

Safety data sheet

Page: 1/13

BASF Safety data sheet
Date / Revised: 27.06.2025
Product: **BUTYLGLYCOL**

Version: 10.0

(30034845/SDS_GEN_VN/EN)

Date of print: 19.10.2025

1. Substance/preparation and manufacturer/supplier identification

Product name:
BUTYLGLYCOL

Use: process chemical, solvent(s)

Manufacturer/supplier:
BASF Vietnam Co. Ltd.
Level 23, Deutsches Haus, 33 Le Duan,
Sai Gon Ward, Ho Chi Minh City, Vietnam
Telephone: +84 28 3824 3833
Telefax number: +84 28 3824 3832
E-mail address: minh-triet.thieu@basf.com

Emergency information:
18001703 (Vietnam)
Telefax number: +84 28 3824 3832
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:
| Flammable liquids: Cat.4
| Eye irritation: Cat.2A
| Acute toxicity: Cat.4 (oral)
| Skin irritation: Cat.2

Label elements and precautionary statement:

Pictogram:



Signal Word:
Warning

Hazard Statement:

H227	Combustible liquid.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H302	Harmful if swallowed.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye protection or face protection.
P280	Wear eye protection.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P270	Do not eat, drink or smoke when using this product.
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 + P352	IF ON SKIN: Wash with plenty of soap and water.
P330	Rinse mouth.
P332 + P313	If skin irritation occurs: Get medical attention.
P337 + P313	If eye irritation persists: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P370 + P378	In case of fire: Use alcohol-resistant foam, carbon dioxide, dry powder or water spray for extinction.

Precautionary Statements (Storage):

P403	Store in a well-ventilated place.
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Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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Other hazards which do not result in classification:

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

Chemical nature

Substance nature: Substance

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2-butoxyethanol (Content (W/W): > 99 %)
CAS Number: 111-76-2

Hazardous ingredients

2-butoxyethanol

Content (W/W): > 99 % - < 100 %	Flam. Liq.: Cat. 4
CAS Number: 111-76-2	Eye Irrit.: Cat. 2A
	Acute Tox.: Cat. 4 (oral)
	Skin Irrit.: Cat. 2

4. First-Aid Measures

General advice:

Remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). If not breathing, give artificial respiration. First aid personnel should pay attention to their own safety.

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.

Note to physician:

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: Skin resorption hazard.

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

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

5. Fire-Fighting Measures

Suitable extinguishing media:

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

Unsuitable extinguishing media for safety reasons:

water jet

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Additional information:

Use extinguishing measures to suit surroundings.

Specific hazards:

Flammable liquid Cool endangered containers with water-spray. See SDS section 7 - Handling and storage.

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.

Further information:

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

6. Accidental Release Measures

Personal precautions:

Handle in accordance with good industrial hygiene and safety practice.

Avoid all sources of ignition: heat, sparks, open flame. Use antistatic tools.

Environmental precautions:

Discharge into the environment must be avoided.

Methods for cleaning up or taking up:

For large amounts: Pump off product.

For residues: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations.

Additional information: High risk of slipping due to leakage/spillage of product.

Release of substance/product can cause fire or explosion. Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

7. Handling and Storage

Handling

Ensure thorough ventilation of stores and work areas. Prevent contact with air/oxygen (formation of peroxide).

Protection against fire and explosion:

Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

BASF Safety data sheet
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Storage

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

Storage stability:

Storage temperature: $\leq 35\text{ }^{\circ}\text{C}$

The stability data given is only valid when stored under oxygen free inert gases or in containers that are impermeable to oxygen.

8. Exposure controls and personal protection

Components with occupational exposure limits

2-butoxyethanol, 111-76-2;
TWA value 20 ppm (ACGIHTLV)

Personal protective equipment

Respiratory protection:

Gas filter for gases/vapours of organic compounds (boiling point $>65\text{ }^{\circ}\text{C}$, 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):

butyl rubber (butyl) - 0.7 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:

Avoid contact with the skin, eyes and clothing. Avoid inhalation of vapour. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

9. Physical and Chemical Properties

Form:	liquid
Colour:	colourless
Odour:	ether-like
Odour threshold:	not determined

