

IN CASE OF TRANSPORTATION EMERGENCY CONTACT:

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1. IDENTIFICATION

PRODUCT NAME: GYLCOL ETHER EB ACETATE
CAS NO: 112-07-2
SYNONYMS: Ethylene glycol monobutyl ether acetate; 2-butoxyethyl acetate; acetic acid, 2-butoxyethyl ester
PRODUCT USES: SOLVENT IN CLEANERS AND COATINGS

2. HAZARDS IDENTIFICATION

Physical hazards

Flammable liquids: Category 4

Health hazards

Acute toxicity (Oral): Category 4

Acute toxicity (Dermal): Category 4

Acute toxicity (Inhalation) : Category 4

Specific target organ toxicity - repeated exposure (Inhalation) : Category 2

OSHA Specified Hazards: not applicable

SIGNAL WORDS: WARNING!

Hazard Statements:

Combustible liquid

Harmful if swallowed

Harmful in contact with skin

Harmful if inhaled

May cause damage to organs (Kidneys) through prolonged or repeated exposure

Precautionary Statement:

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Wear protective gloves/protective clothing/eye protection/face protection

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

Wash hands thoroughly after handling

Response:

In case of fire: Use water spray, carbon dioxide, dry chemical or foam for extinction

IF ON SKIN: Wash with plenty of soap and water

Call a POISON CENTER or doctor/physician if you feel unwell

Wash contaminated clothing before reuse.

IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing.

Get medical advice/attention if you feel unwell

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Storage: Store in a well-ventilated place. Keep container tightly closed

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC); Peroxide former

3. COMPOSITION

GENERAL INFORMATION: SUBSTANCE

CHEMICAL NAME	CAS #	% BY WEIGHT
2-butoxyethyl acetate	112-07-2	100

4. FIRST AID MEASURES

Inhalation:

Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Eye contact:

Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Skin contact:

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Ingestion:

Seek medical advice.

Most important symptoms and effects, both acute and delayed:

Symptoms may be delayed.

Indication of any immediate medical attention and special treatment needed

Hazards: None known.

Treatment: Treat symptomatically.

5. FIRE FIGHTING MEASURES

General fire hazards: Combustible liquid and vapor. USE WATER WITH CAUTION. Material will float and may ignite on surface of water.

Extinguishing media

Suitable extinguishing media: Water spray. Dry chemical. Carbon Dioxide. Foam.

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture: Forms peroxides of unknown stability.

Advice for firefighters

Special fire fighting procedures: Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear appropriate personal protective equipment.

Environmental precautions:

Avoid release to the environment.

Methods and material for containment and cleaning up:

Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

Notification Procedures:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Precautions for safe handling:

Keep away from heat, sparks and open flame. Avoid breathing mists or vapors. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Do not allow to evaporate to near dryness. Do not distill to near dryness. Addition of water or appropriate reducing materials will lessen peroxide formation.

Conditions for safe storage, including any incompatibilities:

Keep away from food, drink and animal feeding stuffs. Keep container tightly closed and in a well-ventilated place. Store away from heat and light.

Specific end use(s):

Solvent

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Occupational exposure limits

Wear appropriate personal protective equipment. Avoid release to the environment.

Chemical Name	Type	Exposure Limit Values	Source
2-butoxyethyl acetate;	TWA	20 ppm	US. ACGIH Threshold limit Values (01 2010)
butylglycol acetate	TWA	25 ppm	

Exposure controls

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information:

Eye bath. Washing facilities. Safety shower.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

Skin protection Hand protection:

Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Other:

No data available.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air- purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures:

Observe good industrial hygiene practices.

Environmental Controls:

No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Physical State: Liquid

Form: Liquid

Color: Colorless

Odor: Mild

Odor Threshold: not determined

pH: No data available

Freezing Point: -64.6°C

Boiling Point: 186° C

Flash Point: 71°C (Tag closed cup)

Evaporation Rate: 0.03

Flammability (solid, gas): No data available

Flammability Limit - Upper (%)-: No data available

Flammability Limit - Lower (%)-: No data available

Vapor pressure: 0.39 mbar (20°C)

Vapor density (air=1): 5.5

Specific Gravity: 0.94 (20°C)

Solubility(ies):

Solubility in Water: 1 g/l

Solubility (other): no data available

Partition coefficient (n-octanol/water): No data available

Autoignition Temperature: 340 °C (ASTM D2155)

Decomposition Temperature: 193 °C (DTA) No exotherm

Dynamic Viscosity: 1.8 mPa.s (20 °C)

Kinematic viscosity: 1.91 mm²/s (20 °C)

Explosive properties: No data available.

Oxidizing properties: No data available.

