



## Safety Data Sheet

### 1. PRODUCT IDENTIFICATION

Name	<b>Glycol Ether DB Acetate</b>
Synonyms	diethylene glycol monobutyl ether acetate; 2-(2-butoxyethoxy)ethyl acetate
CAS#	124-17-4
Europe EC#	204-685-9
Product Uses	solvent, coupling agent

### 2. HAZARDS

<b>Quick Guide:</b>	<i>not hazardous</i>
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#### Canada – WHMIS

Key:

**not controlled under WHMIS***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*

#### U.S.A. – HMIS

Key:

**Health – 0, Fire – 1, Reactivity – 0***0=minimal, 1=slight, 2=moderate, 3=serious, 4=severe*

### 3. COMPOSITION

	%	TWAEV / TLV mg/m <sup>3</sup>	LD <sub>50</sub> (mg/kg) ORAL	LD <sub>50</sub> (mg/kg) SKIN	LC <sub>50</sub> ppm INHALATION
Diethylene Glycol Monobutyl Ether Acetate	100%	not listed	2260	5640	8700

### 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	116°C / 241°F (open cup)
Autoignition Temperature	295°C / 536°F
Flammable Limits	0.76% - 5.0%
Combustion Products	carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments
Firefighting Precautions	foam, dry chemical, CO <sub>2</sub> ; water fog or spray only to cool containers & dilute spilled material,
Static Charge Accumulation	product floats on water – water jet spreads flames; firefighters must wear SCBA cannot accumulate a static charge on agitation or pumping

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

**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, 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. Empty containers may contain a flammable / explosive vapour. Always ensure that containers, whether empty or full, or part full, are tightly sealed unless in use.

Avoid breathing product mist. Never cut, drill, weld or grind on or near this container. Avoid prolonged 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
ACGIH TLV	not listed
OSHA PEL	not listed
Ventilation	no special ventilation required; if product mist forms in use, install adequate exhaust ventilation to clear workplace air
Hands	no special protective gloves required; butyl or nitrile gloves are resistant – <i>confirm suitability with supplier</i>
Eyes	safety glasses with side shields – <i>always protect the eyes</i>
Clothing	no special protective clothing required

**9. PHYSICAL PROPERTIES**

Odour & Appearance	clear, colourless liquid with slight, pleasant odour and bitter taste
Odour Threshold	not known
Vapour Pressure	0.04mmHg / 0.005kPa (20°C / 68°F)
Evaporation Rate ( <i>Butyl Acetate = 1</i> )	below 0.01
Vapour Density (air = 1)	7
Boiling Range	245°C / 473°F
Freezing Point	-32°C / -23°F
Specific Gravity	0.954 (20/20°C)
Water Solubility	65 grams per litre (20°C / 68°F); <i>also given as 35grams per litre (25°C / 77°F)</i>
Also soluble in	most organic solvents; particularly soluble in acetone, diethyl ether & ethyl alcohol
Viscosity	5.6centipoise (20°C / 68°F)
pH	none – ( <i>does not liberate hydrogen ions when dissolved</i> )
Conversion Factor	1ppm = 8.34mg/m <sup>3</sup>
Molecular Weight	204grams per mole

**10. REACTIVITY**

Dangerously Reactive With	strong oxidising agents, 70% perchloric acid causes explosion
Also Reactive With	none known
Stability	stable; will not polymerize
Decomposes in Presence of	not known
Decomposition Products	none apart from Hazardous Combustion Products
Sensitive to Mechanical Impact	no

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## 11. TOXICITY

### Effects, Acute Exposure

Skin Contact	may be mildly irritating, causing slight reddening & slight exfoliation
Skin Absorption	yes; no toxic effects likely by this route
Eye Contact	may be slightly irritating; will not damage
Inhalation	may irritate but low vapour pressure makes this unlikely
Ingestion	not known – not a route of industrial exposure

