

Ethylene glycol

03750-5L

Version 1.4

Revision Date 27.05.2021

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

1.1. Product identifier

Product name : Ethylene glycol
SDS-number : 000000020453
Type of product : Substance
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.

Chemical name : ethanediol; ethylene glycol

Index-No. : 603-027-00-1

REACH Registration Number : no data available

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

Use of the Substance/Mixture : Laboratory chemicals
Industrial use

Uses advised against : none

1.3. Details of the supplier of the safety data sheet

| | | |
|---------|---|--|
| Company | : Honeywell International Inc. 115 Tabor Road 07950-2546 Morris Plains USA | Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA |
|---------|---|--|

Telephone :
For further information, please contact: : SafetyDataSheet@Honeywell.com

1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)
+1-303-389-1414 (Medical)
Country based Poison Control Center : see chapter 15.1

SECTION 2: Hazards identification

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2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute toxicity Category 4 - Oral

H302 Harmful if swallowed.

Specific target organ toxicity - repeated exposure Category 2

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

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms



Signal word

: Warning

Hazard statements

: H302

Harmful if swallowed.

H373

May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

: P260

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P301 + P330 + P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P308 + P313

IF exposed or concerned: Get medical advice/ attention.

2.3. Other hazards

Vapours may form explosive mixtures with air. Results of PBT and vPvB assessment, see chapter 12.5.

SECTION 3: Composition/information on ingredients

3.1. Substance

| Chemical name | CAS-No. Index-No. REACH Registration Number EC-No. | Classification 1272/2008 | Concentration | Remarks |
|---------------|--|--------------------------|---------------|---------|
| | | | | |

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| | | | | |
|-----------------------------|---------------------------------------|---|-------|--|
| ethanediol; ethylene glycol | 107-21-1 603-027-00-1 203-473-3 | Acute Tox. 4; H302; Oral STOT RE 2; H373; Oral; Kidney | 100 % | |
|-----------------------------|---------------------------------------|---|-------|--|

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
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:

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation:

If breathed in, move person into fresh air. If symptoms persist, call a physician.

Skin contact:

After contact with skin, wash immediately with plenty of soap and water. If symptoms persist, call a physician.

Eye contact:

Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. If eye irritation persists, consult a specialist.

Ingestion:

When swallowed, allow water to be drunk. Rinse mouth. Call a physician immediately.

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

No data available

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

No data available

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

In case of fire hazardous decomposition products may be produced such as:

Carbon monoxide
Carbon dioxide (CO₂)

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Avoid contact with skin and eyes. Ensure adequate ventilation.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Exhaust ventilation at the object is necessary. Do not breathe vapour.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection. Keep away from sources of ignition - No smoking.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store under argon

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

| Components | Basis / Value type | Value / Form of exposure | Exceeding Factor | Remarks |
|-----------------------------|----------------------|-------------------------------|------------------|-----------------------------------|
| ethanediol; ethylene glycol | EU ELV SKIN_DES | | | Can be absorbed through the skin. |
| ethanediol; ethylene glycol | EH40 WEL STEL | 104 mg/m3 40 ppm Vapor. | | |
| ethanediol; ethylene glycol | EH40 WEL TWA | 52 mg/m3 20 ppm Vapor. | | |
| ethanediol; ethylene glycol | EH40 WEL TWA | 10 mg/m3 Particulate. | | |
| ethanediol; ethylene glycol | EH40 WEL SKIN_DES | Vapor. | | Can be absorbed through the skin. |
| ethanediol; ethylene glycol | EH40 WEL SKIN_DES | Particulate. | | Can be absorbed through the skin. |
| ethanediol; ethylene glycol | EU ELV TWA | 52 mg/m3 20 ppm | | Indicative |
| ethanediol; ethylene glycol | EU ELV STEL | 104 mg/m3 40 ppm | | Indicative |

SKIN_DES - Skin designation:
STEL - Short term exposure limit
TWA - Time weighted average

DNEL/ PNEC-Values

| Component | End-use/impact | Exposure duration | Value | Exposure routes | Remarks |
|-----------------------------|---|-------------------|------------------|-----------------|---------|
| ethanediol; ethylene glycol | Workers / Long-term local effects | | 35 mg/m3 | Inhalation | |
| ethanediol; ethylene glycol | Workers / Long-term systemic effects | | 106mg/kg bw/d | Skin contact | |

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|-----------------------------|--|--|---------------------|--------------|--|
| ethanediol; ethylene glycol | Consumers / Long-term local effects | | 7 mg/m ³ | Inhalation | |
| ethanediol; ethylene glycol | Consumers / Long-term systemic effects | | 53mg/kg bw/d | Skin contact | |

| Component | Environmental compartment / Value | Remarks |
|-----------------------------|------------------------------------|------------------------|
| ethanediol; ethylene glycol | Fresh water: 10 mg/l | Assessment factor: 10 |
| ethanediol; ethylene glycol | Marine water: 1 mg/l | Assessment factor: 100 |
| ethanediol; ethylene glycol | Sewage treatment plant: 199,5 mg/l | Assessment factor: 10 |
| ethanediol; ethylene glycol | Fresh water: 37 mg/kg dw | |
| ethanediol; ethylene glycol | Marine sediment: 3,7 mg/kg dw | |
| ethanediol; ethylene glycol | Soil: 1,53 mg/kg dw | |

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Do not breathe vapours/dust.

Take off all contaminated clothing immediately.

Wash hands before breaks and at the end of workday.

Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Hand protection:

Glove material: Natural Latex

Break through time: > 480 min

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Glove thickness: 0,6 mm

Lapren®706

Gloves must be inspected prior to use.

