



SAFETY DATA SHEET

Butyl glycol (BG)

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

Date issued 21.01.2014

1.1. Product identifier

Product name Butyl glycol (BG)
Chemical name 2-butoxietanol
Synonyms Etylenglykolmonobutyleter
REACH Reg No. 01-2119475108-36-0000
CAS no. 111-76-2
Index no. 603-014-00-0
Article no. 17000000

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

Use of the substance/preparation For the preparation of paints and as a solvent.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name Fred Holmberg & Co AB
Office address Geijersgatan 8
Postal address Box 60056
Postcode S-216 10
City Limhamn
Country Sweden
Tel +46 (0)40 15 79 20
Fax +46 (0)40 16 22 95
E-mail info@holmberg.se
Website http://www.holmberg.se/en/

1.4. Emergency telephone number

Emergency telephone 112 (Europe)

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

Classification according to Xi; R36/38
67/548/EEC or 1999/45/EC Xn; R20/21/22
Classification according to Acute tox. 4; H302;
Regulation (EC) No 1272/2008 Acute tox. 4; H312;
[CLP/GHS] Skin Irrit. 2; H315;
Eye Irrit. 2; H319;
Acute tox. 4; H332;

2.2. Label elements

Hazard Pictograms (CLP)



Signal word

Warning

Hazard statements	H302 Harmful if swallowed. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled.
Precautionary statements	P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/attention. P363 Wash contaminated clothing before reuse. P501 Dispose of contents/container to

2.3. Other hazards

Other hazards	Not known.
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SECTION 3: Composition/information on ingredients

3.1. Substances

Substance	Identification	Classification	Contents
2-Butoxyethanol	CAS no.: 111-76-2 EC no.: 203-905-0 Index no.: 603-014-00-0 Synonyms: 2-Butoxyethanol	Xn; R20/21/22 Xi; R36/38 Acute tox. 4; H332 Acute tox. 4; H312 Acute tox. 4; H302 Eye Irrit. 2; H319 Skin Irrit. 2; H315	100
Column headings	CAS no. = Chemical Abstracts Service; EU (Einecs or Elincs number) = European inventory of Existing Commercial Chemical Substances; Ingredient name = Name as specified in the substance list (substances that are not included in the substance list must be translated, if possible). Contents given in; %, %wt/wt, %vol/wt, %vol/vol, mg/m3, ppb, ppm, weight%, vol%		
HH/HF/HE	T+ = Very toxic, T = Toxic, C = Corrosive, Xn = Harmful, Xi = Irritating, E = Explosive, O = Oxidizing, F+ = Extremely flammable, F = Very flammable, N = Environmental hazard		

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothes and rinse skin thoroughly with water.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if any discomfort continues.
Ingestion	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Do not induce vomiting. Rinse mouth with water. Get medical attention.

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

Information for health personnel	Treat Symptomatically. Do not give victim anything to drink if he is unconscious.
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4.3. Indication of any immediate medical attention and special treatment needed

Specific details on antidotes	No recommendation given.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
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5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Solvent vapours may form explosive mixtures with air.
Hazardous combustion products	Fire creates: Carbon monoxide (CO). Carbon dioxide (CO ₂).

5.3. Advice for firefighters

Fire fighting procedures	No specific fire fighting procedure given.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. Ventilate well. Stop leak if possible without risk. Avoid contact with skin and eyes. Do not breathe vapour. For personal protection, see section 8.
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6.2. Environmental precautions

Environmental precautionary measures	Avoid discharge into drains, water courses or onto the ground.
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6.3. Methods and material for containment and cleaning up

Cleaning method	Dam and absorb spillages with sand, earth or other non-combustible material.
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6.4. Reference to other sections

Other instructions	Information regarding exposure / personal protection and disposal, see section 8 and 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Keep away from heat, sparks and open flame. Take precautionary measures against static discharges. Mechanical ventilation may be required.
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Protective Safety Measures

