

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product Identifier:

Trade Name: Butyl glycol acetate
CAS Number: 112-07-2
EINECS Number: 203-933-3
REACH Registration Number: 01-2119457112-47-XXXX

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

Identified use(s): Industrial use.
Solvent.
Raw material for printing inks and printing ink additives.

Uses advised against: No further information

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification (REGULATION (EC) No 1272/2008):

Acute toxicity Category 4 (Oral): Harmful if swallowed.
Acute toxicity Category 4 (Inhalation): Harmful if inhaled.
Acute toxicity Category 4 (Dermal): Harmful in contact with skin.

Label elements:

According to Regulation (EC) No. 1272/2008 (CLP).

Hazard Pictogram:



Signal word(s): Warning.

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Hazard statement(s):

Hazard statements: H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.

Precautionary statement(s):

P261 Avoid breathing dust/fume/gas/mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards:

Vapours may form explosive mixture with air.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances: 2-butoxyethyl acetate; butyl glycol acetate

Component Type: Active ingredient

CAS No.	EINECS No.	REACH registration no.	Index No.	Classification according to Regulation 1272/2008	Content
112-07-2	203-933-3	01-2119475112-47-XXXX	607-038-00-2	Acute Tox. 4 (Oral). H302 Acute Tox. 4 (Inhalation) H332 Acute Tox. 4 (Dermal) H312	<=100%

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

Description of first aid measures:

General advice: Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: Provide fresh air. Call a physician immediately.

Skin contact: Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact: Rinse with water.

Ingestion: If a person vomits when lying on his back, place him in the recovery position. If swallowed, seek medical advice immediately and show this container or label.

Most important symptoms and effects, both acute and delayed:

Risks: No information available.

Indication of any immediate medical attention and special treatment needed:

Treatment: For specialist advice physicians should contact the Poisons Information Service.

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5. FIRE-FIGHTING MEASURES

Extinguishing Media: Water spray, Dry powder, Foam, Carbon dioxide (CO₂) in enclosed spaces

Special hazards arising from the substance or mixture:

Specific hazards during firefighting: When fighting fires in enclosed spaces: Caution, danger of suffocation!

Advice for fire-fighters:

Special protective equipment for fire fighters: Wear self-contained breathing apparatus and protective suit.

Further information: Standard procedure for chemical fires.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.

Environmental precautions: Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up: Soak up with inert absorbent material (e.g., sand, silica gel, acid binder, universal binder, sawdust).

Reference to other sections: For personal protection see section 8.

7. HANDLING AND STORAGE

The information in this section is a general description. Always use the relevant exposure scenarios that correspond to your identified use. For relevant identified uses, see exposure scenarios attached in annex.

Precautions for safe handling:

Advice on safe handling: Wear personal protective equipment. Avoid inhalation, ingestion and contact with skin and eyes.

Advice on protection against fire and explosion: No special protective measures against fire required.

Temperature class: T2

Fire-fighting class: B: Fires involving liquids or liquid containing substances. Also includes substances which become liquid at elevated temperatures.

Conditions for safe storage, including any incompatibilities:

Requirements for storage areas and containers: With exclusion of air/oxygen Store at room temperature.

Advice on common storage: Keep away from food, drink and animal feeding stuffs. Keep away from oxidising agents.

Storage class (TRGS 510): 10: Combustible liquids

Specific end use(s): Consult the technical guidelines for the use of this substance/mixture.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure:

National occupational exposure limits:

2-butoxyethyl Acetate:

TWA	20 ppm	2007	EH40	WEL
STEL	50 ppm	2007	EH40	WEL

Can be absorbed through the skin.

European occupational exposure limits:

TWA	133 mg/m3	02/2006	EU	ELV/EU SCOELS
TWA	20 ppm	02/2006	EU	ELV/EU SCOELS
STEL	333 mg/m3	02/2006	EU	ELV/EU SCOELS
STEL	50 ppm	02/2006	EU	ELV/EU SCOELS

Can be absorbed through the skin.

