

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Substance
Substance name	: Glycol Ether DE
CAS-No.	: 111-90-0
Formula	: C6H14O3
Synonyms	: 2-(2-ethoxyethoxy)ethanol, Diethylene Glycol Monoethyl Ether; DGEE
BIG no	: 10412

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Solvent
Recommended use	: Industrial use
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	Whitaker Oil Company	Whitaker Chemicals LLC
1557 Marietta Road NW	280 Enterprise Street	405 John Dodd Road
Atlanta, GA 30318	Ocoee, FL 34761	Spartanburg, SC 29303
404-355-8220 (t)	407-656.0088 (t)	864-578-6968 (t)
404-355-2436 (f)	407-877-8335 (f)	864-578-6864 (f)

**WEBSITE:** www.whitakeroil.com      **EMAIL:** SDS@whitakeroil.com

#### 1.4. Emergency telephone number

Emergency number : **CHEMTREC** 800-424-9300

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flammable liquids Category 4	H227	Combustible liquid
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)	: H227 - Combustible liquid H336 - May cause drowsiness or dizziness
Precautionary statements (GHS-US)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking heat, hot surfaces, open flames, sparks P261 - Avoid breathing dust, fume, gas, mist, vapors, spray 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 P312 - Call a POISON CENTER or doctor/physician if you feel unwell P370+P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish P403+P233 - Store in a well-ventilated place. Keep container tightly closed P403+P235 - Store in a well-ventilated place. Keep cool

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P405 - Store locked up  
P501 - Dispose of contents/container in an approved waste disposal plant

### 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
Glycol Ether DE (Main constituent)	(CAS-No.) 111-90-0	99.9	Flam. Liq. 4, H227 STOT SE 3, H336

Full text of hazard classes and H-statements : see section 16

### 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 : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
- First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Call Poison Control Center.

### 4.2. Immediate medical attention and special treatment, if necessary

- Notes to physician : High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration with collapse, coma and death in cases of severe over-exposure).
- Hazards : May cause drowsiness or dizziness.
- Treatment : Treat symptomatically.  
Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Treatment of metabolic acidosis, administration of ethanol, and hemodialysis may be indicated.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if puddle cannot expand.
- Unsuitable extinguishing media : Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : Airborne mists from this substance are a moderate fire and explosion hazard.  
Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.  
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. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

### 5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighborhood close doors and windows.

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- Firefighting instructions : Cool tanks/drums with water spray/remove them into safety.  
Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Safety glasses. Protective clothing.  
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.

##### 6.1.2. For emergency responders

- 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

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapor with water curtain.  
Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Scoop absorbed substance into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.  
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

- Precautions for safe handling : Keep away from naked flames/heat. At temperature > flashpoint: use spark-/explosionproof appliances. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Before use: check for peroxides and eliminate them. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle and open the container with care. Cool before opening. Thoroughly clean/dry the installation before use.  
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 in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.  
Storage area : Store at room temperature. Keep out of direct sunlight. Store in a dry area. Ventilation at floor level. Meet the legal requirements.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Materials for protective clothing:

GIVE GOOD RESISTANCE: PVC. butyl rubber

##### Hand protection:

Gloves

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### Eye protection:

Safety glasses or chemical safety goggles.

### Skin and body protection:

Protective clothing

### Respiratory protection:

Full face mask at conc. in air > exposure limit

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

*Information in this section was derived from the producer or from common industry held information. Whitaker is not the producer of this material.*

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless
Odor	: Pleasant odor. Mild odor.
Odor threshold	: 1 ppm 6 mg/m <sup>3</sup>
pH	: No data available
Melting point/ Freezing point	: -54 °C (-65 °F)
Boiling point	: 202 °C
Flash point	: 94 °C
Relative evaporation rate (butyl acetate=1)	: 0.1
Relative evaporation rate (ether=1)	: 518
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 0.13 hPa (20 °C)
Relative vapor density at 20 °C	: 4.6
Relative density	: 0.99
Relative density of saturated gas/air mixture	: 1
Specific gravity / density	: 998 kg/m <sup>3</sup>
Molecular mass	: 134.18 g/mol
Solubility	: Miscible with water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in aliphatic hydrocarbons. Soluble in halogenated hydrocarbons. Soluble in pyridine. Water: complete
Log Pow	: -1.19 - -0.08
Auto-ignition temperature	: 204 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: 3.908 mm <sup>2</sup> /s
Viscosity, dynamic	: 3.9 mPa.s (25 °C)
Explosion limits	: 1.2 - 23.5 vol % LEL: 1.2 vol % (135 °C) UEL: 23.5 vol % (135 °C)
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

Specific conductivity	: 25000 pS/m
VOC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Hygroscopic. Slightly volatile.

