

Polyethylene glycol 4000

Safety Data Sheet

P0804

according to Regulation (EU) 2015/830

Version: 2.0

Date of issue: 12/01/2011 Revision date: 05/10/2017
Supersedes 05/08/2011

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

1.1. Product identifier

Product form : Substance
Trade name : Polyethylene glycol 4000
EC-No. : 500-038-2
CAS-No. : 25322-68-3
Product code : P0804
Formula : (C₂H₄O) · n.H₂O
Synonyms : PEG 4000 / Macrogol 4000

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

1.2.1. Relevant identified uses

Main use category : Professional use
Industrial/Professional use spec : For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Duchefa Biochemie B.V.
A. Hofmanweg 71
2031 BH Haarlem - The Netherlands
T +31(0)23-5319093 - F +31(0)23-5318027
info@duchefa.nl

1.4. Emergency telephone number

Emergency number : Supplier contact information:
+31(0)23-5319093 (M-F 09:00-17:00)
+31(0)6-30109355 (outside office hours)

Organisation/Company	Address	Comment
World Health Organization world directory of poison centres	http://apps.who.int/poisoncentres/	Consult website for a local poison centre

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Comments : Average molecular mass: 3700 - 4500 g/mol
Name : Polyethylene glycol 4000
CAS-No. : 25322-68-3
EC-No. : 500-038-2

Name	Product identifier	%
Polyethylene glycol 10000 (Polydiol)	(CAS-No.) 25322-68-3 (EC-No.) 500-038-2	>= 99

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Assure fresh air breathing.
First-aid measures after skin contact : Flush with plenty of water.
First-aid measures after eye contact : Rinse immediately with plenty of water.
First-aid measures after ingestion : Give water to drink. Seek medical attention if ill effect develops.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical powder. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.
Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : When heated to decomposition, emits toxic fumes. CO_x.

5.3. Advice for firefighters

Firefighting instructions : Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Wear proper protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear suitable protective clothing.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Dilute residue with water. Dispose in a safe manner in accordance with local/national regulations. Dike for recovery or absorb with appropriate material.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

No additional information available

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, well-ventilated area. Store at room temperature. Light and moisture sensitive.

7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Polyethylene glycol 4000 (25322-68-3)		
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	1000 mg/m ³

8.2. Exposure controls

Hand protection:

Type	Material	Permeation	Thickness (mm)	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11	EN 374

Eye protection:

Safety glasses

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Flakes. Waxy solid.
Colour	: White.
Odour	: Characteristic.
Odour threshold	: No data available
pH	: 5 - 7
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 53 - 58 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 260 °C (Open cup)
Auto-ignition temperature	: ≈ 420
Decomposition temperature	: > 250 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: 0,01 mbar (20 °C)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1217 g/cm ³
Solubility	: In water, material is partially soluble. Water: 500 g/l
Log Pow	: < -1
Viscosity, kinematic	: 102 - 158 mm ² /s
Viscosity, dynamic	: 110 - 170 mPa.s
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

Bulk density : 400 - 500 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Open flame. Heat.

10.5. Incompatible materials

Alkali. Oxidizing agents and acids.

10.6. Hazardous decomposition products

When heated to decomposition, emits dangerous fumes. COx.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Polyethylene glycol 4000 (25322-68-3)	
LD50 oral rat	> mg/kg

Skin corrosion/irritation : Not classified
pH: 5 - 7

Serious eye damage/irritation : Not classified
pH: 5 - 7

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Polyethylene glycol 4000 (25322-68-3)	
Viscosity, kinematic	102 - 158 mm ² /s

SECTION 12: Ecological information

12.1. Toxicity

Polyethylene glycol 4000 (25322-68-3)	
LC50 fish 1	> 1000 mg/l

12.2. Persistence and degradability

Polyethylene glycol 4000 (25322-68-3)	
Persistence and degradability	Minimally biodegradable.
Biodegradation	< 20 %

12.3. Bioaccumulative potential

Polyethylene glycol 4000 (25322-68-3)	
Log Pow	< -1

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IATA / IMDG

ADR	IMDG	IATA
14.1. UN number		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Not applicable	Not applicable	Not applicable
No supplementary information available		

14.6. Special precautions for user

. Overland transport

Not applicable

- Transport by sea

Not applicable

- Air transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Polyethylene glycol 4000 is not on the REACH Candidate List

Polyethylene glycol 4000 is not on the REACH Annex XIV List

15.1.2. National regulations

Ensure all national/local regulations are observed.

Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 1 or 2; ID No. 279)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes:

1.4	Emergency number	Modified	
8.2	Hand protection	Modified	Specified material, thickness, et cetera of gloves

Abbreviations and acronyms:

ATE	Acute Toxicity Estimate
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet

Data sources : Supplier. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

SDS Biochemicals version 2017

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product