Advice on general occupational hygiene	Provide easy access to water supply and eye wash facilities.
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7.2. Conditions for safe storage, including any incompatibilities

Storage	Keep away from heat, sparks and open flame. Ground container and transfer equipment to eliminate static electric sparks. Store in a cool and well-ventilated place.
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7.3. Specific end use(s)

Specific use(s)	Not entered.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure limit values

Substance	Identification	Value	TWA Year
2-Butoxyethanol	CAS no.: 111-76-2	8-hour TWA: 25 ppm	2011
	EC no.: 203-905-0	8-hour TWA: 123 mg/m ³	

Index no.: 603-014-00-0
Synonyms: 2-Butoxyethanol

15 min.: 50 ppm
15 min.: 246 mg/m³
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Other Information about threshold
limit values

Norske grenseverdier; FOR-2011-12-06-1358 vedlegg 1.
2-butoksyetanol: 8 t.: 10ppm, 50 mg/m³ (2003)

DNEL / PNEC

Method of testing

Contents

DNEL

Group: Consumer
Exposure route: Inhalation
Exposure frequency: Long term (repeated)
Type of effect: Systemic effect
Value: 49 mg/m³

DNEL

Group: Consumer
Exposure route: Inhalation
Exposure frequency: Short term (acute)
Type of effect: Local effect
Value: 123 mg/m³

DNEL

Group: Consumer
Exposure route: Oral
Exposure frequency: Long term (repeated)
Type of effect: Systemic effect
Value: 3,2 mg/kg

DNEL

Group: Consumer
Exposure route: Dermal
Exposure frequency: Long term (repeated)
Type of effect: Systemic effect
Value: 38 mg/kg

DNEL

Group: Worker
Exposure route: Inhalation
Exposure frequency: Long term (repeated)
Type of effect: Systemic effect
Value: 20 ppm

DNEL

Group: Worker
Exposure route: Dermal
Exposure frequency: Long term (repeated)
Type of effect: Systemic effect
Value: 75 mg/kg

8.2. Exposure controls

Occupational exposure limits

Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours. Protective gloves and goggles are recommended. Provide eyewash, quick drench.

Safety signs



Respiratory protection

Respiratory protection

Respiratory protection must be used if air contamination exceeds acceptable level. Use respiratory equipment with gas filter, type A2.

Hand protection

Hand protection

Use protective gloves. Chemical resistant gloves required for prolonged or repeated contact. Gloves of nitrile rubber, PVA or Viton are recommended.

Eye / face protection

Eye protection

Use safety goggles or face shield in case of splash risk.

Skin protection

Skin protection (except hands)

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene / Environmental

Specific hygiene measures

Wash hands after contact.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Fluid.
Colour	Colourless.
Odour	Mild.
Comments, pH (as supplied)	Not relevant.
Melting point/melting range	Value: < -70,4 °C
Boiling point / boiling range	Value: 168-172 °C
Flash point	Value: 67 °C
Explosion limit	Value: 1,1-10,6 %
Vapour pressure	Value: 0,89 hPa Test temperature: 20 °C
Vapour density	Value: 3,7
Specific gravity	Value: 899-902 kg/m ³ Test temperature: 20 °C
Solubility description	Soluble in: Organic solvents. Miscible with water.
Partition coefficient: n-octanol/water	Value: 0,81
Viscosity	Value: 3,642 mm ² /s Method of testing: Kinematisk Test temperature: 20 °C

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Heating may cause a fire.

