



## Safety Data Sheet

# ETHYLENE GLYCOL

### SECTION 1. IDENTIFICATION

|                                     |                                                                                                                                                                                               |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Identifier                  | Ethylene Glycol                                                                                                                                                                               |
| Other Means of Identification       | Code: ETHGLY**<br>DSL: 1,2-Ethanediol<br>IUPAC: Ethane-1,2-diol<br>CAS: 107-21-1<br>Monoethylene glycol; Ethylene alcohol                                                                     |
| Product Use and Restrictions on Use | For commercial or industrial use.                                                                                                                                                             |
| Initial Supplier Identifier         | ClearTech Industries Inc.<br>1500 Quebec Avenue<br>Saskatoon, SK. Canada<br>S7K 1V7<br><br>Phone: 800.387.7503<br>Fax: 888.281.8109<br><a href="http://www.cleartech.ca">www.cleartech.ca</a> |
| 24-Hour Emergency Phone             | 306.664.2522                                                                                                                                                                                  |

### SECTION 2. HAZARD IDENTIFICATION

|                                                    |            |
|----------------------------------------------------|------------|
| Acute toxicity - oral                              | Category 4 |
| Specific target organ toxicity - repeated exposure | Category 2 |

#### Pictograms



**Signal Word: Warning**

#### Hazard Statements

- H302 Harmful if swallowed.  
H373 May cause damage to kidneys through prolonged or repeated oral exposure.

#### Precautionary Statements

##### Prevention

- P260 Do not breathe vapours, fumes, or mists.  
P264 Wash affected body parts thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

##### Response

- P301 P312 P330 IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.  
P314 Get medical advice or attention if you feel unwell.

##### Disposal

- P501 Dispose of contents / container in accordance with all federal, provincial and / or local regulations including the Canadian Environmental Protection Act.



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#### Hazards Not Otherwise Classified

Not available

#### Supplemental Information

Not available

### SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### Hazardous Ingredients:

| <i>Chemical name</i> | <i>Common name(s)</i>            | <i>CAS number</i> | <i>Concentration (w/w%)</i> |
|----------------------|----------------------------------|-------------------|-----------------------------|
| 1,2-Ethanediol       | Ethylene glycol; Ethane-1,2-diol | 107-21-1          | >99%                        |

### SECTION 4. FIRST-AID MEASURES

#### Description of necessary first-aid measures

|              |                                                                                                                                                                                            |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation   | Get medical advice / attention if you feel unwell or are concerned.                                                                                                                        |
| Ingestion    | Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.                                                                                                                            |
| Skin contact | Rinse skin with lukewarm, gently flowing water / shower for 5 minutes or until product is removed. If skin irritation occurs or if you feel unwell: Get medical advice / attention.        |
| Eye contact  | If irritation occurs, cautiously rinse eyes with lukewarm, gently flowing water for 5 minutes, while holding the eyelids open. If eye irritation persists: Get medical advice / attention. |

#### Most important symptoms and effects, both acute and delayed

|                     |                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------|
| Inhalation          | May cause respiratory irritation.                                                              |
| Ingestion           | Harmful if swallowed. May cause damage to kidneys through prolonged or repeated oral exposure. |
| Skin contact        | Not available                                                                                  |
| Eye contact         | May cause eye irritation and redness.                                                          |
| Further information | For further information see Section 11 Toxicological Information.                              |

### SECTION 5. FIRE FIGHTING MEASURES

|                                                |                                                                                          |
|------------------------------------------------|------------------------------------------------------------------------------------------|
| Suitable extinguishing media                   | Extinguish fire using extinguishing agents suitable for the surrounding fire.            |
| Unsuitable extinguishing media                 | Water jets are not recommended in fires involving chemicals.                             |
| Specific hazards arising from the chemical     | In the event of a fire oxides of carbon may be released.                                 |
| Special protective equipment for fire-fighters | Wear NIOSH-approved self-contained breathing apparatus and chemical-protective clothing. |

### SECTION 6. ACCIDENTAL RELEASE MEASURES

|                                                                    |                                                                                                                                                            |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal Precautions / Protective Equipment / Emergency Procedures | Wear appropriate personal protective equipment (See Section 08 Exposure Controls and Personal Protection). Stay upwind, ventilate area.                    |
| Environmental Precautions                                          | Prevent material from entering waterways, sewers or confined spaces. Notify local health and wildlife officials. Notify operators of nearby water intakes. |



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#### Methods and Materials for Containment and Cleaning Up

SMALL SPILLS: Stop or reduce leak if safe to do so. Clean up spill with non-reactive absorbent and place in suitable, covered, labeled containers. Flush area with water. Contaminated absorbent material may pose the same hazards as the spilled product.  
LARGE SPILLS: Contact fire and emergency services and supplier for advice.

