ChemicalBook

Chemical Safety Data Sheet MSDS / SDS

Polyethylene Glycol

Revision Date:2026-05-31 Revision Number:1

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

Product identifier

Product name	: Polyethylene Glycol
CBnumber	: CB6145866
CAS	: 25322-68-3
EINECS Number	: 500-038-2
Synonyms	: PEG,Polyethylene Glycol

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

Relevant identified uses	: For R&D use only. Not for medicinal, household or other use.
Uses advised against	: none

Company Identification

Company	: Chemicalbook
Address	: Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone	: 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)

Signal word Danger

Precautionary statements

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P391 Collect spillage. Hazardous to the aquatic environment

P501 Dispose of contents/container to.....

Hazard statements

H302 Harmful if swallowed

H311 Toxic in contact with skin

H373 May cause damage to organs through prolonged or repeated exposure

H411 Toxic to aquatic life with long lasting effects

SECTION 3: Composition/information on ingredients

Substance

Product name	: Polyethylene Glycol
Synonyms	: PEG,Polyethylene Glycol
CAS	: 25322-68-3
EC number	: 500-038-2
MF	: (C2H4O)nH2O
MW	: 0

SECTION 4: First aid measures

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all con- taminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

Protection of first-aiders

For personal protection see section 8.

Notes to physician

No data available

SECTION 5: Firefighting measures

Suitable extinguishing media

Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media

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

Specific hazards during fire fighting

Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of

hazardous combustion gases or vapours possible in the event of fire.

Hazardous combustion products

Nature of decomposition products not known.

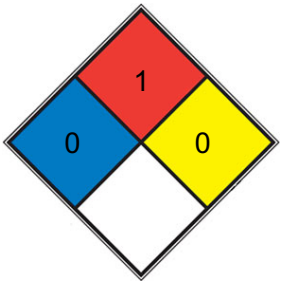
Specific extinguishing methods

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipbreathing ment for fire-fighters

In the event of fire, wear self-contained apparatus.

NFPA 704



■	HEALTH	0	Poses no health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible materials
■	FIRE	1	Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. mineral oil, ammonia)
■	REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,N2)
□	SPEC. HAZ.		

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

SECTION 7: Handling and storage

Handling

Avoidance of contact

Strong acids Strong bases Strong oxidizing agents

Storage

Further information on storage conditions

Tightly closed.

Storage class

10, Combustible liquids

Recommended storage temperature

2 - 8 °C

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures

No data available

Personal protective equipment

Respiratory protection

Not required; except in case of aerosol formation.

Eye/face protection

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

Safety glasses

Hand protection

Remarks

not required

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

liquid (20 °C , 1,013 hPa)

Bioaccumulation is not expected.

Color

light yellow

Odor

No data available

Odor Threshold

No data available

pH

5.5-7.0 (25℃, 50mg/mL in H2O)

Melting point/ range

57.5 °C

Boiling point/boiling range

205.7 °C (977.6 hPa)

Method: OECD Test Guideline 103

Flash point

138.6 °C (976.4 hPa)

Method: closed cup

Evaporation rate

No data available

Flammability (solid, gas)

No data available

Flammability (liquids)

No data available

Burning rate

No data available

Self-ignition

360 °C

Upper explosion limit / Upper flammability limit

No data available

Lower explosion limit / Lower flammability limit

No data available

Vapor pressure

< 0.01 hPa (20 °C)

Relative vapor density

>1 (vs air)

Relative density

1.27 g/mL at 25 °C

Density

1.116 g/cm3 (20 °C, 975.5 hPa)

Method: OECD Test Guideline 109

Water solubility

256.084 g/l completely soluble (25 °C)

Method: OECD Test Guideline 105

Partition coefficient: n-octanol/water

log Pow: -0.698 (30 °C)

Autoignition temperature

No data available

Decomposition temperature

No data available

Viscosity, dynamic

No data available

Viscosity, kinematic

No data available

Flow time

No data available

Explosive properties

No data available

Oxidizing properties

none

Particle characteristics Particle size

No data available

Solubility

H_2O: 50 mg/mL, clear, colorless

Physical state

waxy solid

Viscosity

1,650-3,850cp (1% solution @ 25C)

Viscosity

11cs (99C)

Viscosity

4.5cs (99C)

Viscosity

5,500-8,000cp (1% solution @ 25C)

Viscosity

6cs (99C)

Viscosity

7.4cs (99C)

Viscosity

750cp (5% solution @ 25C)

Viscosity

75cp (5% solution @ 25C)

Viscosity

8,000cs (99C)

Viscosity

8,800-17,600cp (5% solution @ 25C)

Viscosity

93cs (99C)

Absorption

≤0.1 at 280nm

≤0.2 at 260nm

SECTION 10: Stability and reactivity

Reactivity

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous

No data available reactions

Conditions to avoid

Strong heating.

