

Global Product Strategy (GPS) Safety Summary

Propylene Glycol Monomethyl Ether

This GPS Safety Summary is a high-level summary intended to provide the general public with an overview of product safety information on this chemical substance. It is not intended to provide emergency response, medical or treatment information, nor to provide an overview of all safety and health information. This summary is not intended to replace the (Material) Safety Data Sheet. For detailed guidance on the use or regulatory status of this substance, please consult the (Material) Safety Data Sheet and the Regulatory Affairs Bulletin (RAB).

Chemical Identity

Name: Propylene Glycol Monomethyl Ether

Brand names: *Arcosolv PM*

Chemical name (IUPAC): 1-methoxypropan-2-ol

CAS number: 107-98-2

EC number: 203-539-1

Molecular formula: C₄H₁₀O₂

Uses and Applications

Arcosolv PM is a versatile solvent with low toxicity and fast evaporation rate. It is water miscible and has good solvency with numerous polar and non-polar substances. *Arcosolv PM* has been selected for use in:

- Coatings, where it provides good solvency for a wide variety of resins including acrylic, epoxies, alkyds, polyesters, nitrocellulose and polyurethanes. Key properties for coating applications include complete water miscibility and good coupling ability.
- Cleaning formulations.
- 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. Specifically for the electronics industry, an electronic grade *Arcosolv PM-EL* is available from the United States with low metal content levels.
- Agricultural, electronic, ink, textile, cosmetics (e.g. fingernail polish) and adhesive products.

Physical / Chemical Properties

Arcosolv PM is a colorless liquid with an ether-like odor at room temperature. The substance is considered flammable with a flash point of 31°C (88°F). The boiling and freezing points of *Arcosolv PM* are 120°C (248°F) and -96°C (-141°F) respectively. *Arcosolv PM* has been classified as hazardous under the Globally Harmonized System on classification and labeling (GHS) for its flammability.

Health Effects

Arcosolv PM is of low acute toxicity by all routes of exposure. It may cause temporary slight eye irritation and exposure to vapors may cause irritation of the eyes, nose or throat. However, these effects are below the thresholds that would warrant classification under GHS. It can cause drowsiness and dizziness when ingested or inhaled for which it has been classified as hazardous under GHS.

The table below gives an overview of the health effects assessment results for *Arcosolv PM*.

Effect Assessment	Result
Acute Toxicity Oral / inhalation / dermal	Low acute toxicity by all routes of exposure. Can cause dizziness and drowsiness when ingested or inhaled.
Irritation / corrosion Skin / eye/ respiratory tract	May cause temporary slight eye irritation. Exposure to vapors may cause irritation of the eyes, nose or throat.
Sensitisation	Not sensitising.
Toxicity after repeated exposure Oral / dermal	May cause sedation, enlarged liver, and minor kidney changes during prolonged or high exposures.
Genotoxicity / Mutagenicity	Not mutagenic.
Carcinogenicity	Not considered carcinogenic.
Toxicity for reproduction	Not classified as toxic to reproduction or development.

Environmental Effects

Arcosolv PM is a low ecotoxicity hazard and therefore is not classified under GHS. Furthermore, it does not bio-accumulate, is readily biodegradable and will not persist in the environment.

The table below gives an overview of the environmental effects assessment results for *Arcosolv PM*.

Effect Assessment	Result
Aquatic Toxicity	Low ecotoxicity hazard to aquatic organisms

Fate and behavior	Result
Biodegradation	Readily biodegradable.
Bioaccumulation potential	Not bio-accumulative.
PBT / vPvB conclusion	Not considered to be either PBT or vPvB.

PBT = Persistent, Bio-accumulative and Toxic in the environment.
vPvB = very Persistent and very Bio-accumulative in the environment.

Exposure

Human health

Consumers may be exposed to small amounts of *Arcosolv PM* during the use of consumer products containing *Arcosolv PM*. However, for supported uses these potential exposures are expected to be below the allowable and recommended exposure limits.

