Global Product Strategy (GPS) Safety Summary

Glycol Ether HE

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.

Chemical Identity

Name: Ethylene Glycol Ethyl Ether High Boilers
Brand names: Glycol Ether HE
Chemical name (IUPAC): Heavy Ethylene Glycol Monoethyl Ether
CAS number: n/a (mixture)
EC number: n/a (mixture)
Molecular formula: n/a (mixture)

Uses and Applications

Glycol Ether HE may be used as an additive in many applications, including the production of asphalts, inks, cleaning compounds, concretes, well drilling fluids, anti-freeze, brake fluids and hydraulic fluids.

Physical / Chemical Properties

Glycol Ether HE is a mixture of di-, tri-, tetra- and polyethylene glycol monoethyl ethers. At ambient temperature Glycol Ether HE is a yellowish liquid with a mild sweet odor. It is completely soluble in water and has low volatility. The flash point for Glycol Ether HE is 120°C (>248°F). The boiling point of glycol ether HE is 220°C (428°F).

Health Effects

Glycol Ether HE has not been classified as hazardous to human health under the Globally Harmonized System on classification and labeling (GHS).

The table below gives an overview of the health effects assessment results for Glycol ether HE.

Effect Assessment	Result
Acute Toxicity Oral / inhalation / dermal	Acute toxicity by the oral, inhalation and dermal routes of exposure is estimated to be low.
Irritation / corrosion Skin / eye/ respiratory tract	Not expected to be irritating to skin or eyes.
Sensitization	Not expected to be a sensitizer.
Toxicity after repeated exposure Oral / inhalation / dermal	Low concern for repeated exposure systemic toxicity.
Genotoxicity / Mutagenicity	Low concern for genotoxicity/mutagenicity.
Carcinogenicity	Low concern for cancer.
Toxicity for reproduction	Not expected to impair fertility nor to be toxic to fetal development.

Environmental Effects

Based on component data, Glycol Ether HE is expected to have low toxicity to aquatic life. It has therefore not been classified under GHS as hazardous to the environment.

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

Effect Assessment	Result
Aquatic Toxicity	Not expected to be toxic to aquatic life

Fate and behaviour	Result
Biodegradation	Expected to be biodegradable
Bioaccumulation potential	Not expected to bioaccumulate
PBT / vPvB conclusion	Not considered to be either PBT nor vPvB.

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

Exposure

Human health

Glycol Ether HE may be present in consumer products such as cleaning compounds, anti-freeze and hydraulic brake fluids. When using a Glycol Ether HE containing consumer product at home, all instructions and precautions should be read, understood and followed.

Personnel exposure to Glycol Ether HE in manufacturing facilities is considered very low because the process, storage and handling operations are 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.

Environment
Glycol Ether HE is manufactured in a closed and automated process. Also, transfer (loading and transport) of the product is conducted in closed containers to prevent release from the system. Due to its use as a component in hydraulic brake fluids, Glycol Ether HE has indoor and outdoor environmental release possibilities.

Risk Management Measures

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

Glycol Ether HE should be handled only by knowledgeable and trained personnel.

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 for safe use, 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

Under GHS (Globally Harmonized System on Classification and Labeling) 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 HE is used as an additive in many applications including the production of inks, cleaning compounds, anti-freeze and hydraulic brake fluids.
- Glycol ether HE has not been classified as hazardous to human health.
- Glycol Ether HE is expected to have low toxicity to aquatic organisms, to be biodegradable and not expected to bioaccumulate.

Contact Information within Company

For further information on this product in general, please consult the LyondellBasell corporate website.

Date of issue

Date of issue: 30 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 HE is a product of Equistar Chemicals, LP.