

Ethylene glycol**102466-220KG**

Version 1.3

Revision Date 09/20/2023

Print Date 04/15/2024

SECTION 1. IDENTIFICATION

Product name : Ethylene glycol

Number : 000000020453

Product Use Description : Laboratory chemicals, Industrial use

Manufacturer or supplier's details : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid

Color : colourless

Odor : odourless

Classification of the substance or mixture

Classification of the substance or mixture : Specific target organ toxicity - repeated exposure, Category 2, Oral, Kidney

GHS Label elements, including precautionary statements

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Symbol(s)

:



Signal word

: Warning

Hazard statements

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

Precautionary statements

: **Prevention:**Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Use personal protective equipment as required.**Response:**

Get medical advice/ attention if you feel unwell.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula

: C₂H₆O₂

Chemical nature

: Substance

Chemical name	CAS-No.	Concentration
Ethylene Glycol	107-21-1	100.00 %

SECTION 4. FIRST AID MEASURES

Inhalation

: Remove to fresh air. If not breathing, give artificial respiration.

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If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation develops or persists.

Ingestion : If swallowed, and the victim is conscious and alert, induce vomiting immediately, as directed by medical personnel. Call a physician.

Notes to physician

Most important symptoms/effects, acute and delayed : No information available.

Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray
Dry chemical
Alcohol-resistant foam
Carbon dioxide (CO₂)

Specific hazards during firefighting : In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)

Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | | |
|---|---|--|
| 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. |
| Environmental precautions | : | Do not flush into surface water or sanitary sewer system. |
| Methods and materials for containment and cleaning up | : | Soak up with inert absorbent material.
Sweep up and shovel into suitable containers for disposal. |

SECTION 7. HANDLING AND STORAGE**Handling**

- | | | |
|---|---|---|
| Precautions for safe handling | : | Wear personal protective equipment.
Use only in well-ventilated areas. |
| Advice on protection against fire and explosion | : | Normal measures for preventive fire protection.
Keep away from sources of ignition - No smoking. |

Storage

- | | | |
|--|---|---|
| Conditions for safe storage, including any incompatibilities | : | Keep containers tightly closed in a dry, cool and well-ventilated place.
Store in original container.
Keep away from heat and sources of ignition.
Keep away from direct sunlight. |
|--|---|---|

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- | | | |
|---------------------|---|--|
| Protective measures | : | Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment. |
|---------------------|---|--|

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Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.

- Engineering measures : Use with local exhaust ventilation.
- Eye protection : Safety goggles
- Hand protection : Latex gloves
Gloves must be inspected prior to use.
Replace when worn.
- Skin and body protection : Protective suit
- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.
- Hygiene measures : When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Wash thoroughly after handling.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Ethylene Glycol	107-21-1	STEL : Short term exposure limit	10 mg/m3	03 2017	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Form of exposure : Aerosol, inhalable.			

Ethylene Glycol	107-21-1	STEL : Short term exposure limit	(50 ppm)	03 2017	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Form of exposure : Vapor fraction			

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Ethylene Glycol	107-21-1	TWA : Time weighted average	(25 ppm)	03 2017	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Form of exposure : Vapor fraction			
Ethylene Glycol	107-21-1	Ceiling : Ceiling Limit Value:	125 mg/m3 (50 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Color	: colourless
Odor	: odourless
Odor threshold	: Note: No data available
pH	: Note: neutral
Melting point/range	: -12 °C
Boiling point/boiling range	: 197 °C
Flash point	: 232 °F (111 °C) Method: closed cup
Evaporation rate	: Note: No data available
Flammability	: Not applicable

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Lower explosion limit	: 3.2 %(V)
Upper explosion limit	: 15.3 %(V)
Vapor pressure	: 0.08 hPa at 20 °C(68 °F)
Vapor density	: 2.1 Note: (Air = 1.0)
Density	: 1.11 g/cm3 at 20 °C
Water solubility	: Note: completely miscible
Partition coefficient: n-octanol/water	: log Pow: -1.93
Ignition temperature	: 410 °C
Viscosity, dynamic	: Note: No data available
Viscosity, kinematic	: Note: No data available
Molecular weight	: 62.07 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Vapours may form explosive mixture with air. Hazardous polymerisation does not occur.
Conditions to avoid	: Heat, flames and sparks.