### Effects, Chronic Exposure

General	prolonged exposure may cause dermatitis; 13 weeks of skin application in rabbits caused some kidney damage & blood in the urine
Sensitising	not a sensitiser in humans or animals
Carcinogen/Tumorigen	not considered a tumorigen or a carcinogen in humans or animals
Reproductive Effect	no known effect in humans or animals
Mutagen	no known effect on humans or animals
Synergistic With	not known
LD <sub>50</sub> (oral)	6500 & 11,920mg/kg (rat); 6300mg/kg (mouse), 2260, 2400 & 2670mg/kg (rabbit), 2340 & 2575mg/kg (guinea pig)
LD <sub>50</sub> (skin)	5640 & 14,500mg/kg (rabbit)
LC <sub>50</sub> (inhalation)	8700ppm (rat)

## 12. ECOLOGICAL INFORMATION

Bioaccumulation	not a bioaccumulator
Biodegradation 90%	biodegrades readily in the presence of oxygen: 100% in 28 days; 73% in 20days; 69% in 10 days; in 14 days, also 58% & 84% in 10days with microorganisms acclimated for 28 & 59 days respectively
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 3.8hr & 12.5hr; hydrolyses in water with a ½-life of 300 days at pH 7 & 30 days at pH 8
Mobility in soil, water	water soluble; moves readily in soil and water
<b>Aquatic Toxicity</b>	
LC <sub>50</sub> (Fish, 96hr)	50-70mg/litre (Brachydanio rerio), 77mg/litre (Pimephelas promelas) & others
EC <sub>50</sub> (Crustacea, 48hr)	655mg/litre (Daphnia magna)
EC <sub>50</sub> (Algae)	not known
EC <sub>50</sub> (Bacteria)	>5000mg/litre (“aquatic bacteria”);
EC <sub>0</sub> (Bacteria)	1574mg/litre (industrial activated sludge)

## 13. DISPOSAL

Waste Disposal	<b>do not flush to sewer</b> , recycle solvent if possible; may be incinerated in approved facility
Containers	<b>Drums</b> should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use. <b>Pails</b> must be vented and thoroughly dried prior to crushing and recycling. <b>IBCs</b> (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>

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## **14. TRANSPORT CLASSIFICATION**

<b>Canada TDG</b>	<b>PIN</b>	<b>UN – not regulated for transport</b>
<b>AND</b>	<b>Shipping Name</b>	<b>not regulated for transport</b>
<b>U.S.A. 49 CFR</b>	<b>Class &amp; Packing Group</b>	<b>not regulated for transport</b>
<b>Marine Pollutant</b>		<b>not a marine pollutant</b>
<b>ERAP Required</b>		<b>NO</b>

### ***EMERGENCY INFORMATION***

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

## **15. REGULATIONS**

<b>Canada DSL</b>	<b>on inventory</b>
<b>U.S.A. TSCA</b>	<b>on inventory</b>
<b>Europe EINECS</b>	<b>on inventory</b>

**Europe Classification**                    *not classified as hazardous in Europe*

### ***U.S.A. Regulations:***

**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. Diethylene glycol monobutyl ether acetate is produced, as an intermediate or a final product, by process units covered under this subpart.

**TSCA Requirements:** Pursuant to section 8(d) of TSCA, EPA promulgated a model Health and Safety Data Reporting Rule. The section 8(d) model rule requires manufacturers, importers, and processors of listed chemical substances and mixtures to submit to EPA copies and lists of unpublished health and safety studies. 2-(2-butoxyethoxy)ethyl acetate is included on this list. Manufacturers and processors of diethylene glycol butyl ether acetate required to conduct pharmacokinetic testing under TSCA section 4. The effective date of the final rule is April 11, 1988.

## **16. OTHER INFORMATION**

*Prepared for Megaloid Laboratories by Peter Bursztyn, (705) 734-1577*

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

*Preparation Date:            **January 2004**    Revision Date:    **February 2007, February 2010, February 2013***

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