We create chemistry

Safety Data Sheet
BUTYLGLYCOL

1. Identification

Product identifier used on the label

BUTYLGLYCOL

Recommended use of the chemical and restriction on use

Recommended use*: process chemical, solvent(s)
Recommended use*: process chemical; solvent(s)
Unsuitable for use: Not intended for sale to or use by the general public.

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: organic compounds

2. Hazards Identification

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Flam. Liq.	4	Flammable liquids
Eye Irrit.	2A	Eye irritation
Acute Tox.	4 (oral)	Acute toxicity
Skin Irrit.	2	Skin irritation

Label elements

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.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

No data available.

3. Composition / Information on Ingredients

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

2-butoxyethanol
CAS Number: 111-76-2

Content (W/W): > 99.0 - < 100.0%
Synonym: 2-Butoxyethanol; Ethylene glycol monobutyl ether

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

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

If on skin:
Wash thoroughly with soap and water

If in eyes:
Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Seek medical attention.

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

Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause:, skin irritation, irritation of respiratory tract, erythema, nausea, headache, vomiting, diarrhea, abdominal cramps, hemolysis, blood in urine, CNS depression
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

Indication of any immediate medical attention and special treatment needed

Note to physician

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
Hazards during fire-fighting:
Flammable liquid Cool endangered containers with water-spray. See SDS section 7 - Handling and storage.

Advice for fire-fighters
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear. Special protective equipment for firefighters

Further information:
Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition. If exposed to fire, keep containers cool by spraying with water. Flash fire may occur. Do not flood burning material with water due to potential spreading of fire.

Impact Sensitivity:
Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Further accidental release measures:
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.

Personal precautions, protective equipment and emergency procedures
No special precautions necessary. Extinguish sources of ignition nearby and downwind. Wear suitable personal protective clothing and equipment. Use antistatic tools. Avoid contact with skin and eyes. Ensure adequate ventilation.

Environmental precautions
Do not discharge into drains/surface waters/groundwater. In case of release into waterways, immediately notify the appropriate authorities downstream of the spill so they can determine if further action is needed.

Methods and material for containment and cleaning up
For residues: Rinse away with water.
Spills should be contained, solidified, and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling
Ensure adequate ventilation. Do not apply to hot surfaces. Proper ventilation and respiratory protection is required when sanding, flame cutting, welding or brazing coated surfaces. Do not puncture, drop, or slide containers. Containers under pressure should be opened with care to release pressure.

Protection against fire and explosion:

Use antistatic tools. Exhaust fans should be explosion proof. Provide adequate ventilation to remove solvent vapors from lower levels or work areas and to prevent solvent contact with ignition sources. Sealed containers should be protected against heat as this results in pressure build-up. Avoid all sources of ignition: heat, sparks, open flame. Ground conductive equipment properly to prevent electrostatic discharge. Electrical handling equipment should be explosion-proof.

Conditions for safe storage, including any incompatibilities

Store well away from other substances.

Further information on storage conditions: Avoid extreme heat. Keep away from sources of ignition - No smoking. Keep container tightly closed. Protect from direct sunlight.

Storage stability:
Storage temperature: <= 35 °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/Personal Protection

Components with occupational exposure limits

2-butoxyethanol	ACGIH, US:	TWA value 20 ppm ;
	OSHA Z1:	PEL 50 ppm 240 mg/m3 ;
	OSHA Z1:	Skin Designation ; The substance can be absorbed through the skin.
	NIO ID, US:	IDLH 700 ppm ; IDLH values based on the 1994 Revised Criteria
	NIO ID, US:	LEL 1.1 % ;

Advice on system design:
Provide local exhaust ventilation to maintain recommended P.E.L. Provide local exhaust ventilation to control vapours. Exhaust fans should be explosion proof.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Hand protection:
Chemical resistant protective gloves, Consult with glove manufacturer for testing data.

Eye protection:
Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke.

