

Safety data sheet

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BASF Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 07.10.2025

Version: 5.0

Product: **BUTYLDIGLYCOL**

(ID no. 30034744/SDS_GEN_IL/EN)

Date of print 09.10.2025

1. Identification

Product identifier

BUTYLDIGLYCOL

Chemical name: Butyl diglycol

CAS Number: 112-34-5

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

Relevant identified uses: process chemical, solvent(s)

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Petrochemicals

Telephone: +49 621 60-42151

E-mail address: sds-petrochemicals@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 5 (oral)

Acute Tox. 5 (dermal)

Skin Irrit. 3

Eye Irrit. 2A

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

H319 Causes serious eye irritation.

H316 Causes mild skin irritation.

H303 + H313 May be harmful if swallowed or in contact with skin.

Precautionary Statements (Prevention):

P280 Wear eye protection.

P264 Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P302 + P312 IF ON SKIN: Call a POISON CENTER or a doctor/physician if you feel unwell.

P337 + P313 If eye irritation persists: Get medical attention.

P332 + P313 If skin irritation occurs: Get medical attention.

Other hazards

According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

See section 12 - Results of PBT and vPvB assessment.

3. Composition/Information on Ingredients

Substances

Chemical nature

2-(2-Butoxyethoxy)ethanol

CAS Number: 112-34-5

EC-Number: 203-961-6

INDEX-Number: 603-096-00-8

Hazardous ingredients (GHS)

According to UN GHS criteria

2-(2-Butoxyethoxy)ethanol

CAS Number: 112-34-5

EC-Number: 203-961-6

INDEX-Number: 603-096-00-8

Acute Tox. 5 (oral)

Acute Tox. 5 (dermal)

Skin Irrit. 3

Eye Irrit. 2A

H319, H316, H303 + H313

For the classifications not written out in full in this section the full text can be found in section 16.

Mixtures

Not applicable

4. First-Aid Measures

Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Hazards: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11. (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures**Extinguishing media**

Suitable extinguishing media:

dry powder, water spray, carbon dioxide, alcohol-resistant foam

Unsuitable extinguishing media for safety reasons:

water jet

Additional information:

Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture

The product is combustible. Cool endangered containers with water-spray. See SDS section 7 - Handling and storage.

Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus. Special protective equipment for firefighters

Further information:

Evacuate area of all unnecessary personnel. Fight fire from maximum distance.

Extend fire extinguishing measures to the surroundings. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

High risk of slipping due to leakage/spillage of product.

Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

Personal precautions, protective equipment and emergency procedures

Handle in accordance with good industrial hygiene and safety practice.

Environmental precautions

Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

Pick up with suitable appliance and dispose of. Spills should be contained, solidified, and placed in suitable containers for disposal. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage**Precautions for safe handling**

Prevent contact with air/oxygen (formation of peroxide). Ensure thorough ventilation of stores and work areas. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Containers should be stored tightly sealed in a dry place.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection**Control parameters**Components with occupational exposure limits

112-34-5: 2-(2-Butoxyethoxy)ethanol

| TWA value 10 ppm (OEL (IL)), Inhalable fraction and vapor

Exposure controlsPersonal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):

nitrile rubber (NBR) - 0.4 mm coating thickness

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

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

State of matter:	liquid	
Form:	liquid	
Colour:	colourless	
Odour:	almost odourless	
Odour threshold:		
	not determined	
Melting point:	-68,0 °C	(other)
	Literature data.	
Boiling point:	230,5 °C	(other)
	(1.013,25 hPa)	
Flammability:	hardly combustible	(derived from flash point)
Lower explosion limit:	0,69 %(V) 46 g/m ³	(air)
	(102,2 °C)	
	The lower explosion point of the substance/mixture has been determined. The explosion point describes the temperature of a flammable liquid at which the concentration of the saturated vapour mixed with air equals the lower explosion limit.	
Upper explosion limit:	5,9 %(V) 398 g/m ³	(air)
	(143 °C)	
	The upper explosion point of the substance/mixture has been determined. This explosion point describes the temperature of a flammable liquid at which the concentration of the saturated vapour mixed with air equals the upper explosion limit.	

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Flash point:	105 °C	(ASTM D93, closed cup)
Auto-ignition temperature:	210 °C	(DIN 51794)
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
pH value:	(20 °C)	
	neutral, miscible	
Viscosity, dynamic:	6,49 mPa.s	
	(20 °C)	
	Literature data.	
Thixotropy:	not thixotropic	
Solubility in water:	miscible	(other)
	(20 °C)	
Solubility (qualitative) solvent(s):	organic solvents	
	soluble	
Partitioning coefficient n-octanol/water (log Kow):	1	(OECD Guideline 117)
	(20 °C; pH value: 7)	
Vapour pressure:	0,03 hPa	(measured)
	(25 °C)	
	Literature data.	
Relative density:	0,9553	(other)
	(20 °C)	
	Literature data.	
Density:	approx. 0,9553 g/cm ³	(other)
	(20 °C)	
	Literature data.	
Relative vapour density (air):	5,59	(calculated)
	(20 °C)	
	Heavier than air.	