Incompatible materials

Strong acids Strong bases Strong oxidizing agents

Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - > 2,000 mg/kg (OECD Test Guideline 423)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 72 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation - 24 h (OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: Not a skin sensitizer.

Remarks: (Lit.) (ECHA)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Carcinogenicity

Classified based on available data. For more details, see section 2

Reproductive toxicity

Classified based on available data. For more details, see section 2

Specific target organ toxicity - single exposure

Classified based on available data. For more details, see section 2

Specific target organ toxicity - repeated exposure

Classified based on available data. For more details, see section 2

Aspiration hazard

Classified based on available data. For more details, see section 2

11.2 Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 90 d - NOAEL (No observed adverse effect level) - 8,000 mg/kg - LOAEL (Lowest observed adverse effect level) - 16,000 mg/kg

Remarks: (ECHA)

RTECS: TQ3500000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

Ecotoxicity

Components:

Polyethylene glycol:

Toxicity to fish

LC50 (Poecilia reticulata (guppy)): > 100 mg/l End point: mortality Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202

Persistence and degradability

Components:

Polyethylene glycol:

Biodegradability

aerobic Concentration: 4 mg/l Result: Readily biodegradable. Biodegradation: 74.85 % Exposure time: 28 d Method: OECD Test Guideline 301D

Bioaccumulative potential

Components:

Polyethylene glycol:

Partition coefficient: noctanol/water

log Pow: -0.698 (30 °C) pH: 6.44 Remarks: Bioaccumulation is not expected.

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

Offer surplus and non-recyclable solutions to a licensed disposal company.

SECTION 14: Transport information

International Regulations

IATA-DGR

UN/ID No. : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Packing instruction (cargo aircraft) : Not applicable

Packing instruction (passenger aircraft) : Not applicable

IMDG-Code

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

EmS Code : Not applicable

Marine pollutant : no

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

Not applicable for product as supplied.

National regulation GB 6944/12268

UN number : Not applicable

Proper shipping name : Not applicable

Class : Not applicable

Subsidiary risk : Not applicable

Packing group : Not applicable

Labels : Not applicable

Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

National regulatory information

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals

Hazardous Chemicals for Priority Management

under SAWS

China. List of Explosive Precursors

Not applicable

Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export

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SECTION 16: Other information

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals

ANTT - National Agency forTransport by Land of Brazil

ASTM - American Society for the Testing of Materials

bw - Body weight

CMR - Carcinogen, Mutagen or Reproductive Toxicant

DIN -Standard of the German Institute for Standardisation

DSL - Domestic SubstancesList (Canada)

ECx - Concentration associated with x% response

ELx - Loading rate associated with x% response

EmS - Emergency Schedule

ENCS - Existing and NewChemical Substances (Japan)

ErCx - Concentration associated with x% growth rate response

ERG - Emergency Response Guide

GHS - Globally Harmonized System

GLP - Good Laboratory Practice

IARC - International Agency for Research on Can- cer

IATA - International Air Transport Association

IBC - International Code for theConstruction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC50 -Half maximal inhibitory concentration

ICAO - International Civil Aviation Organiza- tion

IECSC - Inventory of Existing Chemical Substances in China

IMDG - Interna- tional Maritime Dangerous Goods

IMO - International Maritime Organization

ISHL -Industrial Safety and Health Law (Japan)

ISO - International Organisation forStandardization

KECI - Korea Existing Chemicals Inventory

LC50 - Lethal Concen- tration to 50 % of a test population

LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)

MARPOL - International Convention for the Prevention of Pol- lution from Ships

n.o.s. - Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC -No Observed (Adverse) Effect Concentration

NO(A)EL - No Observed (Adverse) Ef- fect Level

NOELR - No Observable Effect Loading Rate

NOM - Official MexicanNorm

NTP - National Toxicology Program

NZIoC - New Zealand Inventory of Chem- icals

OECD - Organization for Economic Co-operation and Development

OPPTS - Of- fice of Chemical Safety and Pollution Prevention

PBT - Persistent, Bioaccumulative and Toxic substance

PICCS - Philippines Inventory of Chemicals and Chemical Sub- stances

(Q)SAR - (Quantitative) Structure Activity Relationship

REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning theRegistration, Evaluation, Authorisation and Restriction of Chemicals

SADT - Self-Accelerating Decomposition Temperature

SDS - Safety Data Sheet

TCSI - TaiwanChemical Substance Inventory

TDG - Transportation of Dangerous Goods

TECI -Thailand Existing Chemicals Inventory

TSCA - Toxic Substances Control Act (UnitedStates)

UN - United Nations

UNRTDG - United Nations Recommendations on theTransport of Dangerous Goods

vPvB - Very Persistent and Very Bioaccumulative

WHMIS - Workplace Hazardous Materials Information System