BASF Safety data sheet
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pH value:	(20 °C)	
pKA:	miscible, neutral 15 (20 °C) The substance does not dissociate.	(calculated)
Melting point:	-74.8 °C Literature data.	
Boiling point:	173.5 °C (1,013 hPa)	(other)
Flash point:	67 °C	(DIN 51758, closed cup)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability (solid/gas):	Combustible liquid.	(derived from flash point)
Lower explosion limit:	1.1 %(V) For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	10.6 %(V) For liquids not relevant for classification and labelling.	
Ignition temperature:	232 °C	(DIN EN 14522)
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Self ignition:	Temperature: 20 °C Based on its structural properties the product is not classified as self- igniting.	Test type: Spontaneous self- ignition at room-temperature.
Self heating ability:	not applicable, the product is a liquid	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	
Vapour pressure:	0.8 hPa (20 °C) Literature data.	(measured)
	1.17 hPa (25 °C) Literature data.	(measured)
Density:	0.9000 g/cm ³ (20 °C, 1,013 hPa)	(DIN 51757)

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 Date / Revised: 27.06.2025
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Relative density:	0.9000 (20 °C)	
Relative vapour density (air):	4.08 (20 °C)	(calculated)
	Heavier than air.	
Solubility in water:	Literature data. 900 g/l (20 °C)	
Solubility (qualitative) solvent(s):	organic solvents soluble	
Partitioning coefficient n-octanol/water (log Pow):	0.81 (25 °C)	(measured)
	The data refers to the undissociated form of the substance.	
Adsorption/water - soil:	KOC: 2.82; log KOC: 0.45	(calculated)
Surface tension:	65 mN/m (20 °C; 2 g/l)	(other, other)
Viscosity, dynamic:	3.3 mPa.s (20 °C)	(calculated (from kinematic viscosity))
	The value was determined by calculation from the detected kinematic viscosity.	
Viscosity, kinematic:	3.642 mm ² /s (20 °C)	(Capillary viscometer)
Molar mass:	118.18 g/mol	

10. Stability and Reactivity

Conditions to avoid:

No special precautions other than good housekeeping of chemicals.

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Substances to avoid:
strong oxidizing agents

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:

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

Hazardous decomposition products:

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

Chemical stability:

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

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Reactivity:

No hazardous reactions if stored and handled as prescribed/indicated. When heated can give off ignitable vapours.

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:

LD50 guinea pig (oral): 1,200 mg/kg (similar to OECD guideline 401)

Acute inhalation toxicity

LC0 guinea pig (by inhalation): > 2.25 mg/l 4 h (similar to OECD guideline 403)

No mortality was observed. The European Union (EU) has classified this substance as 'toxic' (Cat. 3). The vapour was tested.

Acute dermal toxicity

LD50 guinea pig (dermal): > 2,000 mg/kg (OECD Guideline 402)

Acute toxicity other routes

LD50 mouse (intraperitoneal): 1,174 mg/kg

Assessment of acute toxicity

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

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.

Irritation

Assessment of irritating effects:

Eye contact causes irritation. Skin contact causes irritation.

Experimental/calculated data:

Skin corrosion/irritation rabbit: Irritant. (BASF-Test)

Serious eye damage/irritation rabbit: Irritant. (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:

Indication of possible carcinogenic effect in animal tests. A clear indication of an increased risk of cancer in humans has so far not been shown. IARC Group 3 (not classifiable as to human carcinogenicity).

Reproductive toxicity

Assessment of reproduction toxicity:

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

Developmental toxicity

Assessment of teratogenicity:

In animal studies the substance did not cause malformations.

Specific target organ toxicity (single exposure)

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:

Damages blood cells. Due to the species specific mode of action, the effects are not expected to occur in humans.

Aspiration hazard

not applicable

Other relevant toxicity information

Skin resorption hazard.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. Based on long-term (chronic) toxicity study data, the product is very likely not 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) 1,474 mg/l, *Oncorhynchus mykiss* (OECD Guideline 203, static)

Nominal concentration. Literature data.

Aquatic invertebrates:

EC50 (48 h) 1,550 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Nominal concentration. Literature data.

Aquatic plants:

EC50 (72 h) 1,840 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201, static)

Nominal concentration. Literature data.

Microorganisms/Effect on activated sludge:

Toxic limit concentration (16 h) > 700 mg/l, *Pseudomonas putida* (DIN 38412 Part 8, static)

Nominal concentration. Literature data.

