

Global Product Strategy (GPS) Safety Summary

Glycol Ether EB

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: Glycol Ether EB
Brand names: Glycol Ether EB
Chemical name (IUPAC): 2-butoxyethanol
Synonym: Ethylene Glycol Monobutyl Ether (EGBE)
CAS number: 111-76-2
EC number: 203-905-0
Molecular formula: C₆H₁₄O₂

Uses and Applications

Glycol Ether EB is widely used as a solvent in coating formulations, a chemical intermediate in the manufacture of esters, and a coupling agent to stabilize immiscible ingredients in metal cleaners, textile lubricants, cutting oils and liquid household products.

Physical / Chemical Properties

Glycol Ether EB is a colorless liquid that is miscible with water and most organic solvents. It has a flash point of 72°C (161.6°F). The boiling point and freezing point are 169°C (336°F) and -70°C (-94°F), respectively.

Health Effects

Glycol Ether EB presents a minimal acute toxicity hazard to humans after exposure via ingestion, skin contact, and inhalation. It is irritating to the skin, moderately to severely irritating to the eyes and slightly irritating to the respiratory tract. Glycol Ether EB is classified as hazardous under GHS for its health effects.

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

Effect Assessment	Result
Acute toxicity Oral / inhalation / dermal	Minimal acute toxicity by the oral, inhalation and dermal routes of exposure
Irritation / corrosion	Skin irritant, moderate to severe eye irritant and slight

Skin / eye / respiratory tract	respiratory tract irritant
Sensitization	Not expected to be a sensitizer
Toxicity after repeated exposure Oral / inhalation / dermal	Low concern for repeated exposure toxicity
Genotoxicity / mutagenicity	Not genotoxic / not mutagenic
Carcinogenicity	Not expected to be a human carcinogen. Tumors produced in animals are questionably relevant to humans
Toxicity for reproduction	Not expected to be toxic to reproduction

Environmental Effects

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

Effect Assessment	Result
Aquatic toxicity	Not expected to be harmful to aquatic organisms

Fate and behaviour	Result
Biodegradation	Readily biodegradable
Bio-accumulation potential	Not expected to bio-accumulate
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 EB during the use of consumer products containing Glycol Ether EB.

Worker exposure to Glycol Ether EB in manufacturing facilities is low because the process, storage and handling operations are generally enclosed. However, worker exposure can potentially occur during operations such as 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.

Professional and industrial workers may come into contact with Glycol Ether EB as a component of industrial products containing Glycol Ether EB. Exposure should be controlled by selecting and applying the appropriate Risk Management Measures.

Environment

The manufacture of Glycol Ether EB is a closed and automated process. Also, transfer (loading and transport) of the product is conducted in a closed system to prevent release.

However, due to its use as a component in products such as coatings, cleaners and household products, Glycol Ether EB has indoor and outdoor environmental release possibilities.

Glycol Ether EB is soluble in water and evaporates quickly. Therefore, Glycol Ether EB is not expected to be bio-accumulative.

Risk Management Measures

For detailed guidance on the use of Glycol Ether EB, the Safety Data Sheet should be consulted.

Consumer use

When using a consumer product containing Glycol Ether EB at home, all instructions and precautions should be read, understood and followed, such as recommendations for use of eye protection and gloves. Adequate ventilation should be provided and it should not be used near open flames or other ignition sources.

Human health (industrial and professional use)

When using chemicals make sure that there is adequate ventilation. Always use appropriate chemical-resistant gloves to protect your hands and skin, wear eye protection such as chemical goggles, and 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, 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.

Spills and Leaks

Eliminate all sources of ignition. All equipment used when handling this product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

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 available on lyondellbasell.com.

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 found on lyondellbasell.com

Conclusion Statements

- Glycol Ether EB is widely used as a solvent in coating formulations, a chemical intermediate in the manufacture of esters, and a coupling agent to stabilize immiscible ingredients in metal cleaners, textile lubricants, cutting oils and liquid household products.
- Glycol Ether EB is hazardous under GHS. The material has minimal toxicity via all routes of exposure. It is a moderate to severe eye irritant, a skin irritant and a slight respiratory tract irritant. It should be used only in well ventilated areas away from ignition sources and with the recommended risk management measures.
- Glycol Ether EB is not expected to be harmful to aquatic organisms, readily biodegradable and not expected to bio-accumulate.

Contact Information within Company

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

Date of issue

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Glycol Ether EB is a product of Equistar Chemicals, LP and Lyondell Chemie Nederland B.V.