Derived No Effect Level (DNEL)

Substance name: 2-butoxyethyl acetate; butyl glycol acetate

End Use	Exposure routes	Value	Note
Workers:	Dermal, Acute/short-term exposure - systemic effects	120 mg/kg Body weight/ day	
	Inhalation, Acute/short-term exposure - systemic effects		Not relevant
	Dermal, Acute/short-term exposure - local effects		Not relevant
	Inhalation, Acute/short-term exposure - local effects	333 mg/m3	
	Dermal, long-term exposure - systemic effects	169 mg/kg Body weight/day	
	Inhalation, long-term exposure - systemic effects	133 mg/m3	
	Dermal, long-term exposure - local effects		Not relevant
	Inhalation, long-term exposure - local effects		Not relevant
Consumers:	Dermal, Acute/short-term exposure - systemic effects	72 mg/kg Body weight/day	
	Inhalation, Acute/short-term exposure - systemic effects		Not relevant
	Oral, Acute/short-term exposure - systemic effects	36 mg/kg Body weight/day	
	Dermal, Acute/short-term exposure - local effects		Not relevant
	Inhalation, Acute/short-term exposure - local effects	200 mg/m3	
	Dermal, long-term exposure - systemic effects	102 mg/kg Body weight/day	
	Inhalation, long-term exposure - systemic effects	80 mg/m3	
	Oral, long-term exposure - systemic effects	8.6 mg/kg Body weight/day	
	Dermal, long-term exposure - local effects		Not relevant
	Inhalation, long-term exposure - local effects		Not relevant

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PNEC:

Environmental compartment	Value	Remark
Fresh water	0.304mg/l	
Marine water	0.0304mg/l	
Intermittent release	0.56 mg/l	
Treatment plant	90 mg/l	
Fresh water sediment	2.03 mg/kg	Based on dry weight
Marine sediment	0.203 mg/kg	Based on dry weight
Soil	0.42 mg/kg	Based on dry weight
Food	0.06 mg/kg	

Exposure controls:

Respiratory protection: In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a type A filter or appropriate combined filter (e.g., where aerosols are in use, or smoke and mist occur, A-P2 or ABEK-P2), in compliance with EN 141.

Hand protection: The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time., Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the breakthrough time measured according to EN 374, due to the numerous outside influences (e.g. temperature).

Gloves suitable for permanent contact: Material: butyl-rubber. Break through time: \geq 480 min. Layer thickness: 0.4 mm

Unsuitable gloves: Material: Natural rubber/natural latex, Polychloroprene, Fluorinated rubber, Nitrile rubber/nitrile latex, Polyvinylchloride

Eye protection: Tightly fitting safety goggles

Skin protection: Wear suitable protective equipment.

Protective measures: Avoid contact with the skin and the eyes. Wear suitable protective clothing, gloves and eye/face protection.

Environmental exposure controls:

General advice: Avoid subsoil penetration. Do not flush into surface water or sanitary sewer system.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Physical state:	Liquid; 20 °C; 1,013 hPa
Form:	Liquid
Colour:	Colourless
Odour:	Mild
Odour Threshold:	No valid method available
pH:	4; 10 g/l; 20°C
Melting point/range:	-64 °C; 1,013 hPa 209 K; 1,013 hPa
Boiling point/boiling range:	192 °C; 1,013 hPa. 465.3 K; 1,013 hPa

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Flash point:	78 °C; DIN 51758 351 K; 1,013 hPa.
Evaporation rate:	No data available
Flammability (solid, gas):	Not applicable (liquid)
Lower explosion limit:	1.7 %(V)
Upper explosion limit:	8.4 %(V)
Vapour pressure:	0.5 hPa; 25°C
Relative vapour density:	> 1
Density:	0.942 g/cm ³ ; 20°C
Water solubility:	15 g/l; 20°C
Partition coefficient: n- octanol/water: Log Pow:	1.51; 20°C; literature value
Ignition temperature:	280°C; 1,013 hPa. 553 K; 1,013 hPa
Auto-ignition temperature:	553 K; 1,013 hPa
Viscosity, dynamic:	1.81 mPas; 20°C
Explosive properties:	Not expected based on structure and functional groups.
Oxidizing properties:	Not expected based on structure and functional groups.

Other information:

Refractive index:	1.413 - 1.415 at 20°C
Additional advice:	No data

10. STABILITY AND REACTIVITY

Reactivity: Vapours may form explosive mixture with air.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Reacts with air to form peroxides.