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Keep away from direct sunlight.

Incompatible materials

: Strong oxidizing agents
Strong acids
AlkalisHazardous decomposition
products: In case of fire hazardous decomposition products may be
produced such as:
Alcohols
Aldehydes
carbon oxides (CO, CO₂).**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity

: LD50: 7,712 mg/kg
Species: Rat

Acute inhalation toxicity

: Note: No data available

Acute dermal toxicity

: LD50: 9,530 mg/kg
Species: Rabbit

Skin irritation

: Species: Rabbit
Result: No skin irritation

Eye irritation

: Species: Rabbit
Result: No eye irritation

Sensitisation

: Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406

Repeated dose toxicity

: Species: Rat
Application Route: Oral

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Exposure time: 13 Weeks

Note: Kidney toxicity

: Species: Rat

Application Route: Oral

Exposure time: 16 Weeks

No-observed-effect level: 71 mg/kg

Note: Kidney damage

: Species: Mouse

Application Route: Oral

Note: Developmental Toxicity Incomplete skeletal ossification

Teratogenic effects occur at doses which did not also produce effects in the maternal animal.

: Species: Rat

Application Route: Oral gavage bioassay

Note: Developmental Toxicity Incomplete skeletal ossification

Skeletal malformation decrease in body weight

Genotoxicity in vitro

: Note: In vitro tests did not show mutagenic effects

Carcinogenicity

: Species: Rat

Application Route: Oral

Exposure time: Lifetime Exposure

Note: Did not show carcinogenic effects in animal experiments.

: Species: Mouse

Application Route: Oral

Exposure time: Lifetime Exposure

Note: Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

: Species: Mouse

Method: No toxicity to reproduction

: Species: Rat

Method: No toxicity to reproduction

Teratogenicity

: Species: Mouse

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Application Route: Oral
NOAEL, Teratog: 100 mg/kg/d
Note: Incomplete skeletal ossification Teratogenic effects occur at doses which did not also produce effects in the maternal animal.

: Species: Rat
Application Route: Oral
NOAEL, Teratog: 200 mg/kg/d
Note: Incomplete skeletal ossification Skeletal malformation decrease in body weight

Further information : Note: Acute toxicity Can cause kidney toxicity, narcotic effects and metabolic acidosis.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : LC50: 72,860 mg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates : EC50: > 100 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 202

Toxicity to algae : Growth inhibition
EC50: > 100 mg/l
Exposure time: 48 h
Species: Algae

Elimination information (persistence and degradability)

Bioaccumulation : Note: No bioaccumulation is to be expected (log Pow <= 4).

Biodegradability : Note: Readily biodegradable.

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Further information on ecology

Chemical Oxygen Demand (COD) : Value: 1.25 mg/g

Additional ecological information : Bioaccumulation is unlikely.
Should not be released into the environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT Not dangerous goods

TDG Not dangerous goods

IATA Not dangerous goods

IMDG Not dangerous goods

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended : 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

Japan. Kashin-Hou Law : On the inventory, or in compliance with the inventory

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List

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

Taiwan Chemical Substance Inventory (TCSI) : On the inventory, or in compliance with the inventory

National regulatory information

US. EPA CERCLA Hazardous Substances (40 CFR 302) : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

Reportable quantity: 5000 lbs
: Ethylene Glycol 107-21-1

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : The following components are subject to reporting levels established by SARA Title III, Section 313:
: Ethylene Glycol 107-21-1

SARA 311/312 Hazards : Acute Health Hazard

CERCLA Reportable Quantity : 5000 lbs

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California Prop. 65

:



WARNING: This product can expose you to chemicals, listed below, known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ethylene Glycol

107-21-1

Massachusetts RTK

: Ethylene Glycol

107-21-1

New Jersey RTK

: Ethylene Glycol

107-21-1

Pennsylvania RTK

: Ethylene Glycol

107-21-1

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2*	2
Flammability	: 1	1
Physical Hazard	: 0	
Instability	:	0

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

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. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group