Replace when worn.

Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:

Safety goggles

Skin and body protection:

Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-----------------------------|--------------------------------|
| Physical state | : liquid |
| Colour | : colourless |
| Odour | : weak |
| molecular weight | : 62,07 g/mol |
| Melting point/range | : -16 °C |
| Boiling point/boiling range | : 195 - 197 °C at 1.013 hPa |
| Flammability | : Not applicable |
| Upper explosion limit | : 15,3 %(V) |

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| | | |
|--|---|------------------------------------|
| Lower explosion limit | : | 3,2 %(V) |
| Flash point | : | 111 °C Method: closed cup |
| Auto-ignition temperature | : | 410 °C |
| pH | : | neutral |
| Viscosity, kinematic | : | No data available |
| Water solubility | : | completely miscible |
| Solubility in other solvents | : | soluble |
| Partition coefficient: n-octanol/water | : | log Pow -1,93 |
| Vapour pressure | : | 6,5 Pa at 20 °C |
| Density | : | 1,11 g/cm ³ at 20 °C |

9.2 Other Information

| | | |
|--------------------|---|-------------------|
| Evaporation rate | : | No data available |
| Viscosity, dynamic | : | No data available |

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

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Vapours may form explosive mixture with air.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents
Strong acids
Alkalis

10.6. Hazardous decomposition products

carbon oxides (CO, CO₂).
Alcohols
Aldehydes

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

LD50
Species: Rat
Value: 7.712 mg/kg

Acute dermal toxicity:

LD50
Species: Mouse
Value: > 3.500 mg/kg

Acute inhalation toxicity:

No data available

Skin irritation:

Species: Rabbit
Result: non-irritant

Eye irritation:

Species: Rabbit
Result: non-irritant

Respiratory or skin sensitisation:

Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

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Method: OECD Test Guideline 406

Repeated dose toxicity:

Note: Conclusive and supporting classification (Ref: REACH Dossier - ECHA disseminated data)

Carcinogenicity:

Note: Not classified due to data which are conclusive although insufficient for classification.

Germ cell mutagenicity:

Note: Not classified due to data which are conclusive although insufficient for classification.

Reproductive toxicity:

Remarks: Not classified due to data which are conclusive although insufficient for classification.

Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

LC50

Species: Pimephales promelas (fathead minnow)

Value: 72.860 mg/l

Exposure time: 96 h

Toxicity to aquatic plants:

Not classified due to data which are conclusive although insufficient for classification.

Toxicity to aquatic invertebrates:

EC50

Species: Daphnia magna (Water flea)

Value: > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

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12.2. Persistence and degradability

Biodegradability:

DOC decrease

Biodegradation: $\geq 90\%$

Exposure time: 10 d

Result: Readily biodegradable.

12.3. Bioaccumulative potential

No bioaccumulation is to be expected ($\log P_{ow} \leq 4$).

12.4. Mobility in soil

No data available

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. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Chemical Oxygen Demand : Value: 1,25 mg/g
(COD)

Bioaccumulation is unlikely.

Should not be released into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:

EC Directive 2006/12/EC; 2008/98/EEC

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Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

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)

14.4 Packaging group

14.5 Environmental hazards

ADR/RID: no Marine pollutant: no

14.6 Special precautions for user

No data available

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

| Basis | Value | Remarks |
|--|-------|--|
| Substances of very high concern (SVHC) | | This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w). |

Poison Control Center

| | | | |
|---------|--------------|---------|--------------|
| Country | Phone Number | Country | Phone Number |
|---------|--------------|---------|--------------|

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| | |
|--------------------|------------------------------|
| Austria | +4314064343 |
| Belgium | 070 245245 |
| Bulgaria | (+35929154233 |
| Croatia | (+3851)23-48-342 |
| Cyprus | +357 2240 5611 |
| Czech Republic | +420224919293; +420224915402 |
| Denmark | 82121212 |
| Estonia | 16662; (+372)6269390 |
| Finland | 9471977 |
| France | +33(0)145425959 |
| Greece | +30 210 779 3777 |
| Hungary | (+36-80)201-199 |
| Iceland | 5432222 |
| Ireland | +353(1)8092166 |
| Italy | 0382 24444 |
| Germany | Berlin : 030/19240 |
| | Bonn : 0228/19240 |
| | Erfurt : 0361/730730 |
| | Freiburg : 0761/19240 |
| | Göttingen : 0551/19240 |
| | Homburg : 06841/19240 |
| | Mainz : 06131/19240 |
| Munich : 089/19240 | |
| Latvia | +37167042473 |

| | |
|-----------------|---|
| Liechtenstein | +41 442515151 |
| Lithuania | +370532362052 |
| Luxembourg | 070245245; (+352)80002-5500 |
| Malta | +356 2395 2000 |
| Netherlands | 030-2748888 |
| Norway | 22591300 |
| Poland | +48 42 25 38 400 |
| Portugal | 808250250 |
| Romania | +40 21 318 3606 |
| Slovakia (NTIC) | +421 2 54 774 166 |
| Slovenia | +386 1 400 6051 |
| Spain | +34915620420 |
| Sweden | 112 (begär Giftinformation);+46104566786 |
| Switzerland | 145 |
| United Kingdom | (+44) 844 892 0111 |

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

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Japan. Kashin-Hou Law List

On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)

On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)

On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)

On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

ethanediol; ethylene glycol : H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

Further information

All directives and regulations refer to amended versions.

Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community

CAS Chemical Abstracts Service

DNEL Derived no effect level

PNEC Predicted no effect level

vPvB Very persistent and very bioaccumulative substance

PBT Persistent, bioaccumulative und toxic substance

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

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