10. STABILITY AND REACTIVITY

Reactivity: None known

Chemical stability: Stable

Possibility of hazardous reactions: Forms peroxides of unknown stability

Conditions to avoid: Heat, sparks, flames

Incompatible materials: Strong oxidizing agents

Hazardous decomposition products: Carbon dioxide. Carbon Monoxide

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation: Harmful if inhaled.

Ingestion: Harmful if swallowed.

Skin contact: Harmful in contact with skin.

Eye contact: None known.

Information on toxicological effects Acute Toxicity

Oral

Product: No data available

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: Oral LD-50: (Rat, Male and Female): 1,880 mg/kg

Dermal

Product: No data available.

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: Dermal LD-50: (Rabbit): 1,500 mg/kg

Inhalation

Product: No data available.

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate:

LC50 (Rat, 4 h): > 450 ppm 7.82 mg/l (highest concentration obtainable)

LC50 (Rat, 4 h): > 4.59 mg/l

Repeated dose toxicity

Product: No data available

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate; No data available

Skin corrosion/irritation:

Product: No data available

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: (Guinea Pig, 72 h): very slight

Serious eye damage/eye irritation:

Product: No data available

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: (Rabbit): Slight

Respiratory or skin sensitization:

Product: no data available

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: Skin Sensitization; (Guinea Pig) - non sensitizing

Mutagenicity

In vitro

Product: No data available

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: No data available

In vivo

Product: no data available

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: No data available

Carcinogenicity

Product: No product available

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: No data available

Reproductive toxicity

Product: No data available

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: No data available

Specific target organ toxicity - single exposure

Product: No data available.

Specified substance(s)

2-butoxyethyl acetate; butylglycol acetate: No data available.

Specific target organ toxicity - repeated exposure

Product: Not data available

Specified substance(s)
2-butoxyethyl acetate; butylglycol acetate: Inhalation: Kidney

Aspiration Hazard
Product: No data available
Specified substance(s)
2-butoxyethyl acetate; butylglycol acetate: No data available

Other adverse effects: Can cause kidney damage

12. ECOLOGICAL INFORMATION

Acute Toxicity
Fish
Product: No data available

specified substance(s)
2-butoxyethyl acetate; butylglycol acetate LC-50 (Rainbow Trout, 96 h): 20-40 mg/l

Aquatic Invertebrates
Product: No data available

Specified substance(s)
2-butoxyethyl acetate; butylglycol acetate EC-50 (daphnid, 48 h): 37 mg/l

Chronic Toxicity
Fish
Product: No data available

Specified substance(s)
2-butoxyethyl acetate; butylglycol acetate No data available

Aquatic Invertebrates
Product: no data available

Specified substance(s)
2-butoxyethyl acetate; butylglycol acetate No data available

Toxicity to Aquatic Plants
Product: No data available

Specified substance(s)
2-butoxyethyl acetate; butylglycol acetate EC-50 (Algae (Pseudokirchneriella subcapitata), 72 h): 1,570 mg/l

Persistence and degradability
Biodegradation
Product: No data available

Specified substance(s)
2-butoxyethyl acetate; butylglycol acetate 88% (28 d, Ready Biodegradability: Manometric Respirometry test)

Biological Oxygen Demand:
Product: No data available

Specified substance(s)

2-butoxyethyl acetate; No data available
butylglycol acetate

Chemical Oxygen Demand:
Product: No data available

Specified substance(s)
2-butoxyethyl acetate; No data available
butylglycol acetate

BOD/COD ratio
Product: No data available

Specified substance(s)
2-butoxyethyl acetate; No data available
butylglycol acetate

Bioaccumulative potential
Product: No data available

Specified substance(s)
2-butoxyethyl acetate; No data available
butylglycol acetate

Mobility in soil:
Known or predicted distribution to environmental compartments
2-butoxyethyl acetate; No data available
butylglycol acetate

Results of PBT and vPvB assessment: No data available

2-butoxyethyl acetate; No data available
butylglycol acetate

Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

General information:
No data available

Disposal methods:
Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

14. TRANSPORT INFORMATION

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT:
Class combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities

Possible Shipping Description(s):

NA 1993 Combustible liquid, n.o.s. (2-butoxyethyl acetate) combustible liquid III

IMDG - International Maritime Dangerous Goods Code
Class not regulated

Possible Shipping Description(s):

not regulated

IATA

Class not regulated

Possible Shipping Description(s):

not regulated

15. REGULATORY INFORMATION

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

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS(Canada)Status: controlled

WHMIS(Canada)HazardClassification: B/3,D/1/B

SARA 311-312 Hazard Classification(s):

immediate (acute) health hazard delayed (chronic) health hazard fire hazard

reactive hazard

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List

GLYCOL ETHERS 100%

OSHA: hazardous

TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL. Any impurities present in this product are exempt from listing.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

16. OTHER INFORMATION

HMIS® Hazard Ratings: Health - 2*, Flammability - 2, Chemical Reactivity - 1

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Disclaimer:

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

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