

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Substance
Substance name	: Diethylene Glycol
Chemical name	: Diethylene Glycol
CAS-No.	: 111-46-6
Formula	: C4H10O3
Synonyms	: 2,2' -oxybisethanol / 2,2'-dihydroxydiethyl ether / 2,2-dihydroxydiethyl ether / 2,2'-dihydroxyethyl ether / 2,2-dihydroxyethyl ether / 2,2-oksidiethanol / 2,2-oxy-bis(ethanol) / 2,2'-oxydiethanol / 2,2-oxydiethanol / 2,2'-oxydiethanol / 2,2'-oxyethanol / 2-2-hydroxyethoxy)ethanol / 2-hydroxyethyl ether / 2-idrossietil etere / 3-oxa-1,5-pentandiol / 3-oxapentamethylene-1,5-diol / 3-oxapentane-1,5-diol / beta,beta'-dihydroxydiethyl ether / beta,beta'-dihydroxydiethyl ether / bis(2-hydroxyethyl)ether / bis(beta-hydroxyethyl)ether / bissant APV / brecolane NDG / carbitol (=2,2'-oxy-bis(ethanol) / cellosolve (=2,2'-oxy-bis(ethanol) / deactivator E / deactivator H / DEG / dicol / diethylenglycol, special grade / diethylene glycol / dietilenglicole / digenos / diglycol / digol / dihydroxydiethyl ether / dissolvant APV / ethanol, 2,2'-oxybis- / ethylenediglycol / glicole dietilenico / glycol ether / glycoethyl ether / oxapentane-1,5-diol / oxypentane-1,5-diol / TL4N
Other means of identification	: Diethylene Glycol IR Grade; DEG;

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

Use of the substance/mixture : Raw Material; Industrial Use

#### 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](http://www.whitakeroil.com) EMAIL: [SDS@whitakeroil.com](mailto: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

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs through prolonged or repeated exposure

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) : H302 - Harmful if swallowed  
H373 - May cause damage to organs through prolonged or repeated exposure

# Diethylene Glycol

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Precautionary statements (GHS-US) : P260 - Do not breathe dust, fume, gas, mist, spray, vapors  
P264 - Wash hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P301+P312 - If swallowed: Call a POISON CENTER or doctor/physician if you feel unwell  
P314 - Get medical advice/attention if you feel unwell  
P330 - Rinse mouth  
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

Other hazards not contributing to the 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 (Main constituent)	(CAS-No.) 111-46-6	100	Acute Tox. 4 (Oral), H302 STOT RE 2, H373

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 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. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.  
First-aid measures after eye contact : Rinse with 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. Do not induce vomiting. Call Poison Control Center. Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

### 4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Produces effects on the nervous system. Harmful if swallowed. Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Slightly irritant to skin. Slightly harmful by inhalation. Slightly irritant to respiratory organs. Not irritant to eyes.  
Symptoms/effects : May cause damage to organs through prolonged or repeated exposure.  
Symptoms/effects after inhalation : Slight irritation.  
Symptoms/effects after skin contact : Slight irritation.  
Symptoms/effects after eye contact : Not irritating.  
Symptoms/effects after ingestion : Nausea. Vomiting. Abdominal pain. Diarrhoea. AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dizziness. Drunkenness. Narcosis. Disturbances of consciousness. Blood in vomit. Change in urine output.  
Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Feeling of weakness. Skin rash/inflammation. Decreased renal function. Affection of the renal tissue.

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

All treatments should be based on observed signs and symptoms of distress in the patient.

## 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.

# Diethylene Glycol

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 5.2. Specific hazards arising from the chemical

Fire hazard	: DIRECT FIRE HAZARD: Combustible. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".
Reactivity	: Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts with (some) acids: (increased) risk of fire/explosion. Violent to explosive reaction on exposure to temperature rise with (some) acids/bases.

### 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.
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

General measures	: Avoid all eye and skin contact and do not breathe vapor and mist.
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#### 6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Protective clothing.
Emergency procedures	: Mark the danger area. No naked flames. Wash contaminated clothes.

#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Wear suitable gloves. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Stop release. Ventilate area.

### 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.
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

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment. For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Use earthed equipment. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. 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. Thoroughly clean/dry the installation before use.
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. 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	: Do not store near food, foodstuffs, drugs, or potable water supplies. Store in a well-ventilated place. Keep cool.
Incompatible products	: Strong acids. Strong bases. Strong oxidizers.
Storage temperature	: > -8 °C
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. peroxides. water/moisture.
Storage area	: Store in a dry area. Ventilation at floor level. Store at ambient temperature. Keep out of direct sunlight. Provide the tank with earthing. Meet the legal requirements.

# Diethylene Glycol

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Special rules on packaging : SPECIAL REQUIREMENTS: closing. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: carbon steel. steel. stainless steel. aluminum. zinc. glass. plastics.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Diethylene Glycol (111-46-6)		
ACGIH	Remark (ACGIH)	Not applicable
OSHA	Remark (OSHA)	Not applicable

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid creating mist or spray. Either local exhaust or general room ventilation is usually required. Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

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

##### Personal protective equipment:

Avoid all unnecessary exposure.

##### Materials for protective clothing:

GIVE GOOD RESISTANCE: chloroprene rubber. chlorosulfonated polyethylene. neoprene. nitrile rubber. PVA. PVC. viton. neoprene/SBR

##### Hand protection:

Gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Protective clothing

##### Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit

### SECTION 9: Physical and chemical properties

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

Physical state : Liquid

Appearance : Liquid.

