



Preparing for the New Era of Laboratories

MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

ETHYLENE GLYCOL 99,5% (ETHANEDIOL) AR

PRODUCT CODE : B-3031

CAS No : 107-21-1

FORMULA : $C_2H_6O_2$

UN No : Not Applicable

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MSDS Number : 0144

Date : Aug 23th, 2024

Version : 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product Name** : ETHYLENE GLYCOL 99,5% (ETHANEDIOL) AR
Synonyms : 1,2-Dihydroxyethane; 1,2-Ethanediol; 1,2-Ethandiol; Ethylene dihydrate; Glycol alcohol; Monoethylene glycol; Tescol
CAS No. : 107-21-1
HS Code : 2905 31 00
Chemical Formula : HOCH₂CH₂OH C₂H₆O₂ Hill
Molecular Weight : 62.07 g/mol
Product Code : B-3031
Brand : Labotiq
1.2 Manufacturer : Labotiq
Address : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
Website : www.labotiq.net
Email : labotiq.id@gmail.com
For information : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
Emergency number : +6281316894650
1.3 Application : Laboratory chemicals, Manufacture of substances, General Chemical reagent

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302

Specific target organ toxicity - repeated exposure, Oral (Category 2), Kidney, H373

For the full text of the H-Statements mentioned in this Section, see Section 16

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Warning

Hazard statement(s)

H302

Harmful if swallowed.

H373

May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary statement(s)

P260

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P301 + P312 + P330

Get medical advice/ attention if you feel unwell.

P314

Supplemental Hazard Statements

EUH066

Repeated exposure may cause skin dryness or cracking.

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2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: 1,2-Ethandiol; Glycol alcohol; Monoethylene glycol;
Formula	: HOCH ₂ CH ₂ OH C ₂ H ₆ O ₂ Hill
Molecular weight	: 62.07 g/mol
CAS-No.	: 107-21-1
EC-No.	: 203-473-3
Index-No.	: 603-027-00-1

3.2 Mixture

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Ethylene glycol CAS-No. . 107-21-1 EC-No. 203-473-3 Index-No 603-027-00-1	Acute Tox. 4; STOT RE 2; H302, H373	<=100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed.

Storage class

Storage class (TRGS 510): 10: Combustible liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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SECTION 8: Exposure controls/personal protection**8.1 Control parameters****8.2 Exposure controls****Appropriat engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment**Eye/face protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740, Size M)

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance

Form: liquid

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Odour	Colour: colourless
Odour Threshold	No data available
pH	No data available
Melting point/freezingpoint	No data available
Initial boiling point and boiling range	Melting point: -13 °C at 1.013 hPa
Flash point	197,4 °C at 1.013 hPa
Evaporation rate	111 °C - closed cup 115 °C - open cup
Flammability (solid, gas)	1
Upper/lower flammability or	No data available
explosive limits	Upper explosion limit: 15.3 %(V)
Vapour pressure	Lower explosion limit: 3.2 %(V)
Vapour density	No data available
Relative density	1 hPa at 51,1 °C
Water solubility	2,14 - (Air = 1.0)
Partition coefficient: noctanol/water	1.113 g/mL at 25 °C
Auto-ignition temperature	completely misciblesoluble
Decomposition temperature	log Pow: -1.36
Viscosity	412 °C at 1.013 hPa
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information

Surface tension	48,4 mN/m at 20 °C
Relative vapour density	2,14 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Exposure to moisture

10.5 Incompatible materials

Strong acids, Strong oxidizing agents, Strong bases, Aldehydes, Aluminum

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

(Regulation (EC) No 1272/2008, Annex VI)

LC50 Inhalation - Rat - male and female - 6 h - > 2,5 mg/l Remarks: (ECHA)

LD50 Dermal - Mouse - male and female - > 3.500 mg/kg Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 20 h

Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 h

Remarks: (ECHA)

Respiratory or skin sensitisation

Maximisation Test - Guinea pig

Result: negative (OECD Test Guideline 406)

Germ cell mutagenicity

Ames test Escherichia coli/Salmonella typhimurium

Result: negative Rat - male and female

Result: negative e

Carcinogenicity

This product is or contains a component that is probably not carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.(Ethylene glycol) (Ethylene glycol)

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Laboratory experiments have shown teratogenic effects.(Ethylene glycol) Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.(Ethylene glycol)

Specific target organ toxicity - single exposure

No data available(Ethylene glycol)

Specific target organ toxicity - repeated exposure

Oral - May cause damage to organs through prolonged or repeated exposure. - Kidney

Aspiration hazard

No data available(Ethylene glycol)

Additional Information

RTECS: KW2975000

When ingested early symptoms mimic alcohol inebriation and are followed by tenderness, respiratory failure, convulsions, cardiovascular collapse, pu acidosis. Without treatment, death may occur in 8 to 24 hours. Victims wh renal failure along with brain and liver damage., Exposure to and/or consumption of alcohol may increase toxic effects.(Ethylene glycol) Central nervous system - Irregularities - Based on Human Evidence(Ethylene glycol)

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SECTION 12: Ecological information**12.1 Toxicity***Toxicity to fish*

LC50 - Oncorhynchus mykiss (rainbow trout) - 18,500 mg/l - 96 h(Ethylene glycol)

LC50 - Leuciscus idus (Golden orfe) - > 10,000 mg/l - 48 h(Ethylene glycol)

NOEC - Pimephales promelas (fathead minnow) - 32,000 mg/l - 7 d(Ethylene glycol)

NOEC - Pimephales promelas (fathead minnow) - 39,140 mg/l - 96 h(Ethylene glycol)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 74,000 mg/l - 24 h(Ethylene glycol)

NOEC - Daphnia (water flea) - 24,000 mg/l - 48 h(Ethylene glycol)

LC50 - Daphnia magna (Water flea) - 41,000 mg/l - 48 h(Ethylene glycol)

Toxicity to algae

EC50 - Algae - 4,300.00 mg/l - 24 h(Ethyl acetate)

EC50 - SELENASTRUM - 1,800.00 - 3,200.00 mg/l - 72 h(Ethyl acetate)

Toxicity to bacteria

static test EC20 - activated sludge - > 1.995 mg/l - 30 min (ISO 8192)

12.2 Persistence and degradability*Biodegradability*

aerobic - Exposure time 10 d

Result: 90 - 100 % - Readily biodegradable. (OECD Test Guideline 301A)

Biochemical Oxygen Demand (BOD) 780 mg/g

Remarks: (IUCLID)

Chemical Oxygen Demand (COD) 1.190 mg/g

Remarks: (IUCLID)

Theoretical oxygen demand 1.290 mg/g

Remarks: (IUCLID)

Ratio BOD/ThBOD 60 %

Remarks: (IUCLID)

12.3 Bioaccumulative potential

Does not bioaccumulate.

12.4 Mobility in soil

No data available(Ethylene glycol)

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

Further information

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

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Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.

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