9. Physical and Chemical Properties

Physical state:	liquid	
Form:	liquid	
Odour:	ether-like	
Odour threshold:	not determined	
Colour:	colourless	
pH value:	(20 °C) miscible, neutral	
Melting point:	-74.8 °C Literature data.	
Freezing point:	-70.4 °C	
Boiling point:	173.5 °C (1,013 hPa)	(other)
Flash point:	67 °C	(DIN 51758, closed cup)
Flammability:	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.	
Heat of Combustion:	30.04 kJ/g	
Autoignition:	232 °C	(DIN EN 14522)
Vapour pressure:	0.8 hPa (20 °C) Literature data.	(measured)
	1.17 hPa (25 °C) Literature data.	(measured)
Density:	0.9000 g/cm3 (20 °C, 1,013 hPa)	(DIN 51757)
Relative density:	0.9000 (20 °C)	
Relative vapour density:	4.08 (20 °C) Heavier than air.	(calculated)
Partitioning coefficient n-octanol/water (log Pow):	0.81 (25 °C) The data refers to the undissociated form of the substance.	(measured)
Self-ignition temperature:	20 °C Based on its structural properties the product is not classified as self-igniting.	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	3.3 mPa.s (20 °C) The value was determined by calculation from the detected kinematic viscosity.	(calculated (from kinematic viscosity))

Viscosity, kinematic:	3.642 mm2/s (20 °C)	(Capilliary viscometer)
Solubility in water:	900 g/l (20 °C) Literature data.	
Solubility (qualitative):	soluble solvent(s): organic solvents,	
Molecular weight:	118.18 g/mol	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	

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

10. Stability and Reactivity

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

Corrosion to metals:
No corrosive effect on metal.

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

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
The product is chemically stable.

Conditions to avoid
Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme heat.

Incompatible materials
amines

Hazardous decomposition products

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

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

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
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.

Information on: 2-butoxyethanol
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.

Oral
Type of value: LD50
Species: guinea pig
Value: 1,200 mg/kg (similar to OECD guideline 401)

Inhalation
Type of value: LC0
Species: guinea pig
Value: > 2.25 mg/l (similar to OECD guideline 403)
Exposure time: 4 h
The vapour was tested.
No mortality was observed. The European Union (EU) has classified this substance as 'toxic' (Cat. 3).

Dermal
Type of value: LD50
Species: guinea pig
Value: > 2,000 mg/kg (OECD Guideline 402)

Assessment other acute effects
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion
Assessment of irritating effects: Eye contact causes irritation. Skin contact causes irritation.

Skin
Species: rabbit
Result: Irritant.
Method: BASF-Test

Eye
Species: rabbit

Result: Irritant.
Method: OECD Guideline 405

Sensitization
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Guinea pig maximization test
Species: guinea pig
Result: Non-sensitizing.
Method: OECD Guideline 406

Aspiration Hazard
not applicable

Chronic Toxicity/Effects

Repeated dose toxicity
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.

Genetic toxicity
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.

Teratogenicity
Assessment of teratogenicity: In animal studies the substance did not cause malformations.

Other Information
Skin resorption hazard.

12. Ecological Information

Toxicity

Aquatic toxicity
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.

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.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
DIN 38412 Part 8 static
bacterium/Toxic limit concentration (16 h): > 700 mg/l
Nominal concentration. Literature data.

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.

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
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Additional information

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

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. Do not incinerate closed containers. Do not discharge into drains/surface waters/groundwater.

Container disposal:
WARNING: Empty containers may still contain hazardous residue. Do not reuse containers without commercial reconditioning.

RCRA: D001

14. Transport Information

Land transport
USDOT

Classified as combustible liquid in containers greater than 119 gallons.

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

EPCRA 313:

CAS Number	Chemical name
111-76-2	2-butoxyethanol

State regulations

State RTK	CAS Number	Chemical name
NJ	111-76-2	2-butoxyethanol
PA	111-76-2	2-butoxyethanol

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including ETHYLENE GLYCOL (INGESTED), which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:
Health: 2 Fire: 2 Reactivity: 0 Special:

HMIS III rating
Health: 2¤ Flammability: 2 Physical hazard: 0

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Acute Tox.	4 (oral)	Acute toxicity
Eye Irrit.	2A	Eye irritation
Skin Irrit.	2	Skin irritation
Flam. Liq.	4	Flammable liquids

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2025/06/27

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