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

9.2. Other information**Information with regard to physical hazard classes**Explosives

Explosion hazard: Based on the chemical structure there is no indication of explosive properties.

Oxidizing properties

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Pyrophoric properties

Self-ignition temperature: Test type: Spontaneous self-ignition at room-temperature.

Based on its structural properties the product is not classified as self-igniting.

Self-heating substances and mixtures

Self heating ability: not applicable, the product is a liquid

Substances and mixtures, which emit flammable gases in contact with water

Formation of flammable gases:

Forms no flammable gases in the presence of water.

Corrosion to metals

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No corrosive effect on metal.

Other safety characteristics

pKA: 14,77 (calculated)
(25 °C)

Adsorption/water - soil: The substance does not dissociate.
KOC: 10; log KOC: 1 (calculated)

Surface tension: Based on chemical structure, surface activity is not to be expected.

Molar mass: 162,23 g/mol

SAPT-Temperature:

Study scientifically not justified.

Evaporation rate:

Value can be approximated from Henry's Law Constant or vapor pressure.

10. Stability and Reactivity**Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

Formation of flammable gases: Remarks: Forms no flammable gases in the presence of water.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Reacts with strong oxidizing agents. Reacts with light metals, with evolution of hydrogen.

Conditions to avoid

No special precautions other than good housekeeping of chemicals.

Incompatible materials

Substances to avoid:
strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Of low toxicity after single ingestion. Of low toxicity after short-term skin contact. The inhalation of a highly enriched/saturated vapor-air-mixture represents an unlikely acute hazard.

Experimental/calculated data:

LD50 mouse (oral): 2.410 mg/kg (OECD Guideline 401)

LC50 rat (by inhalation): > 29 ppm 2 h (IRT)

No mortality was observed. The vapour was tested.

LD50 rabbit (dermal): 2.764 mg/kg (OECD Guideline 402)

Irritation

Assessment of irritating effects:

Eye contact causes irritation. May cause slight irritation to the skin.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: Irritant. (similar to OECD guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:

Guinea pig maximization test guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:

The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in studies with mammals.

Carcinogenicity

Assessment of carcinogenicity:

No data was available concerning carcinogenic activity.

Reproductive toxicity

Assessment of reproduction toxicity:

The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

No substance-specific organotoxicity was observed after repeated administration to animals.

Prolonged or repeated contact may cause mild skin irritation.

Aspiration hazard

not applicable

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 (96 h) 1.300 mg/l, *Lepomis macrochirus* (OECD Guideline 203, static)

Literature data. Nominal concentration.

Aquatic invertebrates:

EC50 (48 h) > 100 mg/l, *Daphnia magna* (Directive 92/69/EEC, C.2, static)

Nominal concentration.

Aquatic plants:

EC50 (96 h) > 100 mg/l (growth rate), *Scenedesmus subspicatus* (OECD Guideline 201, static)

Nominal concentration.

Microorganisms/Effect on activated sludge:

EC10 (30 min) > 1.995 mg/l, activated sludge, industrial (OECD Guideline 209, aquatic)

Nominal concentration.

Chronic toxicity to fish:

No data available regarding toxicity to fish.

Chronic toxicity to aquatic invertebrates:

No data available regarding toxicity to daphnids.

Assessment of terrestrial toxicity:
No data available concerning terrestrial toxicity.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):
Readily biodegradable (according to OECD criteria).

Elimination information:

80 - 90 % BOD of the ThOD (28 d) (OECD 301C; ISO 9408; 92/69/EWG, C.4-F) (aerobic, Inoculum conforming to MITI requirements (OECD 301C))

Assessment of stability in water:
No data available.

Bioaccumulative potential

Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Bioaccumulation potential:
No data available.

Mobility in soil

Assessment transport between environmental compartments:
Volatility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

Additional information

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Other ecotoxicological advice:
Do not release untreated into natural waters.

13. Disposal Considerations

Waste treatment methods

The waste codes are manufacturer's recommendations based on the designated use of the product. Other use and special waste disposal treatment on customer's location may require different waste-code assignments.

Contact the manufacturer directly in case of waste disposal problems with the assigned waste-codes.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Inland waterway transport

ADN

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

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Transport in inland waterway vessel

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable

Sea transport

IMDG

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport

IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Maritime transport in bulk according to IMO instruments

Regulation:	IBC-Code
Product name:	Poly(2-8)Alkylene Glykol Monoalkyl (C1-C6)ether
Pollution category:	Z
Ship Type:	3

15. Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

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If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Irrit.	Skin irritation
Eye Irrit.	Eye irritation
H319	Causes serious eye irritation.
H316	Causes mild skin irritation.
H303 + H313	May be harmful if swallowed or in contact with skin.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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