

Section 1: Product & Company Information

Product Identifier: Glycol Ether EB

Other Means of Identification

Product Number: No data available.

Recommended Use and Restrictions on Use

Recommended Use: Solvent
Restrictions on Use : None known.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.
Address: 4320 Greenway Drive
Knoxville, TN 37918
USA

Information Telephone Number: 1-865-524-4239
Fax Number: 1-865-524-3375
Website: www.corecheminc.com
Contact Person: Regulatory Manager
E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Flammable, Liquids - 4

Health Hazard(s)

Acute Toxicity, Oral - 4
Corrosion/Irritation, Skin - 2
(Corrosion)Damage/Irritation, Eye - 2A
Specific Target Organ Toxicity (STOT)-CNS, Single exposure - 3

Environmental Hazard(s)

Not classified.

Label Elements

Signal Word

WARNING

Hazard Symbol(s)



Hazard Statement(s)

H227: Combustible liquid.
H302: Harmful if swallowed.
H315: Causes skin Irritation.
H319: Causes serious eye Irritation.
H336: May cause drowsiness or dizziness.

Precautionary Statements

General

Not applicable.

Prevention

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321: Specific treatment (see supplemental first aid instructions on this label).
 P330: Rinse mouth.
 P331: Do NOT induce vomiting.
 P332 + P313: If skin irritation occurs: Get medical advice/attention.
 P337 + P313: If eye irritation persists: Get medical advice/attention.
 P362: Take off contaminated clothing and wash before reuse.
 P370 + P378: In case of fire: Use suitable extinguishing media for extinction.

Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
 P403 + P235: Store in a well-ventilated place. Keep cool.
 P405: Store locked up.

Disposal

P501: 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.

Section 3: Composition/Information on Ingredients

Substance

| Chemical Identity ² | Common Name/Synonym(s) | CAS # ³ | Weight % | Impurity or Stabilizing Additive |
|--------------------------------|------------------------|--------------------|----------|----------------------------------|
| 2-Butoxyethanol | Glycol Ether EB | 111-76-2 | 100% | No |

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non- hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

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

Skin Contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye Contact

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Ingestion

Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. To prevent aspiration keep head below knees.

Most important symptoms/effects, acute and delayed

Symptoms

May irritate and cause redness and pain.

Indication of immediate medical attention and special treatment needed

Hazards

Glycol Ethers: Some glycol ethers cause adverse effects in animals that include the reproductive system, offspring, blood, kidney and liver.

Treatment

Treat symptomatically.

Section 5: Fire-Fighting Measures

General Fire Hazards

Combustible liquid and vapor.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Extinguishing powder, alcohol resistant foam, carbon dioxide, water fog.
 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

Do not use solid water stream

Specific Hazards Arising from the Chemical

Fire Hazard:

Evacuate area. Eliminate all ignition sources if safe to do so. Flash back possible over considerable distance. Fight fire with normal precautions from a reasonable distance. Cool closed containers exposed to fire with water spray.

Reactivity:

On exposure to air: peroxidation resulting in increased fire or explosion risk. Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion.
Reacts violently with (some) bases: (increased) risk of fire.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Use water spray to keep fire-exposed containers cool.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate area.

Methods and Materials for Containment and Clean-Up

Eliminate all sources of ignition. All equipment used when handling this product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

Notification Procedures

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

Environmental Precautions

Avoid release into the environment.

Section 7: Handling and Storage

Precautions for Safe Handling

Containers, even those that have been emptied, will retain product residue and vapor and should be handled as if they were full. Do not eat, drink or smoke in areas where this material is used. After handling, always wash hands thoroughly with soap and water. 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. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Conditions for Safe Storage, including any Incompatibilities

Prevent unauthorized access. Keep away from open flames, hot surfaces and sources of ignition. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

| Chemical Identity | Type | Value | Source |
|---|-----------|---------------------|----------------------------------|
| 2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve | ACGIH TWA | 20 ppm | US. ACGIH Threshold Limit Values |
| 2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve | OSHA PEL | 50 ppm 240 mg/m3 | US OSHA Table Z-1 |

Biological Limit Values

| Chemical Identity | CAS # | Parameter | Value | Biological Specimen | Source |
|---|----------|---|----------|---------------------|---|
| 2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve | 111-76-2 | Butoxyacetic Acid (BAA) with hydrolysis | 200 mg/g | Creatinine in Urine | ACGIH – Biological Exposure Indices (BEI) |
| Remarks: Sampling Time: End of Shift | | | | | |

Appropriate Engineering Controls

Ensure good ventilation of the workstation. Ensure that eyewash stations and safety showers are close to the workstation location. Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Individual protection measures, such as personal protective equipment (PPE)

General Information

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. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

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. 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

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Liquid
Color: Colorless

Odor: Mild Sweet, Ester

Odor Threshold: No data available.

pH: No data available.

Melting Point/Freezing Point: -74.8 °C

Initial Boiling Point and Boiling Range: 171-173.5 °C

Flash Point: 68-70 °C (Closed Cup)

Evaporation Rate (butyl acetate=1): 0.1

Flammability (solid, gas): No data available.

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: No data available.

Flammability Limit – Lower: No data available.

Explosive Limit – Upper: No data available.

Explosive Limit – Lower: No data available.

Vapor Pressure: 0.8 – 1.0 hPa (20 °C)

Vapor Density (air =1): 4.1

Relative Density (water=1): 0.9 (20 °C)

Solubility(ies):

Solubility in water: Soluble

Solubility (other): No data available.