Professionals and Industrial workers may come into contact with *Arcosolv PM* as a component of coatings, cleaning fluids, electronics applications, and other formulations containing *Arcosolv PM*. Exposure should be controlled by selecting and applying the appropriate Risk Management Measures.

Exposure to *Arcosolv PM* of personnel in manufacturing facilities is considered very low because the process, storage and handling operations are enclosed. However, worker exposure can potentially occur during operations like product transfer, product sampling, or maintenance / repair activities on product containing systems. The risk of accidental exposure should be controlled by selecting and applying the appropriate Risk Management Measures.

Environment

Due to its many uses as a functional fluid in formulations, *Arcosolv PM* has widespread indoor and outdoor environmental release possibilities.

In manufacturing facilities, *Arcosolv PM* is manufactured in a closed and automated process with minimal release as emissions to air or water.

Risk Management Measures

For detailed guidance on the use of *Arcosolv PM*, the [\(Material\) Safety Data Sheet](#) should be consulted.

When using an *Arcosolv PM* containing consumer product at home, all provided instructions and precautions from the supplier should be read, understood and followed. It should never be used near open flames or other ignition sources.

Flammability

The vapor space above a stored liquid may be flammable/explosive unless blanketed with inert gas. Equipment should be grounded to prevent build-up of static electricity.

Human health

When using chemicals make sure that there is adequate ventilation. Always use appropriate chemical-resistant gloves to protect your hands and skin, always wear eye protection such as chemical goggles and always wear flame-retardant clothing. Do not eat, drink, or smoke where chemicals are handled, processed, or stored. Wash hands and skin following contact. If the substance gets into your eyes, rinse eyes thoroughly for at least 15 minutes with tap water and seek medical attention.

In the case of transfer or maintenance operations, always clear transfer lines prior to decoupling, and flush/drain to a closed system for recycle prior to opening equipment.

In cases where engineering controls cannot maintain airborne substance concentrations below exposure limits, or in cases with a risk of accidental exposure, additional risk management measures may be necessary, such as the use of a complete suit protecting against chemicals and supplied air, a self-contained breathing apparatus or respirator.

Environmental

In case of accidental release or spill do not allow the product to enter sewers, surface or ground water

Regulatory Information / Classification and Labeling

This substance has been registered under REACH by relevant companies of LyondellBasell in the European Union.

For a detailed overview of the regulatory status of this substance, please refer to the [Regulatory Affairs Bulletin](#) which is available from the LyondellBasell corporate website.

Under the Globally Harmonized System on classification and labeling (GHS) substances are classified according to their physical, health and environmental hazards. The hazards are communicated via specific labels on the product packaging and the Safety Data Sheet. GHS attempts to standardize hazard communication so that the intended audience (workers, consumers, transport workers, and emergency responders) can better understand the hazards of the chemicals in use.

For a detailed overview of the classification and labeling of this substance, please refer to the regional [\(Material\) Safety Data Sheet](#), which can be found on the LyondellBasell corporate website.

Conclusion Statements

- *Arcosolv PM* is a versatile solvent with low toxicity, surface tension reduction properties and fast evaporation. It is used in a wide variety of industrial, professional and consumer products, such as coatings and cleaners, agricultural, electronic, ink, textile, cosmetics and adhesive products.
- *Arcosolv PM* is of low acute toxicity via all routes of exposure. However, it has been classified under GHS as hazardous because it can cause drowsiness and dizziness when ingested or inhaled. It is a low ecotoxicity hazard. Appropriate Risk Management Measures should be selected and applied to control risk of exposure;
- Consumer exposures to small amounts of *Arcosolv PM* during supported uses in consumer products containing *Arcosolv PM* are expected to be below the allowable and recommended exposure limits.

Contact Information within Company

For further information on this product in general, please consult the [LyondellBasell corporate website](#).

For specific Product Safety related questions, please contact PSInfo@lyondellbasell.com.

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Disclaimer

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.

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