • Refractive Index @ 25°C(77°F) | 1.404 |
| • Viscosity (centistokes) @ 25°C(77°F) | 1.8 |
| • Vapor Pressure @ 25°C(mm Hg) | 12.6 |

(Mono) Propylene Glycol (Mono) Methyl Ether



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Applications

Coatings: *Arcosolv* PM provides good solvency for a wide variety of resins including acrylic, epoxies, alkyds, polyesters, nitrocellulose and polyurethanes. Key properties for coating reformulation also include complete water miscibility and good coupling ability.

Arcosolv PM is a good substitute for E-series solvents; particularly, EM (ethylene glycol methyl ether) and EE (ethylene glycol ethyl ether).

Cleaners: Low toxicity, surface tension reduction, and fast evaporation are some of the benefits of using *Arcosolv* PM in cleaning formulations. It also provides good solvency for polar and nonpolar materials.

Chemical Intermediate: *Arcosolv* PM can be used in combination with other glycol ethers or solvents to custom tailor properties to meet the full requirements of the formulation. *Arcosolv* PM has a very low content of primary alcohol, generally below 0.49%. The primary alcohol isomer is more reactive than the secondary alcohol isomer. Low primary alcohol content minimizes side product formation.

Electronics: *Arcosolv* PM is used in conjunction with other solvents in the manufacture of laminates which are used to make circuit boards. Additionally, *Arcosolv* PM may be used in the cleaning and removal of solder flux and masks.

The properties listed in the previous section also support the use of *Arcosolv* PM in agricultural, cosmetic, ink, textile and adhesives products.

Storage

General industry practice is to store *Arcosolv* PM in carbon steel vessels. Avoid contact with air when storing for long periods of time.

Store only in tightly closed, properly vented containers away from heat, sparks, open flame or strong oxidizing agents. Use only non-sparking tools. Ground containers before beginning transfer. Electrical equipment should conform to national electric code.

Handle empty containers carefully. Flammable, combustible residue remains after emptying. Store in properly lined steel or stainless steel to avoid slight discoloration from mild steel. Glycol ethers should never be stored or handled in copper or copper alloys. This product may absorb water if exposed to air.

Safety and Handling

Arcosolv PM has a flash point of 89°F. It is a flammable liquid as defined under SARA Title III, section 311/312 hazard category, but is not subject to the reporting requirements of SARA Title 111, section 313.

Undue exposure or spillage should be strictly avoided as a matter of good practice. Refer to the Material Safety Data Sheet for *Arcosolv* PM for more specific information.

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Hazard ratings are summarized as follows:

| | <u>NPCA HMIS</u> | <u>NFPA</u> |
|---------------------|------------------|-------------|
| Health | 1 | 0 |
| Flammability | 3 | 3 |
| Reactivity | 0 | 0 |
| Personal Protection | B* | |

*Personal protection recommendation should be made with consideration of specific work place conditions.

Toxicological Evaluation

Arcosolv PM is a flammable liquid oxygenated hydrocarbon and should be handled with adequate safety precautions. In general, it has a low degree of acute toxicity. Single dose oral toxicity is low, and only mild adverse effects have been shown for skin and eye contact.

However, as a matter of safe practice, ingestion, eye contact, and prolonged skin contact should be avoided. Prolonged inhalation of vapors should also be avoided and adequate ventilation provided. The OSHA PEL for *Arcosolv* PM is 100 ppm.

Regulatory Status

Refer to the Material Safety Data Sheet for more specific information.

Arcosolv PM and all propylene glycol ethers are not included under the category glycol ethers as defined in the Clean Air Act Amendments of 1990.

Arcosolv PM is not subject to the reporting requirement of CERCLA or the reporting requirements established by SARA Title 111, section 313 and 40CFR372.

Arcosolv PM is on the U.S. TSCA list and the EEC EINECS, Canadian DSL, Australian and Japanese chemical inventories.

Material Compatibility Guidelines

Stainless steel is recommended for valves, pumps and filters. *Teflon* is suitable for gaskets. Buna N, butylene polymers and Neoprene are known to swell in contact with *Arcosolv* PM.

Information from material suppliers and specific conditions of contact should be considered in the selection of suitable materials.

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Arcosolv is a trademark owned or used by LyondellBasell group companies. Trademark *Arcosolv* is registered in the U.S. Patent and Trademark Office. *Teflon* is a registered trademark of DuPont.

Before using a product sold by one of the LyondellBasell family of companies, users should make their own independent determination that the product is suitable for the intended use and can be used safely and legally. SELLER MAKES NO WARRANTY; EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) OTHER THAN AS SEPARATELY AGREED BETWEEN THE PARTIES IN WRITING. This product(s) may not be used in the manufacture of any US FDA Class III Medical Device or Health Canada Class IV Medical Device and may not be used in the manufacture of any US FDA Class II Medical Device or Health Canada Class II or Class III Medical Device without the prior written approval by Seller of each specific product or application.

Users should review the applicable Material Safety Data Sheet before handling the product.

Houston, Texas, USA | Tel: +1 713 309 7200 or toll-free within USA +1 888 777 0232
Rotterdam, The Netherlands | Tel: +31 10 275 5500
Hong Kong, China | Tel: +852 2882 2668