

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

1.1. Product identifier

Product form	: Substance
Substance name	: BUTYL GLYCOL
EC Index-No.	: 603-014-00-0
EC-No.	: 203-905-0
CAS-No.	: 111-76-2
REACH registration No	: 01-2119475108-36
Product code	: BUTYL GLYCOL

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

1.2.1. Relevant identified uses

Main use category	: Industrial use
Use of the substance/mixture	: Solvents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

INTERCHIMIE
ZAC du Parc 13 rue Louis Blériot
FR- 77290 COMPANS
T T: +33 (0)1 64 77 76 27
qualite@interchimie.fr - www.interchimie.fr

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4	H302
Acute toxicity (inhal.), Category 4	H332
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

Harmful in contact with skin. Harmful if inhaled. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H302+H332 - Harmful if swallowed or if inhaled.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

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Precautionary statements (CLP) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : BUTYL GLYCOL
CAS-No. : 111-76-2
EC-No. : 203-905-0
EC Index-No. : 603-014-00-0

Name	Product identifier	%
2-butoxyethanol	CAS-No.: 111-76-2 EC-No.: 203-905-0 EC Index-No.: 603-014-00-0 REACH-no: 01-2119475108-36	≥ 100

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a physician immediately.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. Get immediate medical advice/attention. Wash with soapy water.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause respiratory irritation. Inhalation may cause irritation (cough, short breathing, difficulty in breathing). Harmful by inhalation.
Symptoms/effects after skin contact : Irritation. Harmful in contact with skin. Prolonged or repeated contact may cause skin to become dry.
Symptoms/effects after eye contact : Eye irritation. Redness, pain.
Symptoms/effects after ingestion : Harmful if swallowed. May cause irritation to the digestive tract. Ingestion may cause nausea and vomiting. Abdominal pain, nausea.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. May result in aspiration into the lungs.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : The vapours are denser than air and may travel along the ground. Distance ignition possible.
Explosion hazard : May form flammable/explosive vapour-air mixture.
Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon oxides (CO, CO₂).

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information : Prevent fire fighting water from entering the environment. Flammable or explosive vapour/air mixtures may be formed.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin, eyes and clothing. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Cover the spilled liquid product with foam to slow down evaporation. Flammable or explosive vapour/air mixtures may be formed.
Methods for cleaning up : Take up liquid spill into absorbent material. Do not absorb with saw-dust or any other combustible absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Use explosion-proof equipment. Never use pressure to empty container.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool. Keep away from sources of ignition.
Storage temperature : ≤ 50 °C
Packaging materials : Stainless steel. Mild steel. Do not use : Light metals, Plastic, Aluminium.

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

BUTYL GLYCOL (111-76-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-Butoxyethanol
IOEL TWA	98 mg/m ³
IOEL TWA [ppm]	20 ppm
IOEL STEL	246 mg/m ³
IOEL STEL [ppm]	50 ppm
Remark	skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
France - Occupational Exposure Limits	
Local name	2-Butoxyéthanol (Butylglycol)
VME (OEL TWA)	9.8 mg/m ³
VME (OEL TWA) [ppm]	2 ppm
VLE (OEL C/STEL)	147.5 mg/m ³
VLE (OEL C/STEL) [ppm]	30 ppm
Remark	Valeur Indicative Réglementaire (VRI)
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 984, 2016; Décret n° 2019-1487)

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

BUTYL GLYCOL (111-76-2)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	89 mg/kg bodyweight/day
Acute - systemic effects, inhalation	1091 mg/m ³
Long-term - systemic effects, dermal	75 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	20 ppm
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	426 mg/m ³
Acute - systemic effects, oral	25.7 mg/kg bodyweight
Acute - local effects, inhalation	147 mg/m ³
Long-term - systemic effects, oral	6.3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	59 mg/m ³

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BUTYL GLYCOL (111-76-2)	
PNEC (Water)	
PNEC aqua (marine water)	0.88 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	34.6 mg/kg dwt
PNEC sediment (marine water)	3.46 mg/kg dwt
PNEC (Soil)	
PNEC soil	2.8 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	463 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. Wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: Mild.

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Odour threshold	: 0.1 – 0.48 ppm 0.5 – 2.3 mg/m ³
Melting point	: -75 °C (1013hPa)
Freezing point	: Not available
Boiling point	: 168 – 173 °C
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 67 °C (1013hPa)
Auto-ignition temperature	: 230 – 240 °C
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 2.284 mm ² /s (40°C)
Viscosity, dynamic	: 3.28 mPa.s (20°C)
Solubility	: soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: 0.9g/cm ³ (20°C)
Relative vapour density at 20 °C	: Not available
Relative gas density	: 4.1 (air=1)
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with oxidants.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

May form explosive peroxides. Flammable or explosive vapour/air mixtures may be formed.

10.4. Conditions to avoid

Heat. Sparks. Open flame. Moisture. Light (daylight).

10.5. Incompatible materials

Oxidizing agents. Acids. Strong bases. Aluminium.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon oxides (CO, CO₂). Toxic fumes. May form explosive peroxides.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified

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Acute toxicity (inhalation) : Harmful if inhaled.

BUTYL GLYCOL (111-76-2)

LD50 oral rat	> 1200 mg/kg
LD50 dermal rat	> 1000 mg/kg
LC50 Inhalation - Rat	> 10 mg/l
LC50 Inhalation - Rat [ppm]	> 691 ppm

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
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

BUTYL GLYCOL (111-76-2)

Viscosity, kinematic 2.284 mm²/s (40°C)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Other information : Animals, Reproductive toxicity

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Ecology - air : Oxidation.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

BUTYL GLYCOL (111-76-2)

LC50 - Fish [1]	1474 mg/l 96h - <i>Oncorhynchus mykiss</i>
EC50 - Crustacea [1]	1550 mg/l 48h - <i>Daphnia magna</i>
EC50 72h - Algae [1]	1840 mg/l 72h - <i>Pseudokirchneriella subcapitata</i>

12.2. Persistence and degradability

BUTYL GLYCOL (111-76-2)

Persistence and degradability Readily biodegradable.

12.3. Bioaccumulative potential

BUTYL GLYCOL (111-76-2)

Bioaccumulative potential No bioaccumulation.

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12.4. Mobility in soil

BUTYL GLYCOL (111-76-2)

Ecology - soil

Small adsorption. mobile in soils.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Additional information

: This material and its container must be disposed of as hazardous waste.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
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
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

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Inland waterway transport

No data available

Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

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

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(b)	BUTYL GLYCOL ; 2-butoxyethanol

REACH Annex XIV (Authorisation List)

BUTYL GLYCOL is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

BUTYL GLYCOL is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

BUTYL GLYCOL is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

BUTYL GLYCOL is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

BUTYL GLYCOL is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Seveso Directive (Disaster Risk Reduction)

Seveso Additional information : ICPE N° 1436

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

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15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Water hazard class (WGK)	: WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 47).
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed

Denmark

Class for fire hazard	: Class III-1
Store unit	: 50 liter
Classification remarks	: Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association

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Abbreviations and acronyms:	
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
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources : This MSDS has been established with data of MSDS coming from upstream suppliers.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Safety Data Sheet (SDS), EU

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.