

SECTION 1: Identification

1.1. Product identifier

Trade name : ETHANEDIOL
 IUPAC name : ethane-1,2-diol
 EC-No. : 203-473-3
 CAS-No. : 107-21-1
 Product code : 105050xxx
 Formula : C2H6O2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended uses and restrictions : For laboratory use only

1.3. Supplier's details

Labchem (Pty)Ltd
 6 Wakefield Road
 Founders Hill
 1609 Johannesburg - South Africa
 T +27 11 452 1116 - F +27 86 588 0293
techlab@labchem.co.za - www.labchem.co.za

1.4. Emergency telephone number

Emergency number : +27 11 452 1116

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Flammable liquids Not classified
 Acute toxicity (oral), Category 4 H302
 Hazardous to the aquatic environment -
 Acute Hazard Not classified
 Full text of H statements : see section 16

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA) :



GHS07

Signal word (GHS-ZA) : Warning
 Hazard statements (GHS-ZA) : H302 - Harmful if swallowed.
 Precautionary statements (GHS-ZA) : P264 - Wash hands, forearms and face thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
 P330 - Rinse mouth.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice, Harmful if swallowed.

SECTION 3: Composition/information on ingredients

3.1. Substances

IUPAC name : ethane-1,2-diol

Substance identification codes: See section 1.1

| Name | Product identifier | % | Classification according to the United Nations GHS |
|---|--------------------|--------|--|
| Monoethylene glycol (Main constituent) | (CAS-No.) 107-21-1 | ≥ 99.5 | Flam. Liq. Not classified Acute Tox. 4 (Oral), H302 Aquatic Acute Not classified |

Full text of H-statements: see section 16

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According to SANS 10234:2019 and SANS 11014:2010

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell. Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| ETHANEDIOL (107-21-1) | |
|--|---|
| South Africa - Occupational Exposure Limits (Recommended Limits) | |
| Local name | Ethane-1,2-diol (1,2-Dihydroxyethane) (Ethylene glycol) |
| OEL TWA (mg/m ³) | 10 mg/m ³ particulate 60 mg/m ³ vapour |
| OEL STEL (mg/m ³) | 125 mg/m ³ vapour |
| Regulatory reference | Government Notice. R: 1179 |

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

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According to SANS 10234:2019 and SANS 11014:2010

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : Full face mask with filter type A at conc. in air > exposure limit

Personal protective equipment symbol(s):



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : No data available
Molecular mass : 62.07 g/mol
Colour : No data available
Odour : No data available
Odour threshold : No data available
pH : No data available
pH solution : No data available
Relative evaporation rate (butylacetate=1) : No data available
Relative evaporation rate (ether=1) : No data available
Melting point : -13 °C
Freezing point : No data available
Boiling point : 197.4 °C Atm. press.: 1013 hPa
Flash point : 111 °C Atm. press.: 1013,25 hPa
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : Not applicable
Vapour pressure : 0.123 hPa Temp.: 25 °C
Vapour pressure at 50 °C : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available
Relative density of saturated gas/air mixture : No data available
Density : 1.11 g/cm³ Type: 'density' Temp.: 20 °C
Relative gas density : No data available
Solubility : No data available
Partition coefficient n-octanol/water (Log Pow) : No data available
Partition coefficient n-octanol/water (Log Kow) : No data available
Viscosity, kinematic : 14.505 mm²/s
Viscosity, dynamic : 16.1 mPa·s Temp.: 'other:25.0°C' Parameter: 'dynamic viscosity (in mPa s)'
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available
Lower explosive limit (LEL) : No data available
Upper explosive limit (UEL) : No data available

9.2. Other information

No additional information available

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According to SANS 10234:2019 and SANS 11014:2010

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

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| | |
|---------------|-----------------------------------|
| LD50 oral rat | 7712 mg/kg bodyweight Animal: rat |
|---------------|-----------------------------------|

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

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| | |
|---|--|
| NOAEL (chronic, oral, animal/male, 2 years) | 1500 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information) |
|---|--|

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

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| | |
|----------------------|---------------------------|
| Viscosity, kinematic | 14.505 mm ² /s |
|----------------------|---------------------------|

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified.