Partition coefficient (n-octanol/water): Pow: 6.46 log Pow: 0.81

Auto-Ignition Temperature: 230 - 245 °C

Decomposition Temperature: No data available.

Viscosity, kinematic: 20 mm²/s

Other Information:

Molecular Weight: No data available.

Formula: No data available.

Section 10: Stability and Reactivity

Reactivity

May form peroxides in the presence of air.

Chemical Stability

Unstable on exposure to air.

Possibility of Hazardous Reactions

No dangerous reactions known under normal conditions of use.

Conditions to Avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

Incompatible Materials

Oxidizing agents. Acids. Bases. Amines. Ammonia. Acid chlorides.

Hazardous Decomposition Products

During combustion carbon monoxide may be formed. During combustion carbon dioxide may be formed. May form peroxides of unknown stability.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Harmful if swallowed. May be fatal if swallowed and enters airways.

Inhalation: None known.

Skin Contact: Causes skin irritation.

Eye Contact: Causes serious eye irritation.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: LD50 (Rat): 1,300 mg/kg

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: LD50 (Guinea Pig): 1,400 mg/kg

Dermal

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: LD50 (Rat): > 2,000 mg/kg
2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: LD50 (Guinea Pig): > 2,000 mg/kg

Inhalation

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: LC50 (Rat, 4 h): > 20 mg/l
2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: LC0 (Guinea Pig, 1 h): 3.4 mg/l

Repeated Dose Toxicity

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: LOAEL (Rat, Oral Study): 69 mg/kg (Target Organ(s): Liver)
2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: NOAEL (Rat, Dermal Study): 150 mg/kg
2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: LOAEC (Rat, Inhalation Study): 152 mg/m³ (Target Organ(s): Blood)

Skin Corrosion/Irritation

Causes skin irritation. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

Serious Eye Damage/Eye Irritation

Causes serious eye irritation

Respiratory/Skin Sensitization

Not classified

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

Salmonella typhimurium assay (Ames test), : negative +/- activation

In Vivo

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity – Single

Exposure

No data available.

Specific Target Organ Toxicity – Repeated Exposure

No data available.

Aspiration Hazard

Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Chronic Hazards:

Suspect cancer hazard. Possible reproductive hazard. May cause target organ damage. May cause central nervous system damage. Exposure may damage liver and kidneys. Significant exposure to this chemical may adversely affect people with chronic disease of the respiratory system, central nervous system, kidney, liver, skin, and/or eyes. Prolonged or repeated breathing of high concentrations may cause symptoms of central nervous system depression.

Other Effects

None known.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: LC50 (Oncorhynchus mykiss, 96 h): 1,474 mg/l

Aquatic Invertebrates

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: EC50 (Water Flea, 48 h): 1,550 mg/l

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment

Fish

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: NOEC (Zebra Fish, 21 d): > 100 mg/l

Aquatic Invertebrates

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: NOEC (Daphnid, 21 d): 100 mg/l

Toxicity to Aquatic Plants

2-Butoxyethanol; Ethylene Glycol Monobutyl Ether Butyl Cellosolve: EC50 (Pseudokirchneriella subcapitata, 72 h): 1,840 mg/l

Persistence and Degradability

Biodegradation

90.4 % (28 d) Readily biodegradable

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Low potential for bioaccumulation (Log Kow < 4).

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

Surface tension: 65.03 mN/m (20 °C, 2 g/l)

Ecology – soil: Low potential for adsorption in soil.

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated Packaging

Do not discharge into drains or the environment. 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. May be discharged to wastewater treatment installation.

Section 14: Transportation Information

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: Yes
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 313:
Chemical Name (111-76-2): 2-Butoxyethanol Reporting threshold 1.0%

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

New Jersey

Right to Know Hazardous Substance List

Pennsylvania

Right to Know List

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2
Chronic Health Hazard: /
Flammability: 2
Physical Hazard: 0
Personal Protection: X
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2
Fire Hazard: 2
Reactivity Hazard: 0
Special: N/A
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Sections Revised: Changed were made to sections all sections

Key to Abbreviations and Acronyms

| | |
|---|---|
| ATE - Acute Toxicity Estimate | ACGIH - American Conference of Industrial Hygienists |
| BCF - Bioconcentration Factor | AIHA - American Industrial Hygiene Association |
| EC50 - Effective concentration, 50% | BEI - Biological Exposure Indices |
| IDHL - Immediately Dangerous to Life and Health | CAS - Chemical Abstracts Service |
| Kg - Kilogram | DOT - US Department of Transportation |
| l - Liter | EPA - US Environmental Protection Agency |
| lb - Pound | GHS - Globally Harmonized System of Classification and Labelling of Chemicals |
| LC50 - Lethal Concentration, 50% | IARC - International Agency for Research on Cancer |
| LD50 - Lethal Dose, 50% | IATA - International Air Transport Association |
| mg - milligram | IBC - Intermediate Bulk Container |
| ml - milliliter | IMDG - International Maritime Dangerous Goods |
| N/A - Not Applicable | NIOSH - National Institute for Occupational Safety and Health |
| N/D - Not Determined | NTP - National Toxicology Program |
| PEL - Permissible Exposure Limit | OSHA - US Occupational Health and Safety Administration |
| REL - Recommended Exposure Limit | SARA - US EPA Superfund Amendments and Reauthorization Act |
| STEL - Short-term Exposure Limit | TSCA - US EPA Toxic Substances Control Act |
| TWA - Time weighted average | UN - United Nations |

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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