Color : Colourless

Odor : Almost odorless

Odor threshold : No data available  
No data available

pH : 5 - 8 (50 %)

Melting point : -6.5 °C (Test data)

Freezing point : -6.5 °C

Boiling point : 245 °C (Test data)

Critical temperature : 408 °C

Critical pressure : 46598 hPa

Flash point : 138 °C

Relative evaporation rate (butyl acetate=1) : < 0.001

Relative evaporation rate (ether=1) : > 3900

Flammability (solid, gas) : No data available  
Not applicable.

Vapor pressure : < 0.013 hPa (20 °C)

Relative vapor density at 20 °C : 3.7

# Diethylene Glycol

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative density	: 1.12
Relative density of saturated gas/air mixture	: 1
Specific gravity / density	: 1120 kg/m <sup>3</sup>
Molecular mass	: 106.12 g/mol
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in cyclohexanone. Soluble in ethylene glycol. Water: 100 g/100ml (20 °C, complete, Test data)
Log Pow	: -1.98 (Calculated, Other)
Auto-ignition temperature	: 372 °C (1013.25 hPa)
Decomposition temperature	: 287 °C
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 35.7 mPa.s
Explosion limits	: 1.6 - 10.8 vol % 31 - 972 g/m <sup>3</sup> LEL: 1.6 vol % UEL: 10.8 vol %
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

Specific conductivity	: 58600000 pS/m
Saturation concentration	: 0.1 g/m <sup>3</sup>
VOC content	: 0 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Hygroscopic. Slightly volatile.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts with (some) acids: (increased) risk of fire/explosion. Violent to explosive reaction on exposure to temperature rise with (some) acids/bases.

### 10.2. Chemical stability

Hygroscopic.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Heat.

### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Alcohols. Aldehydes. Ethers.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Diethylene Glycol (111-46-6)	
LD50 oral rat	19600 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value)
LD50 dermal rat	13300 mg/kg
LD50 dermal rabbit	11890 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 4.6 mg/l air (Other, 4 h, Rat, Weight of evidence)
ATE US (oral)	500 mg/kg body weight

Skin corrosion/irritation	: Not classified pH: 5 - 8 (50 %)
Serious eye damage/irritation	: Not classified pH: 5 - 8 (50 %)

# Diethylene Glycol

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Likely routes of exposure	: Inhalation. Skin and eye contact.
Potential Adverse human health effects and symptoms	: Produces effects on the nervous system. Harmful if swallowed. Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Slightly irritant to skin. Slightly harmful by inhalation. Slightly irritant to respiratory organs. Not irritant to eyes.
Symptoms/effects	: May cause damage to organs through prolonged or repeated exposure.
Symptoms/effects after inhalation	: Slight irritation.
Symptoms/effects after skin contact	: Slight irritation.
Symptoms/effects after eye contact	: Not irritating.
Symptoms/effects after ingestion	: Nausea. Vomiting. Abdominal pain. Diarrhoea. AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Headache. Dizziness. Drunkenness. Narcosis. Disturbances of consciousness. Blood in vomit. Change in urine output.
Chronic symptoms	: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Feeling of weakness. Skin rash/inflammation. Decreased renal function. Affection of the renal tissue.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Not harmful to crustacea. Not harmful to fishes. Groundwater pollutant. Inhibition of activated sludge. Not harmful to algae.

Diethylene Glycol (111-46-6)	
LC50 fish 1	> 5000 ppm (24 h, Carassius auratus)
EC50 Daphnia 1	> 10000 mg/l (24 h, Daphnia magna)
LC50 fish 2	75200 mg/l (Other, 96 h, Pimephales promelas, Flow-through system, Experimental value)
EC50 Daphnia 2	> 10000 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value)

### 12.2. Persistence and degradability

Diethylene Glycol (111-46-6)	
Persistence and degradability	Biodegradable in the soil. Biodegradable in water.
Biochemical oxygen demand (BOD)	0.02 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.51 g O <sub>2</sub> /g substance
ThOD	1.51 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.015

### 12.3. Bioaccumulative potential

Diethylene Glycol (111-46-6)	
BCF fish 1	100 (Other, 3 day(s), Leuciscus melanotus, Static system, Fresh water, Experimental value)
Bioconcentration factor (BCF REACH)	100
Log Pow	-1.98 (Calculated, Other)
Bioaccumulative potential	Not bioaccumulative.

### 12.4. Mobility in soil

Diethylene Glycol (111-46-6)	
Mobility in soil	No additional information available
Surface tension	0.0485 N/m
Log Koc	0 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
Ecology - soil	Highly mobile in soil.

### 12.5. Other adverse effects

Other adverse effects : No additional information available.

# Diethylene Glycol

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

- Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- Sewage disposal recommendations : Do not dispose of waste into sewer.
- Product/Packaging disposal recommendations : 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.
- Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Not regulated

#### Transportation of Dangerous Goods

#### Transport by sea

#### Air transport

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Diethylene Glycol (111-46-6)

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

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

No additional information available

### SECTION 16: Other information

Revision date : 04/23/2018

Full text of H-phrases:

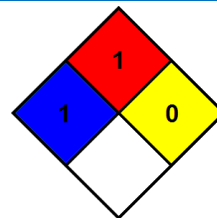
H302	Harmful if swallowed
H373	May cause damage to organs through prolonged or repeated exposure

# Diethylene Glycol

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

NFPA health hazard	: 1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	: 1 - Materials that must be preheated 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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