10.2. Chemical stability

Stability Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not known.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Avoid contact with oxidising agents (e.g. nitric acid, peroxides and chromates). Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products Fire creates: Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological Information:

Other toxicological data Acute Toxicity (Oral LD₅₀): mg/kg (oral rat) 1,746
Acute Toxicity (Inhalation LC₅₀): mg/l (vapours) (4h) 2 - 20
Acute Toxicity (Dermal LD₅₀): mg/kg Guinea Pig > 2000

Potential acute effects

Inhalation	In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea. Ikke klassificerad som aspirationstoxisk (Not classified as asp. tox.)
Skin contact	Irritating to skin. Prolonged or frequent contact may cause redness, itching, eczema and skin cracking. Defats the skin.
Eye contact	May irritate and cause redness and pain. Causes serious eye irritation.
Ingestion	Ingestion of large amounts may cause unconsciousness. However, ingestion may cause nausea, headache, dizziness and intoxication. Ingestion may cause irritation of the gastrointestinal tract, vomiting and diarrhoea. May cause irritation to the mouth and throat.

Delayed effects / repeated exposure

Sensitisation	Not known.
Chronic effects	None known.

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity	Not known.
Mutagenicity	Not known.
Teratogenic properties	Not known.
Reproductive toxicity	Not known.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic, fish	Value: 1,474 mg/l Method of testing: LC50 (OECD 203) Fish, species: Oncorhynchus mykiss Duration: 96h
Acute aquatic, algae	Value: 1,840 mg/l Method of testing: EC50 (OECD 201) Algae, species: Pseudokirchneriella subcapitata Duration: 72h
Acute aquatic, Daphnia	Value: 1,550 mg/l Method of testing: EC50 (OECD 202) Daphnia, species: Daphnia magna Duration: 48h
Other ecotoxicological information, fish	Chronic toxicity: NOEC (21 d) > 100 mg/l, Brachydanio rerio
Other ecotoxicological information, crustaceans	Chronic toxicity: NOEC (21 d) 100 mg/l, Daphnia magna (OECD Guideline 211)

12.2. Persistence and degradability

Persistence and degradability description	Easily biodegradable.
Persistence and degradability	BOD5/COD: 0.32-0.76 BOD: 96% after 14 d (MITI) 95% degraded after 28 d, OECD 301E

12.3. Bioaccumulative potential

Bioaccumulative potential	Will not bio-accumulate.
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12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

PBT assessment results	This substance is not classified as PBT or vPvB.
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12.6. Other adverse effects

Other adverse effects / Remarks	None known.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Specify the appropriate methods of disposal	Confirm disposal procedures with environmental engineer and local regulations. Absorb in vermiculite or dry sand and dispose of at a licenced hazardous waste collection point. Liquid components can be disposed of by incineration.
Product classified as hazardous waste	Yes
Packaging classified as hazardous waste	Yes

SECTION 14: Transport information

14.1. UN number

Comments	Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR .
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14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

Comment	Not relevant.
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14.6. Special precautions for user

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

Other Label Information	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 with amendments.
Legislation and regulations	Dangerous Substance Directive 67/548/EEC. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716). The List of Wastes (England) (Amendment) Regulations 2005. (SI 2005 No. 895). Avfallsförordningen (2011:927).

15.2. Chemical safety assessment

SECTION 16: Other information

Hazard symbol



Harmful

R-phrases	R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R36/38 Irritating to eyes and skin.
S-phrases	S2 Keep out of the reach of children. S24 Avoid contact with skin. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37 Wear suitable protective clothing and gloves. S46 If swallowed, seek medical advice immediately and show this container or label.
Classification according to Regulation (EC) No 1272/2008	Acute tox. 4; H302; Acute tox. 4; H312;

[CLP/GHS]	Skin Irrit. 2; H315; Eye Irrit. 2; H319; Acute tox. 4; H332;
List of relevant R-phrases (under headings 2 and 3).	R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R36/38 Irritating to eyes and skin.
List of relevant H-phrases (Section 2 and 3).	H332 Harmful if inhaled. H302 Harmful if swallowed. H312 Harmful in contact with skin. H319 Causes serious eye irritation. H315 Causes skin irritation.
Responsible for safety data sheet	Fred Holmberg & Co AB