



Safety Data Sheet

1. PRODUCT IDENTIFICATION

Name	Glycol Ether EB Acetate
Synonyms	ethylene glycol monobutyl ether acetate; 2-butoxyethyl acetate; acetic acid, 2-butoxyethyl ester
CAS#	112-07-2
Europe EC#	203-933-3
Product Uses	solvent in cleaners and coatings

EMERGENCY INFORMATION

Canada Call CANUTEC (collect) (613) 996-6666
U.S.A. Call CHEMTREC (800) 424-9300

2. HAZARDS

GHS Class (Category)	<i>combustible</i> (4)	<i>acute oral</i> (4)	<i>acute skin</i> (4)	<i>acute inhal.</i> (4)
Signal Words	WARNING (no Pictogram)	WARNING	WARNING	WARNING
Hazard Statements	<i>combustible liquid (H227)</i>	<i>harmful if swallowed (H302)</i>	<i>harmful in contact with skin (H312)</i>	<i>harmful if inhaled (H332)</i>



GHS Precautionary Statements for Labelling

P210	Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P262	Do not get in eyes, on skin or on clothing.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear eye protection, protective gloves and clothing of butyl.

Canada – WHMIS
Key:

B 3, D 2B
B 2 – Flash Point <38°C, **B 3** – Flash Point >38°C & <93°C
D 1 – Immediately Toxic, **D 2** – Chronic Toxicity
C – Oxidising Substance, **E** – Corrosive, **F** – Reactive Substance



3. COMPOSITION

	%	TWAEV / TLV ppm / mg/m ³	LD ₅₀ (mg/kg) ORAL	LD ₅₀ (mg/kg) SKIN	LC ₅₀ mg/m ³ INHALATION
2-butoxyethyl acetate	100%	20 / 130	1600	1490	>3980

Please ensure that this SDS is given to, and explained to people using this product.

4. FIRST AID

- SKIN: Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered.
- EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.
- INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If breathing stops, administer artificial respiration and seek medical aid promptly.
- INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

5. FIRE FIGHTING & FLAMMABILITY

Flash Point	71°C / 160°F (closed cup); also given as 78°C / 172°F & as 84°C / 183°F ¹
Autoignition Temperature	340°C / 645°F
Flammable Limits	0.9% ó 8.5%
Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments
Firefighting Precautions	alcohol foam, dry chemical, water fog or spray; firefighters must wear SCBA
Static Charge Accumulation	cannot accumulate a static charge on agitation or pumping

6. ACCIDENTAL RELEASE MEASURES

- Leak Precaution dyke to control spillage and prevent environmental contamination
- Handling Spill ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep & pick up using plastic or aluminium shovel, & store in closed containers for recycling or disposal

7. HANDLING & STORAGE

Store in a cool, dry environment, away from sources of ignition, heat and oxidising agents.

Glycol Ether EB Acetate may react with oxygen in air to form explosive peroxides. Ensure that containers are full & tightly sealed. If prolonged storage of a part container is anticipated, flush headspace with dry nitrogen gas prior to sealing. Empty containers may contain a flammable / explosive vapour. Always ensure that containers, whether empty or full, are tightly sealed unless in use.

Avoid breathing product vapour or mist. Never cut, drill, weld or grind on or near this container. Avoid contact with skin and wash work clothes frequently. An eye bath and safety shower must be available near the workplace.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Ontario TWAEV	not listed ppm / mg/m ³	Ontario STEV	not listed
ACGIH TLV	20ppm / 130mg/m ³	ACGIH STEL	not listed
OSHA PEL	not listed ppm / mg/m ³	OSHA STEL	not listed
Ventilation	probably not required; <i>if product is heated, mechanical ventilation may be required</i>		
Hands	butyl rubber gloves recommended ó <i>other types may also protect; consult supplier to confirm suitability</i>		
Eyes	safety glasses with side shields ó <i>always protect the eyes</i>		
Clothing	no special protective clothing required		

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9. PHYSICAL PROPERTIES

Odour & Appearance	clear, colourless liquid with sweet, fruity odour
Odour Threshold	0.1 ó 0.5ppm
Vapour Pressure	0.3mmHg / 0.04kPa (20°C / 68°F)
Evaporation Rate (<i>Butyl Acetate</i> = 1)	not known ó <i>like high-flash mineral spirits</i>
Vapour Density (air = 1)	5.5
Boiling Range	192°C / 378°F
Freezing Point	-63°C / -81°F
Specific Gravity	0.942 (20/20°C)
Water Solubility	17grams/litre (20°C / 68°F)
Also soluble in	most organic solvents, limited solubility in glycols and methanol
Log P _{O/W} (Octanol/H ₂ O partition)	1.57
Viscosity	1.92 centipoise (20°C / 68°F) ¹
pH	none ó (<i>does not liberate hydrogen ions when dissolved</i>)
Conversion Factor	1ppm = 6.5mg/m ³
Molecular Weight	160grams per mole

