

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: Glycol Ether DB
Chemical name	: 2-(2-butoxyethoxy)ethanol
CAS-No.	: 112-34-5
Formula	: C8H18O3
Synonyms	: BDGE / butyl diglycol ether BDG / butyldigol / DEGBE / diethylene glycol monobutyl ether / diethyleneglycol butyl ether / ethanol, 2-(2-butoxyethoxy)- / Butoxyethoxy ethanol/ Butyl carbitol/
Other means of identification	: Solvent
BIG no	: 50482

1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Solvent Laboratory chemical
Recommended use	: Industrial use; Solvent; Use in Cleaning agents; Uses in coatings
Restrictions on use	: None known

1.3. Supplier

<u>Atlanta Branch Office</u>	<u>Ocoee Branch Office</u>	<u>Spartanburg Branch Office</u>
Whitaker Oil Company 1557 Marietta Road NW Atlanta, GA 30318 404-355-8220 (t) 404-355-2436 (f)	Whitaker Oil Company 280 Enterprise Street Ocoee, FL 34761 407-656.0088 (t) 407-877-8335 (f)	Whitaker Chemicals LLC 405 John Dodd Road Spartanburg, SC 29303 864-578-6968 (t) 864-578-6864 (f)

WEBSITE: www.whitakeroil.comEMAIL: SDS@whitakeroil.com

1.4. Emergency telephone number

Emergency number	: CHEMTREC 800-424-9300
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SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Specific target organ toxicity (single exposure) Category 3	H336	May cause drowsiness or dizziness

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US)	: Warning
Hazard statements (GHS-US)	: H319 - Causes serious eye irritation H336 - May cause drowsiness or dizziness
Precautionary statements (GHS-US)	: P261 - Avoid breathing vapors, spray, mist, gas, fume, dust P264 - Wash hands thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear eye protection, face protection, protective clothing, protective gloves P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

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P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P337+P313 - If eye irritation persists: Get medical advice/attention
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container in accordance with local, regional, national, and/or international regulations.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Diethylene glycol monobutyl ether	(CAS-No.) 112-34-5	>=99.0	Eye Irrit. 2A, H319 STOT SE 3, H336
2-Butoxyethanol *	(CAS-No.) 111-76-2	<=0.5	STOT SE 3, H336

* Impurity

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Consult a physician/doctor if necessary. Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Show this safety data sheet to the doctor in attendance.

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Immediately remove excess chemical and contaminated clothing; thoroughly wash contaminated skin with mild soap and water. If irritation persists after washing, seek medical attention. Thoroughly clean contaminated clothing before reuse; discard contaminated leather goods (gloves, shoes, belts, wallets, etc.).

First-aid measures after eye contact : Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

First-aid measures after ingestion : If product is ingested, do not induce vomiting and contact a physician or Poison Control Center.

4.2. Immediate medical attention and special treatment, if necessary

Notes to physician

Symptoms : Aspiration may cause pulmonary edema and pneumonitis. Irritant effects. Central nervous system effects.

Hazards : May be harmful if swallowed and enters airways. May be harmful if swallowed. May be harmful in contact with skin. May be harmful if inhaled. Causes mild skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

Treatment : Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam.
LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.

Unsuitable extinguishing media : Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

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5.2. Specific hazards arising from the chemical

- Fire hazard : Fight fire from maximum distance or use unmanned hose holder or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire.
- Reactivity : May form peroxides. Reacts violently with many compounds e.g. (some) acids/bases and (strong) oxidizers: (increased) risk of fire/explosion.

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- Personal precautions : Evacuate personnel to safe areas. Keep people away from and upwind of spill/ leak. Use personal protective equipment. Ensure adequate ventilation. Eliminate all sources of ignition.
- Emergency procedures : Mark the danger area. No naked flames. Avoid contact with air. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.
- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

- Environmental precautions : Do not allow contact with soil, surface or ground water. Do not discharge product into the aquatic environment without pretreatment (biological treatment plant). Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

- For containment : Contain spill with dike to prevent entry into sewers or waterways.
- Methods for cleaning up : For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spills, soak up with absorbent material and place in properly labeled containers for disposal. All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

- For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Advice on safe handling : Do not handle near heat, sparks, or flame. Avoid contact with incompatible agents. Use only with adequate ventilation/ personal protection. Avoid contact with eyes, skin and clothing. Do not enter storage area unless adequately ventilated. Metal containers involved in the transfer of this material should be grounded and bonded.
- It is recommended that any liquid product exposed to air not be highly concentrated by evaporation without first assuring that no peroxide is present.
- Alternatively, positive steps should be taken to reduce any accumulated peroxides to a safe level before concentrating the liquid.
- Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperature possibly resulting in spontaneous combustion.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store containers in a cool, dry, ventilated, fire resistant area away from sources of ignition and incompatible materials. Keep container tightly closed and properly labeled.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Diethylene glycol monobutyl ether (112-34-5)		
ACGIH	ACGIH TWA (ppm)	10 ppm
2-Butoxyethanol (111-76-2)		
ACGIH	ACGIH TWA (ppm)	20 ppm
NIOSH	NIOSH IDLH (ppm)	700 ppm
OSHA	OSHA TWA (ppm)	50 ppm 240 mg/m ³

8.2. Appropriate engineering controls

- Appropriate engineering controls : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below the recommended exposure limits.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Use chemical resistant gloves appropriate to conditions of use.
Acid-resistant protective gloves.