## SECTION 7. HANDLING AND STORAGE

#### Precautions for Safe Handling

Use sensible workplace hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.  
Inspect containers for damage or leaks before handling. If the original label is damaged or missing replace with a workplace label. Have suitable emergency equipment for fires, spills and leaks readily available.

#### Conditions for Safe Storage

Store in a cool, dry area, out of direct sunlight, away from heat sources and incompatible materials. Always store in original labeled container. Keep containers tightly closed when not in use and when empty. Empty containers may contain hazardous residues. Protect label and keep it visible.

#### Incompatibilities

Oxidizing agents, such as oxygen, hydrogen peroxide, sulphuric and nitric acids, hypochlorites and permanganates.

## SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Exposure limits

| Component                             | Regulation | Type of listing | Value                 |
|---------------------------------------|------------|-----------------|-----------------------|
| Ethylene glycol - Total, aerosol only | ACGIH      | Ceiling         | 100 mg/m <sup>3</sup> |
| Ethylene glycol - Total, aerosol only | ACGIH      | TWA             | 10 mg/m <sup>3</sup>  |
| Ethylene glycol - Total, aerosol only | ACGIH      | STEL            | 20 mg/m <sup>3</sup>  |
| Ethylene glycol - Vapour              | ACGIH      | Ceiling         | 50 ppm                |

### Engineering controls

#### Ventilation Requirements

Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.

### Protective equipment

The following are recommendations only. It is the responsibility of the employer / user to conduct a hazard assessment of the process in which this product being used and determine the proper engineering controls and PPE for their process. Additional regulatory and safety information should be sought from local authorities and, if needed, a professional industrial hygienist.

#### Eye and face protection

Where there is potential eye or face exposure, safety glasses are recommended. Contact lenses are not recommended; they may contribute to severe eye injury.

#### Hand and body protection

Where handling this product it is recommended that skin contact is avoided.

#### Respiratory protection

Where concentrations are above recommended limits, approved respiratory protection should be worn, ensure cartridges provide protection against this product. Depending on conditions such as temperature and handling method negative pressure masks may not provide suitable protection, and positive pressure respirators or SCBAs may be required. Reevaluate any respiratory protection used regularly, as their protective effects tend to degrade over time.

In emergency conditions SCBAs are recommended.

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### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                         |                         |
|-----------------------------------------|-------------------------|
| Physical state                          | Liquid                  |
| Colour                                  | Colourless, clear       |
| Odour                                   | Sweet                   |
| Odour threshold                         | Not applicable          |
| pH                                      | 8.5-9.5                 |
| Melting point / freezing point          | -13 °C                  |
| Initial boiling point and boiling range | 197 °C                  |
| Flash point                             | 111 °C                  |
| Evaporation rate                        | ~0.01                   |
| Flammability                            | Not applicable          |
| Upper flammable limit                   | Not available           |
| Lower flammable limit                   | Not available           |
| Vapour pressure                         | 0.123 hPa @ 25 °C       |
| Vapour density                          | Not available           |
| Relative density                        | Not applicable          |
| Solubility                              | Miscible in water       |
| Partition coefficient: n-octanol/water  | Log Kow = -1.36 @ 25 °C |
| Auto-ignition temperature               | 398 °C                  |
| Decomposition temperature               | 206 °C                  |
| Viscosity                               | 16.1 mPa·s @ 25 °C      |
| Specific gravity                        | 1.11 @ 20 °C            |
| Particle characteristics                | Not applicable          |

### SECTION 10. STABILITY AND REACTIVITY

|                                    |                                                                                                                   |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Reactivity                         | Non-reactive if stored according to section 7.                                                                    |
| Stability                          | This product is stable if stored according to the recommendations in Section 07.                                  |
| Possibility of hazardous reactions | Hazardous polymerization is not known to occur.                                                                   |
| Conditions to avoid                | Avoid contact with incompatible materials.                                                                        |
| Incompatible materials             | Oxidizing agents, such as oxygen, hydrogen peroxide, sulphuric and nitric acids, hypochlorites and permanganates. |
| Hazardous decomposition products   | Thermal decomposition may produce oxides of carbon.                                                               |

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute Toxicity (LD50 / LC50 values)



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| <i>Component</i> | <i>Route</i>         | <i>Species</i> | <i>Value</i>   | <i>Exposure time</i> |
|------------------|----------------------|----------------|----------------|----------------------|
| Ethylene glycol  | Oral                 | Rat            | 7712 mg/kg bw  |                      |
|                  | Inhalation (aerosol) | Rat            | >2.5 mg/L      | 6 hours              |
|                  | Dermal               | Mouse          | >3500 mg/kg bw |                      |