10. REACTIVITY

Dangerously Reactive With	strong oxidising agents; strong alkalis
Also Reactive With	not known
Stability	stable; will not polymerize
Decomposes in Presence of	not known
Decomposition Products	gradually forms explosive peroxides on prolonged exposure to oxygen
Sensitive to Mechanical Impact	no

11. TOXICITY**Effects, Acute Exposure**

Skin Contact	not irritating
Skin Absorption	slight; no toxic effects likely by this route
Eye Contact	may be mildly irritating
Inhalation	may irritate but low vapour pressure makes this unlikely; mist or vapour from hot product may cause coughing, nasal discharge, chest pain and symptoms like headache and dizziness
Ingestion	headache, dizziness, nausea, vomiting ó <i>not a route of industrial exposure</i>
LD ₅₀ (oral)	1600 ó 7000mg/kg (rat, several tests), 2830 & 3200mg/kg (mouse)
LD ₅₀ (skin)	1490mg/kg (rabbit)
LC ₅₀ (inhalation)	2660, 3680mg/m ³ (rat) ó <i>no mortality</i> ¹ , 3910mg/m ³ (rat) ó <i>2 of 18 animals died</i> ¹

Effects, Chronic Exposure

General	prolonged exposure may cause dermatitis; may damage liver & kidneys; may damage red cells causing reddish-brown urine
Sensitising	not a sensitizer in humans or animals
Carcinogen/Tumorigen	not carcinogenic by the U.S. NTP or by OSHA; animal (rodent) carcinogen A3 (ACGIH); not known to be a carcinogen or tumorigen in humans
Reproductive Effect	no known effect in humans or animals
Mutagen	no known effect on humans or animals
Synergistic With	existing skin condition
LOAEL (reproduction)	720mg/kg/day (<i>rat pup weight</i>) ¹

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12. ECOLOGICAL INFORMATION

Bioaccumulation	not a bioaccumulator
Biodegradation	biodegrades readily & rapidly in the presence of oxygen; 90% in 28 days
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 18 hours
Mobility in soil, water	water soluble; moves readily in soil and water
Aquatic Toxicity	
LC ₅₀ (Fish, 48hr)	80mg/litre (<i>Luciscus idus</i>), 28mg/litre (<i>Oncorhynchus mykiss</i>) ¹ 31mg/litre (<i>Pimephelas promelas</i>) ¹
EC ₅₀ (Crustacea, 48hr)	37-150mg/litre (<i>Daphnia magna</i> , <i>several tests</i>)
EC ₅₀ (Algae)	>500mg/litre (<i>Scenedesmus subspicatus</i>), 520mg/litre (<i>Pseudokirchnerella quadricauda</i>) ¹
EC ₅₀ (Bacteria)	960mg/litre (<i>Pseudomonas subspicatus</i>)
EC ₂₀ (Bacteria)	900mg/litre (<i>domestic sewage sludge</i>) ¹

13. DISPOSAL

Waste Disposal	do not flush to sewer , recycle solvent if possible, may be incinerated in approved facility
Containers	Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use. Pails must be vented and thoroughly dried prior to crushing and recycling. IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5yrs). Steel containers must be inspected, pressure tested & recertified every 5 years. <i>Never cut, drill, weld or grind on or near this container, even if empty</i>

14. TRANSPORT CLASSIFICATION

Canada TDG	PIN	UN - not regulated for transport
AND	Shipping Name	not regulated for transport
U.S.A. 49 CFR	Class & Packing Group	not regulated for transport
Marine Pollutant		not a marine pollutant
ERAP Required		NO

15. REGULATIONS

Canada DSL	on inventory
U.S.A. TSCA	on inventory
Europe EINECS	on inventory

U.S.A. Regulations:

NIOSH Recommendations: NIOSH recommends reducing exposure to lowest feasible concn & preventing contact with the skin. /Glycol ethers/ Recommended Exposure Limit: 10 Hr Time-Weighted Avg: 5 ppm (33 mg/cu m).

Atmospheric Standards: This action promulgates standards of performance for equipment leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI). The intended effect of these standards is to require all newly constructed, modified, and reconstructed SOCMI process units to use the best demonstrated system of continuous emission reduction for equipment leaks of VOC, considering costs, non air quality health and environmental impact and energy requirements. Ethylene glycol monobutyl ether acetate is produced, as an intermediate or final product, by process units covered under this subpart.

FDA Requirements: Ethylene glycol monobutyl ether acetate is an indirect food additive for use only as a component of adhesives.

16. OTHER INFORMATION

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Data from RTECS, HSDB (Haz. Substance Data Base), Cheminfo (CCOHS), IUCLID Datasheets (ESIS – European Chem. Substance Info. System), & others.

Preparation Date: **March 2002** Revision Date: **May 2005, June 2008, June 2011, June 2014**

(1) European Chemicals Agency (ECHA) dossier on 2-butoxyethylacetate:

http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d9c0d68-65c9-5550-e044-00144f67d249/DISS-9d9c0d68-65c9-5550-e044-00144f67d249_DISS-9d9c0d68-65c9-5550-e044-00144f67d249.html

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