Hazardous to the aquatic environment, long-term (chronic) : Not classified

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| | |
|-------------|--|
| LC50 fish 1 | 72860 mg/l Test organisms (species): Pimephales promelas |
|-------------|--|

| | |
|----------------|--|
| EC50 Daphnia 1 | > 100 mg/l Test organisms (species): Daphnia magna |
|----------------|--|

| | |
|----------------|---|
| NOEC (chronic) | ≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d' |
|----------------|---|

12.2. Persistence and degradability

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| | |
|-------------------------------|-------------------------------------|
| Persistence and degradability | No additional information available |
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12.3. Bioaccumulative potential

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| | |
|---------------------------|-------------------------------------|
| Bioaccumulative potential | No additional information available |
|---------------------------|-------------------------------------|

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According to SANS 10234:2019 and SANS 11014:2010

12.4. Mobility in soil

ETHANEDIOL (107-21-1)

| | |
|------------------|-------------------------------------|
| Mobility in soil | No additional information available |
|------------------|-------------------------------------|

12.5. Other adverse effects

| | |
|-----------------------|---------------------------------------|
| Ozone | : Not classified |
| Other adverse effects | : No additional information available |




SECTION 13: Disposal considerations

13.1. Disposal methods

| | |
|-------------------------|---|
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
|-------------------------|---|

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

| SANS | IMDG | IATA |
|---|--|--|
| 14.1. UN number | | |
| 3082 | 3082 | 3082 |
| 14.2. Proper Shipping Name | | |
| ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. | Environmentally hazardous substance, liquid, n.o.s. |
| 14.3. Transport hazard class(es) | | |
| 9 | 9 | 9 |
|  |  |  Not applicable |
| 14.4. Packing group | | |
| III | III | III |
| 14.5. Environmental hazards | | |
| Dangerous for the environment : No | Dangerous for the environment : No | Dangerous for the environment : No |
| No supplementary information available | | |

14.6. Special precautions for user

- SANS

| | |
|---|----------------------|
| Special provisions (SANS) | : 179, 274, 331, 335 |
| Limited quantities (SANS) | : 5 L |
| Limited quantities (SANS) | : 5 L |
| Packagings, large packagings and IBCs | : P001, IBC03, LP01 |
| Packing instructions (SANS) | |
| Packagings, large packagings and IBCs Special packing instructions (SANS) | : PP1 |
| Portable tank and bulk containers instructions (SANS) | : T4 |
| Portable tank and bulk container special provisions (SANS) | : TP1, TP29 |

- IMDG

| | |
|-----------------------------------|---|
| Special provisions (IMDG) | : 274, 335, 969 |
| Limited quantities (IMDG) | : 5 L |
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : LP01, P001 |
| Special packing provisions (IMDG) | : PP1 |
| IBC packing instructions (IMDG) | : IBC03 |
| Tank instructions (IMDG) | : T4 |
| Tank special provisions (IMDG) | : TP1, TP29 |
| EmS-No. (Fire) | : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE |
| EmS-No. (Spillage) | : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS |
| Stowage category (IMDG) | : A |

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According to SANS 10234:2019 and SANS 11014:2010

- IATA

| | |
|--|-------------------|
| PCA Excepted quantities (IATA) | : E1 |
| PCA Limited quantities (IATA) | : Y964 |
| PCA limited quantity max net quantity (IATA) | : 30kgG |
| PCA packing instructions (IATA) | : 964 |
| PCA max net quantity (IATA) | : 450L |
| CAO packing instructions (IATA) | : 964 |
| CAO max net quantity (IATA) | : 450L |
| Special provisions (IATA) | : A97, A158, A197 |
| ERG code (IATA) | : 9L |

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

Regulatory reference : SANS 10234:2008; SANS 11014:2010; SANS 10228:2012; SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.

SECTION 16: Other information

Issue date : 20/07/2020
Revision date : 20/07/2025

Full text of H-statements:

H302

Harmful if swallowed.

SDS South Africa

The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is intended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products. This SDS is not a quality specification nor any form of guarantee.