Chronic toxicity to fish:

No observed effect concentration (21 d) > 100 mg/l, *Brachydanio rerio* (OECD Guideline 204, semistatic)

Nominal concentration. Literature data. Limit concentration test only (LIMIT test).

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d), 100 mg/l, *Daphnia magna* (OECD Guideline 211, semistatic)

Nominal concentration. Literature data.

Assessment of terrestrial toxicity:

No data available concerning terrestrial toxicity.

Mobility

Assessment transport between environmental compartments:

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is not expected.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Readily biodegradable (according to OECD criteria).

Elimination information:

90 % CO₂ formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EWG, C.4-C) (aerobic, activated sludge)

Assessment of stability in water:

Substance is readily biodegradable, therefore hydrolysis is not expected to be relevant.

Bioaccumulation 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.

Other adverse effects

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

13. Disposal Considerations

Information on disposal regulations: Must comply with regulations on hazardous waste such as:

- Decree No. 08/2022/ND-CP of the Government: detailing a number of articles of the Law on Environmental Protection.

- Circular No. 02/2022/TT-BTNMT of the Ministry of Natural Resources and Environment: detailing a number of articles of the Law on Environmental Protection.

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:

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

Disposal must be made according to official regulations.

14. Transport Information

Domestic transport:

	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

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
	Marine pollutant: no
Special precautions for user	None known

Air transport

IATA/ICAO

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(30034845/SDS_GEN_VN/EN)

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UN number or ID number	Not classified as a dangerous good under transport regulations
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:	Ethylene glycol monoalkyl ethers
Pollution category:	Y
Ship Type:	3

15. Regulatory Information

Other regulations

Legal information on safety, health and environment for chemicals:

Law on Chemicals No. 06/2007/QH12

Chemical Safety Sheets (SDS) are compiled in accordance with international regulations on chemical classification and labelling (GHS) as well as relevant applicable legal regulations:

- QCVN 05A:2020/BCT National Technical Regulation on safety in production, trading, use, preservation and transportation of hazardous chemicals.
- Amendment 1:2024 QCVN 05A:2020/BCT National technical regulation on safety in production, trading, use, preservation and transportation of hazardous chemicals.
- Decree No. 113/2017/ND-CP dated 09/10/2017 of the Government detailing and guiding the implementation of a number of articles of the Law on Chemicals;
- Circular No. 32/2017/TT-BCT dated 28/12/2017 of the Ministry of Industry and Trade specifying and guiding the implementation of a number of articles of the Law on Chemicals and Decree No. 113/2017/ND-CP dated 09/10/2017 of the Government detailing and guiding the implementation of a number of articles of the Law on Chemicals;
- Decree No. 82/2022/ND-CP dated October 18, 2022 of the Government amending and supplementing a number of articles of the Government's Decree No. 113/2017/ND-CP dated October 09, 2017 detailing and guiding the implementation of a number of articles of the Law on Chemicals
- Circular No. 17/2022/TT-BCT dated October 27, 2022 of the Ministry of Industry and Trade amending and supplementing a number of articles of Circular No. 32/2017/TT-BCT dated December 28, 2017 of the Minister of Industry and Trade specifying and guiding the implementation of a number of articles of the Law on Chemicals and the Government's Decree No. 113/2017/ND-CP dated October 09, 2017 detailing and guiding the exam a number of articles of the Law on Chemicals

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- Decree No. 161/2024 ND-CP dated December 18, 2024 of the Government regulating the list of dangerous goods, transportation of dangerous goods and the order and procedures for issuance of licenses and certificates of completion of training programs for drivers or escorts transporting dangerous goods on roads;
- Decree 34/2024/ND-CP dated 31/03/2024 regulating the list of dangerous goods, transporting dangerous goods by road motor vehicles and inland waterway vehicles
- Circular No. 37/2020/TT-BCT dated 30/11/2020 of the Ministry of Industry and Trade stipulating the list of dangerous goods that must be packed in the process of transporting and transporting dangerous goods by road, railway and inland waterway motor vehicles.
- Decree No. 71/2019/ND-CP dated August 30, 2019 of the Government stipulating the sanctioning of administrative violations in the field of chemicals and industrial explosives.

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

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

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.