

Global Product Strategy (GPS) Safety Summary

Propylene Glycol Monomethyl Ether Acetate

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 Safety Data Sheet. For detailed guidance on the use or regulatory status of this substance, please consult the Safety Data Sheet and the Product Stewardship Bulletin (PSB).

Chemical Identity

Name: Propylene Glycol Monomethyl Ether Acetate

Brand names: Glycol Ether PMA

Chemical name (IUPAC): 1-methoxy-2-propanol acetate

CAS number: 108-65-6

EC number: 203-603-9

Molecular formula: C₆H₁₂O₃

Uses and Applications

Glycol Ether PMA is a versatile solvent with low toxicity. It is soluble in water to the extent of 18% at 20°C and has good solvency for a variety of substances including acrylic, nitrocellulose and urethane coating resins. Glycol Ether PMA has been selected for use in:

- Coatings, where it is extensively used in many decorative and protective coating formulations.
- Cleaning formulations for use in metal degreasing and specialized equipment cleansing.
- Electronics, where it can be used in photoresist formulations applied in semiconductor processing. Glycol Ether PMA may also be used in solvent systems for cleaning and degreasing circuit boards and removing solder flux.
- Other applications such as agricultural, ink, textile, cosmetic and adhesive products.

Physical / Chemical Properties

Glycol Ether PMA is a colorless liquid with an ester-like odor at room temperature. The substance is considered flammable with a flash point of 45°C (114°F). The boiling and freezing points of Glycol Ether PMA are 146°C (295°F) and -65°C (-85°F) respectively. Glycol Ether PMA has been classified as hazardous under the Globally Harmonized System on classification and labeling (GHS) for its flammability.

Health Effects

Glycol Ether PMA is of low acute toxicity by all routes of exposure. It may cause moderate eye irritation and high concentrations may cause central nervous system depression when inhaled. However, these effects are below the thresholds that would warrant classification under GHS.

The table below gives an overview of the health effects assessment results for Glycol Ether PMA.

Effect Assessment	Result
Acute Toxicity Oral / inhalation / dermal	Low acute toxicity by all routes of exposure. High concentrations may cause central nervous system depression when inhaled.
Irritation / corrosion Skin / eye/ respiratory tract	May cause moderate eye irritation, including burning sensation, tearing, redness or swelling.
Sensitization	Not sensitizing.
Toxicity after repeated exposure Oral / inhalation / 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

Glycol Ether PMA is a low ecotoxicity hazard and therefore is not classified under GHS. Furthermore, it does not bio-accumulate, is rapidly biodegradable and will not persist in the environment.

The table below gives an overview of the environmental effects assessment results for Glycol Ether PMA.

Effect Assessment	Result
Aquatic Toxicity	Low ecotoxicity hazard to aquatic organisms

Fate and behavior	Result
Biodegradation	Rapidly 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 Glycol Ether PMA during the use of consumer products containing Glycol Ether PMA. 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 Glycol Ether PMA as a component of coatings, cleaning fluids, electronics applications, and other formulations containing Glycol Ether PMA. Exposure should be controlled by selecting and applying the appropriate Risk Management Measures.

Exposure to Glycol Ether PMA 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, Glycol Ether PMA has widespread indoor and outdoor environmental release possibilities.

In manufacturing facilities, Glycol Ether PMA 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 Glycol Ether PMA, the Safety Data Sheet should be consulted.

When using an Glycol Ether PMA 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 Product Stewardship 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 Safety Data Sheet, which can be found on the LyondellBasell corporate website.

Conclusion Statements

- Glycol Ether PMA is a versatile solvent with uses in a wide variety of industrial, professional and consumer products, such as coatings and cleaners, electronic, agricultural, ink, textile, cosmetics and adhesive products.
- Glycol Ether PMA is of low acute toxicity via all routes of exposure and it is a low ecotoxicity hazard.
- Risks to human health and the environment from Glycol Ether PMA are considered low or negligible, when it is properly handled.

Contact Information within Company

For further information on this product in general, please consult the LyondellBasell corporate website (www.lyb.com).

Date of issue

Date of issue: 24 September 2015.

Disclaimer

Before using a product sold by a company 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 OR ANY WARRANTY) OTHER THAN AS SEPARATELY AGREED TO BY THE PARTIES IN A CONTRACT.

LyondellBasell prohibits or restricts the use of its products in certain applications. For further information on restrictions or prohibitions of use, please contact a LyondellBasell representative.

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

Glycol Ether PMA is a product of Lyondell Chemical Company and Lyondell Chemie Nederland B.V.