

## Global Product Strategy (GPS) Safety Summary

### Glycol Ether DE

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, or 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 DE

**Brand names:** Glycol Ether DE

**Chemical name (IUPAC):** 2-(2-ethoxyethoxy) ethanol

**Synonym:** Diethylene Glycol Monoethyl Ether (DGEE)

**CAS number:** 111-90-0

**EC number:** 203-919-7

**Molecular formula:** C<sub>6</sub>H<sub>14</sub>O<sub>3</sub>

#### Uses and Applications

Glycol Ether DE is widely used as a solvent in coating applications such as latex paint and wood stains and is a component of many industrial cleaners. Textile uses for Glycol Ether DE include dye and printing ink solvent, yarn and cloth conditioning.

#### Physical / Chemical Properties

Glycol Ether DE is a colorless liquid with a mild, pleasant odor that is miscible with water and most organic solvents. It has a flash point of 91°C (196°F) and is classified as combustible under the Globally Harmonized System (GHS) on classification and labeling. The boiling point and freezing point are 198°C (388°F) and -76°C (-105°F), respectively.

#### Health Effects

Glycol Ether DE presents a low acute toxicity hazard to humans after exposure via ingestion, skin contact, and inhalation. Glycol Ether DE is irritating to the eyes and skin. Prolonged or high exposures may cause central nervous system effects and liver and kidney changes. Glycol Ether DE 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 DE.

Effect Assessment	Result
Acute Toxicity Oral / inhalation / dermal	Low acute toxicity by the oral, inhalation and dermal routes of exposure

Irritation / corrosion Skin / eye / respiratory tract	Slight skin irritant and moderate eye irritant
Sensitization	Not considered to be a sensitizer
Toxicity after repeated exposure Oral / inhalation / dermal	Repeated or prolonged skin contact may cause slight transient irritation. Prolonged or high exposures may cause Central Nervous System (CNS) effects and liver and kidney changes
Genotoxicity / Mutagenicity	Not genotoxic / not mutagenic
Carcinogenicity	Not considered to be a human carcinogen
Toxicity for reproduction	Not considered toxic to reproduction

### **Environmental Effects**

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

<b>Effect Assessment</b>	<b>Result</b>
Aquatic Toxicity	Not expected to be harmful to aquatic organisms

<b>Fate and Behavior</b>	<b>Result</b>
Biodegradation	Expected to be readily biodegradable
Bioaccumulation 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 DE during the use of consumer products containing Glycol Ether DE.

Worker exposure to Glycol Ether DE 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 DE as a component of industrial products containing Glycol Ether DE. Exposure should be controlled by selecting and applying the appropriate Risk Management Measures.

#### **Environment**

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

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

Glycol Ether DE is highly soluble in water and will not persist in the environment. Therefore, Glycol Ether DE is not expected to be bio-accumulative.

### **Risk Management Measures**

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

#### **Consumer use**

When using a consumer product containing Glycol Ether DE, all instructions and precautions should be read, understood and followed, such as the 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 a respirator.

#### **Spills and Leaks**

Contain spill with dike to prevent entry into sewers or waterways. For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spills, soak up with absorbent material and place in properly labeled containers for disposal. All recovered materials should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

### **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 (PSB) available on [lyondellbasell.com](http://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](http://lyondellbasell.com)

### **Conclusion Statements**

- Glycol Ether DE is widely used as a solvent in coating applications such as latex paint and wood stains and is a component of many industrial cleaners. Textile uses for Glycol Ether DE include dye and printing ink solvent, yarn and cloth conditioning.
- Glycol Ether DE is hazardous under GHS. The material is combustible and a slight skin and moderate eye irritant. Prolonged or high exposures may cause central nervous system effects and liver and kidney changes. It should be used only in well ventilated areas away from ignition sources and with the recommended risk management measures.
- Glycol Ether DE is not expected to be harmful to aquatic organisms, expected to readily biodegrade 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](http://www.lyb.com)).

### **Date of issue**

Date of issue: 4 June 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.

This product(s) may not be used in:

- (i) any U.S. FDA Class I, Health Canada Class I, and/or European Union Class I medical devices, without prior notification to Seller for each specific product and application; or
- (ii) the manufacture of any of the following, without prior written approval by Seller for each specific product and application: U.S. FDA Class II Medical Devices; Health Canada Class II or Class III Medical Devices; European Union Class II Medical Devices; film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices;

packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration; tobacco related products and applications, electronic cigarettes and similar devices, and pressure pipe or fittings that are considered a part or component of a nuclear reactor. Additionally, the product(s) may not be used in: (i) U.S. FDA Class III Medical Devices; Health Canada Class IV Medical Devices; European Class III Medical Devices; (ii) applications involving permanent implantation into the body; (iii) life-sustaining medical applications; and (iv) lead, asbestos or MTBE related applications. All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

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

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