Conditions to avoid: No data available

Incompatible materials: Aluminium; Oxidising agents; Air

Hazardous decomposition products: Thermal decomposition can lead to release of irritating gases and vapours.

Thermal decomposition: Decomposes on heating.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity:

Acute oral toxicity: 2-butoxyethyl acetate; butylglycol acetate: LD50 Rat: > 300 - 2,000 mg/kg (literature value). Harmful if swallowed.

Acute inhalation toxicity: 2-butoxyethyl acetate; butylglycol acetate: LC0 Rat: > 400 ppm; 4 h Test atmosphere: vapour (literature value) maximal attainable concentration.
2-butoxyethyl acetate; butylglycol acetate: Derived from the classification according to Annex VI of Regulation (EC) 1272/2008. Harmful if inhaled.

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Acute dermal toxicity:	2-butoxyethyl acetate; butylglycol acetate: LD50 Rabbit: > 1,000 - 2,000 mg/kg; (literature value). Harmful in contact with skin.
Skin corrosion/irritation:	
Skin irritation:	2-butoxyethyl acetate; butylglycol acetate: Rabbit: not irritating (literature value). Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation:	
Eye irritation:	2-butoxyethyl acetate; butylglycol acetate: Rabbit: not irritating (literature value). Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation:	
Sensitisation:	2-butoxyethyl acetate; butylglycol acetate: Buehler Test Guinea pig: not sensitizing; OECD Test Guideline 406 Based on available data, the classification criteria are not met.
Germ cell mutagenicity:	
Genotoxicity in vitro:	2-butoxyethyl acetate; butylglycol acetate: In vitro tests did not show mutagenic effects (literature value). The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2- butoxyethanol
Genotoxicity in vivo:	2-butoxyethyl acetate; butylglycol acetate: In vivo tests did not show mutagenic effects (literature value). The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2- butoxyethanol Based on available data, the classification criteria are not met.
Carcinogenicity:	2-butoxyethyl acetate; butylglycol acetate: Mouse; Inhalation; 2 years; NOAEC: 125 mg/m ³ ; OECD Test Guideline 451 (literature value). The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2- butoxyethanol 2-butoxyethyl acetate; butylglycol acetate: The observed tumours do not appear to be relevant for men. This effect is not relevant for human beings. Based on available data, the classification criteria are not met.
Reproductive toxicity:	2-butoxyethyl acetate; butylglycol acetate: No indications that the substance caused adverse effects on reproductive organs. (literature value). The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2- butoxyethanol. Based on available data, the classification criteria are not met.
Teratogenicity:	2-butoxyethyl acetate; butylglycol acetate: Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses (literature value). The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2-butoxyethanol. Based on available data, the classification criteria are not met.
STOT - single exposure:	2-butoxyethyl acetate; butylglycol acetate: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure:	2-butoxyethyl acetate; butylglycol acetate: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Repeated dose toxicity:	2-butoxyethyl acetate; butylglycol acetate: Rat; Oral; Subchronic toxicity LOAEL: 94 mg/kg (based on body weight and day). Target Organs: Liver (literature value). The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2-butoxyethanol. 2-butoxyethyl acetate; butylglycol acetate: Rabbit; Dermal; Subchronic toxicity LOAEL: 203 mg/kg (based on body weight and day) (literature value). The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy). Test substance: 2-butoxyethanol
Aspiration toxicity:	2-butoxyethyl acetate; butylglycol acetate: Not applicable.

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12. ECOLOGICAL INFORMATION

Toxicity:

Toxicity to fish: 2-butoxyethyl acetate; butyl glycol acetate: LC50 (96 h) Oncorhynchus mykiss (rainbow trout): >10 - 100 mg/l ; OECD Test Guideline 203 (literature value).

Toxicity to fish - Chronic toxicity: 2-butoxyethyl acetate; butyl glycol acetate: The study is not necessary.

Toxicity to daphnia and other aquatic invertebrates: 2-butoxyethyl acetate; butyl glycol acetate: EC50 (48 h) Daphnia magna (Water flea): > 10 - 100 mg/l; static test; DIN 38412 (literature value).

Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity: 2-butoxyethyl acetate; butyl glycol acetate: EC10 (7 d) Ceri daphnia Dubia (water flea): 30.4 mg/l; mortality; semi-static test; (literature value).