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reacts slowly on exposure to air: peroxidation resulting in increased fire or explosion risk. Reacts violently with (strong) oxidizers: (increased) risk of fire. Reacts exothermically with (some) bases. Reacts violently with (some) acids.

#### 10.2. Chemical stability

Unstable on exposure to air. Hygroscopic.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

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

#### 10.5. Incompatible materials

Oxidizing agents, (strong) acids, (strong) bases, metals, peroxides, water/moisture, aluminum, copper.

#### 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 (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Glycol Ether DE (111-90-0)	
LD50 oral rat	5445 mg/kg (Rat)
LD50 dermal rat	5940 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5.2 mg/l (4 h, Rat)
ATE US (oral)	5445 mg/kg body weight
ATE US (dermal)	5940 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

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

Viscosity, kinematic : 3.908 mm<sup>2</sup>/s

Potential Adverse human health effects and symptoms : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Not irritant to skin. 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 : No effects known.

Symptoms/effects after skin contact : Red skin.

Symptoms/effects after eye contact : Irritation of the eye tissue.

Symptoms/effects after ingestion : AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dizziness. Nausea. Coordination disorders. Disturbances of consciousness. Decreased renal function.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Decreased renal function.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

- Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
- Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
- Ecology - water : Not harmful to crustacea. Not harmful to fishes. Groundwater pollutant. Mild water pollutant (surface water).

Glycol Ether DE (111-90-0)	
LC50 fish 1	12900 mg/l (96 h, Salmo gairdneri, Flow-through system)
EC50 Daphnia 1	3940 mg/l (48 h, Daphnia magna)

#### 12.2. Persistence and degradability

Glycol Ether DE (111-90-0)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.2 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.85 g O <sub>2</sub> /g substance
ThOD	1.9078849 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.11

#### 12.3. Bioaccumulative potential

Glycol Ether DE (111-90-0)	
Log Pow	-1.19 - -0.08
Bioaccumulative potential	Not bioaccumulative.

#### 12.4. Mobility in soil

Glycol Ether DE (111-90-0)	
Surface tension	0.032 N/m (25 °C)

#### 12.5. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- 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 incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

- Transport document description : NA1993 Combustible liquid, n.o.s., 3, III
- UN-No.(DOT) : NA1993
- Proper Shipping Name (DOT) : Combustible liquid, n.o.s.
- Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- Packing group (DOT) : III - Minor Danger
- DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
- DOT Packaging Bulk (49 CFR 173.xxx) : 241
- DOT Symbols : D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name

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DOT Special Provisions (49 CFR 172.102)	: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
Other information	: No supplementary information available.

### Transportation of Dangerous Goods

#### Transport by sea

#### Air transport

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Glycol Ether DE (111-90-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Specific target organ toxicity (single or repeated exposure)
SARA Section 302/304	Components – Reportable Quantity Amounts 2-Ethoxyethanol 1000 lbs Ethylene Glycol 5000 lbs
SARA 313	This product contains the following chemicals subject to the reporting requirements of SARA Title III, Section 313 and 40 CFR 372:  Component – Reporting Threshold 2-Ethoxyethanol 1.0% Ethylene Glycol 1.0%

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

### 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

**⚠ WARNING:** This product can expose you to 2-Ethoxyethanol and Ethylene Glycol, which is known to the State of California to cause developmental or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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Component	Carcinogenicity	Developmental toxicity	Reproductive toxicity male	Reproductive toxicity female	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
2-Ethoxyethanol(110-80-5)		X	X			
Ethylene glycol (107-21-1)		X				

Component	State or local regulations
2-Ethoxyethanol(110-80-5)	U.S. - Pennsylvania - RTK (Right to Know) List
Ethylene Glycol(107-21-1)	U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

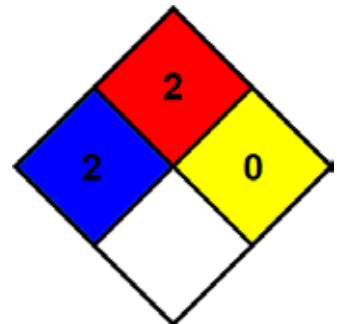
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Revision date : 05/18/2018

Full text of H-phrases:

H227	Combustible liquid
H336	May cause drowsiness or dizziness

- NFPA health hazard : 2 – Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
- NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



SDS US (GHS HazCom 2012)

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