#### Toxic Health Effect Summary

|                          |                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------|
| Chemical characteristics | Not available                                                                                     |
| Skin                     | Not available                                                                                     |
| Ingestion                | Harmful if swallowed. May cause damage to kidneys through prolonged or repeated oral exposure.    |
| Inhalation               | May cause respiratory irritation.                                                                 |
| Eye contact              | May cause eye irritation and redness.                                                             |
| Sensitization            | This product and its components at their listed concentration have no known sensitizing effects.  |
| Mutagenicity             | This product and its components at their listed concentration have no known mutagenic effects.    |
| Carcinogenicity          | This product and its components at their listed concentration have no known carcinogenic effects. |
| Reproductive toxicity    | This product and its components at their listed concentration have no known reproductive effects. |
| Specific organ toxicity  | May cause damage to kidneys through prolonged or repeated oral exposure.                          |
| Aspiration hazard        | Not available                                                                                     |
| Synergistic materials    | Not available                                                                                     |

#### SECTION 12. ECOLOGICAL INFORMATION

##### Ecotoxicity

| <i>Component</i> | <i>Type</i> | <i>Species</i>   | <i>Value</i> | <i>Exposure Time</i> |
|------------------|-------------|------------------|--------------|----------------------|
| Ethylene glycol  | LC50        | Rainbow trout    | 72,860 mg/L  | 96 hours             |
|                  | EC50        | Daphnia          | >13,900 mg/L | 48 hours             |
|                  | EC10        | Freshwater algae | 100 mg/L     | 72 hours             |

|                       |                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------|
| Biodegradability      | The domestic substance list categorizes ethylene glycol as non-persistent.                          |
| Bioaccumulation       | The domestic substance list categorizes ethylene glycol as non-bioaccumulative.                     |
| Mobility              | This product is water soluble, is not predicted to adsorb to soil and may contaminate ground water. |
| Other adverse effects | Not available                                                                                       |

#### SECTION 13. DISPOSAL CONSIDERATIONS

|                                       |                                                                                                                                                                          |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste From Residues / Unused Products | Dispose in accordance with all federal, provincial, and local regulations including the Canadian Environmental Protection Act.                                           |
| Contaminated Packaging                | Do not remove label, follow label warnings even after the container is empty. Empty containers should be recycled or disposed of at an approved waste handling facility. |



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#### SECTION 14. TRANSPORT INFORMATION

|                                         |                                                                                                                                |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| UN number                               | This product does not meet the definition of dangerous goods per Part 2 of Transport of Dangerous Goods Regulations            |
| UN proper shipping name and description | Not available                                                                                                                  |
| Transport hazard class(es)              | Not available                                                                                                                  |
| Packing group                           | Not available                                                                                                                  |
| Excepted quantities                     | Not available                                                                                                                  |
| Environmental hazards                   | Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.                                                 |
| Special precautions                     | No special precautions                                                                                                         |
| Transport in bulk                       | ERAP index: not available                                                                                                      |
| Additional information                  | MARPOL 73/78 and IBC Code:<br>This product is not listed in Chapter 17 of the IBC Code.                                        |
|                                         | Secure containers (full or empty) during shipment and ensure all caps, valves, or closures are secured in the closed position. |

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#### SECTION 15. REGULATORY INFORMATION

All components of this product appear on the domestic substance list.

This product is listed in the National Pollutant Release Inventory (NPRI). Reporting threshold: 10 tonnes manufactured, processed or otherwise used. Concentration threshold: 1%

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#### SECTION 16. OTHER INFORMATION

Date of latest revision: November 12, 2025

Note: The responsibility to provide a safe workplace remains with the buyer / user. The buyer / user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results and assume no liability for damages incurred by the use of this material. It is the responsibility of the buyer / user to comply with all applicable laws and regulations regarding handling, using, reselling and shipping this product.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the RDC Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns, please call our customer service center.

#### References:

- 1) *NIOSH Pocket Guide to Chemical Hazards*; U.S. Department of Health and Human Services, <https://www.cdc.gov/niosh/npg/default.html>
- 2) *WorkSafe BC E-Limit*; Workers' Compensation Board of British Columbia, <https://elimit.online.worksafebc.com/>
- 3) *ECHA - Registered Substance Dossier*; European Chemicals Agency, <https://echa.europa.eu/registration-dossier/-/registered-dossier/15973>



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- 4) *Transportation of Dangerous Goods Regulations*; Transport Canada, <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2001-286/index.html>
- 5) Globally Harmonized System of Classification and Labeling of Chemicals (GHS) *Seventh revised edition*
- 6) International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) 2007 Edition
- 7) The ACS Style Guide