Toxicity to aquatic plants: 2-butoxyethyl acetate; butyl glycol acetate: EC50 (72 h) Pseudokirchneriella subcapitata (green algae): >100 mg/l; Growth rate; static test; ISO 8692; (literature value).

Toxicity to bacteria: 2-butoxyethyl acetate; butyl glycol acetate: EC10 (17 h) Pseudomonas putida: 720 mg/l; static test; DIN 38 412 Part 8.

Toxicity to soil dwelling organisms: 2-butoxyethyl acetate; butyl glycol acetate: The study is not necessary. Unlikely direct and indirect exposure of the soil compartment.

Toxicity to terrestrial flora: 2-butoxyethyl acetate; butyl glycol acetate: The study is not necessary. Unlikely direct and indirect exposure of the soil compartment.

Toxicity for other terrestrial non-mammalian fauna: 2-butoxyethyl acetate; butyl glycol acetate: The study is not necessary. Unlikely to pose a hazard to birds.

Persistence and degradability: Biodegradability 2-butoxyethyl acetate; butyl glycol acetate: Readily biodegradable.; >60 %; 28 d; aerobic; OECD Test Guideline 301D (literature value).

Bioaccumulation potential: 2-butoxyethyl acetate; butyl glycol acetate: No bioaccumulation is to be expected (log Pow <= 4).

Mobility in soil: 2-butoxyethyl acetate; butyl glycol acetate: The study is not necessary. low potential for absorption Readily biodegradable.

Results of PBT and vPvB assessment: 2-butoxyethyl acetate; butyl glycol acetate: Based on available data, the classification criteria are not met.

Other adverse effects:

General advice: 2-butoxyethyl acetate; butyl glycol acetate: None known.

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13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Product: Can be incinerated, when in compliance with local regulations.

Disposal methods: A waste code in accordance with the European Waste Catalogue (EWC) may not be assigned to this product since it admits of a classification only when the consumer uses it for some purpose. The waste code must be determined in agreement with the regional waste disposal authority or company.

14. TRANSPORT INFORMATION

UN Number:

ADR/RID/IMDG/IATA: It is not considered as dangerous goods.

Proper Shipping Name:

ADR/RID/IMDG/IATA: It is not considered as dangerous goods.

Transport hazard class:

ADR/RID/IMDG/IATA: It is not considered as dangerous goods.

Packing group:

ADR/RID/IMDG/IATA: It is not considered as dangerous goods.

Environmental:

ADR/RID/IMDG/IATA: It is not considered as dangerous goods.

Special precautions for users:

ADR/RID/IMDG/IATA: It is not considered as dangerous goods.

Note: Dangerous goods class 9, Identification-No. 9003 ADNR, only when transported by inland waterways tanker.

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

Ship type: 3

Pollution category: Y

15. REGULATORY INFORMATION

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

Occupational restrictions: Employment restrictions for children and young workers in accordance with Directive 94/33/EC and the respective national provisions are to be observed.

National/other regulations:

Legislation on the control of major-accident hazards involving dangerous substances:

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

List entry in the directive: Not applicable.

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Notification status:

Switzerland:	Consolidated Inventory CH INV listed (product or constituents are listed).
US:	Toxic Substances Control Act TSCA listed (product or constituents are listed).
Canada:	Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) DSL listed (product or constituents are listed).
Australia:	Industrial Chemical (Notification and Assessment) Act AICS listed (product or constituents are listed).
Japan:	Kashin-Hou Law List ENCS (JP) listed (product or constituents are listed).
Japan:	Industrial Safety & Health Law (ISHL) List ISHL (JP) listed (product or constituents are listed).
Korea:	Existing Chemicals Inventory (KECI) KECI (KR) listed (product or constituents are listed).
Philippines:	The Toxic Substances and Hazardous and Nuclear Waste Control Act PICCS (PH) listed (product or constituents are listed).
China:	Inventory of Existing Chemical Substances INV (CN) listed (product or constituents are listed).

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in chapter 3.

Chemical safety assessment: 2-butoxyethyl acetate; butyl glycol acetate.
A Chemical Safety Assessment has been carried out for this substance.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3:

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.