Eye protection:

Safety glasses with side-shields.

Skin and body protection:

Appropriate protective clothing should be worn to prevent skin contact.

Respiratory protection:

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Clear
Odor	: Faint butyl odor
Odor threshold	: No data available
pH	: 6 – 7.5
Melting point / freezing point	: < -70 °C (1013 hPa)
Boiling point range	: 228 - 234 °C
Flash point	: 105 - 114 °C
Relative evaporation rate (butyl acetate=1)	: < 0.01
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 0.027 hPa (20 °C)
Relative vapor density at 20 °C	: 5.6
Relative density	: 0.955 (20 °C)
Relative density of saturated gas/air mixture	: 1
Specific gravity / density	: 0.95 g/cm ³
Molecular mass	: 162.23 g/mol

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Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in tetrachloromethane. Soluble in heptane. Soluble in oil. Water: 95.5 g/100ml (20 °C)
Log Pow	: 1 (Experimental value, Equivalent or similar to OECD 107, 20 °C)
Auto-ignition temperature	: 210 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: 6.1 mm ² /s
Viscosity, dynamic	: 6.5 mPa.s
Explosion limits	: 0.85 - 24.6 vol % LEL: 0.85 vol % UEL: 24.6 vol %
Explosive properties	: Not explosive
Oxidizing properties	: Not considered an oxidizing agent

9.2. Other information

Specific conductivity	: 125000 pS/m
Saturation concentration	: 0.2 g/m ³
VOC content	: 0 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Slightly volatile. Substance has neutral reaction. May generate electrostatic charges.

SECTION 10: Stability and reactivity

10.1. Reactivity

Will not occur

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with strong oxidizers, excessive heat, sparks or open flames.

10.5. Incompatible materials

Oxidizers, Acids, Alkalis

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Diethylene glycol monobutyl ether (112-34-5)	
LD50 dermal rabbit	2764 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Male, Experimental value)
ATE US (oral)	2410 mg/kg body weight
ATE US (dermal)	2764 mg/kg body weight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: May cause drowsiness or dizziness.
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Potential Adverse human health effects and symptoms	: Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Practically non-toxic through skin (LD50 skin 2000/5000 mg/kg). Slightly irritant to skin. Slightly harmful by inhalation. Slightly irritant to respiratory organs. Causes serious eye irritation. Caution! Substance is absorbed through the skin.
Symptoms/effects	: May cause drowsiness or dizziness.
Symptoms/effects after inhalation	: Dry/sore throat.
Symptoms/effects after skin contact	: Slight irritation. Dry skin.
Symptoms/effects after eye contact	: Irritation of the eye tissue. Inflammation/damage of the eye tissue.
Symptoms/effects after ingestion	: AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Nausea. Vomiting. Headache. Dizziness. Drunkenness. Coordination disorders. Rapid respiration. Accelerated heart action. Low arterial pressure. Disturbances of consciousness. Decreased renal function.
Chronic symptoms	: No effects known.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	: Not harmful to fishes. Groundwater pollutant. Slightly harmful to algae. Not harmful to bacteria. Not harmful to crustacea.
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Diethylene glycol monobutyl ether (112-34-5)	
LC50 fish 1	1300 mg/l (Equivalent or similar to OECD 203, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value)
EC50 Daphnia 1	4950 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)

12.2. Persistence and degradability

Diethylene glycol monobutyl ether (112-34-5)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

Diethylene glycol monobutyl ether (112-34-5)	
Log Pow	1 (Experimental value, Equivalent or similar to OECD 107, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Diethylene glycol monobutyl ether (112-34-5)	
Surface tension	27 mN/m (25 °C, 0.00212 mol/g)
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of all waste and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations. Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. The materials resulting from clean-up operations may be hazardous wastes and therefore, subject to specific regulations.
Product/Packaging disposal recommendations	: Do not discharge into surface water. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

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SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : NOT REGULATED FOR TRANSPORT
UN-No.(DOT) : NOT REGULATED FOR TRANSPORT
Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Air transport

SECTION 15: Regulatory information

15.1. US Federal regulations

Diethylene glycol monobutyl ether (112-34-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA 302/304

This product contains no known chemicals regulated under SARA 302/304

SARA 311/312

Based upon available information, this material is classified as the following health and/or physical hazards according to Section 311 & 312: Health Hazards Eye Irritation Specific target organ systemic toxicity – single exposure

SARA 313

This product contains the following chemicals subject to the reporting requirements of SARA Title III, Section 313 and 40 CFR 372:

Component: Diethylene glycol monobutyl ether

Reporting Threshold: 1.0%

Component: 2-Butoxyethanol

Reporting Threshold: 1.0%

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

This material is not known to contain a chemical substance known to the State of California to cause cancer, reproductive, or developmental toxicity under California Proposition 65. However, Whitaker Oil Company has not tested for the presence of listed chemical substances.

This product contains the following chemicals regulated by New Jersey's Worker and Community Right to Know Act:

2-Butoxyethanol (111-76-2)

No components are subject to the Massachusetts Right to Know Act.

This product contains no known chemicals regulated by Pennsylvania's Right to Know Act.

SECTION 16: Other information

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Full text of H-phrases:

H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

NFPA health hazard

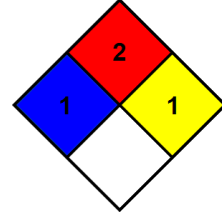
: 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard

: 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity

: 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



SDS US (GHS HazCom 2012)

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