


Section 1. Product and Company Identification

Product Name Diethylene Glycol
CAS Number 111-46-6

Parchem - fine & specialty chemicals
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EMERGENCY RESPONSE NUMBER
CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924

All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

Classification of the Substance or Mixture:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302

Specific Target Organ Toxicity – Repeated Exposure, Oral (Category 2), Kidney, H373

GHS Label Elements, Including Precautionary Statements

Pictograms:



Signal Word: Warning

Hazard and Precautionary Statements

Hazard Statements

H302 - Harmful if swallowed

H373 - May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

Precautionary Statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

P264 - Wash skin 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 to an approved waste disposal plant.

Hazards not Otherwise Classified (HNOC) or not covered by GHS: None

Section 3. Composition / Information on Ingredients

Common Name Diethylene Glycol
Synonym(s) 2,2'-Oxydiethanol; Bis(2-hydroxyethyl) Ether; Diglycol; 2-Hydroxyethyl Ether
Formula C₄H₁₀O₃
CAS Number 111-46-6

COMPONENT	CLASSIFICATION	CONCENTRATION
Diethylene Glycol	Acute toxicity Oral 4, Specific Target Organ Toxicity - Repeated Exposure Oral 2	90 - 100%

Section 4. First Aid Measures

Description of First-aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact: Wash off with soap and plenty of water. Consult a physician.

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most Important Symptoms and Effects, both Acute and Delayed: The most important known symptoms and effects are described in the labelling and/or in section 11

Indication of any Immediate Medical Attention and Special Treatment Needed: No data available

Section 5. Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Special Hazards arising from the Substance or Mixture: Carbon oxides

Advice for Firefighters: Wear self-contained breathing apparatus for firefighting if necessary.



Further Information: Cool containers/tanks with water spray.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures: Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Materials for Containment and Cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to Other Sections: For disposal see section 13.

Section 7. Handling and Storage

Control Parameters

Components with Workplace Control Parameters

Component: Diethylene Glycol

CAS Number: 111-46-6

Value: TWA

Control Parameters: 10 mg/m³

Basis: USA. Workplace Environmental Exposure Levels (WEEL)

Exposure Controls

Appropriate Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal Protective Equipment

Eye/Face Protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.



Section 8. Exposure Controls / Personal Protection

Control Parameters

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Control of Environmental Exposure: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Section 9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance Form: Viscous liquid

Color: Colorless

Odor: Slight

Odor Threshold: No data available

pH: 5.0 - 8 at 500 g/L at 20°C (68°F)

Melting/Freezing Point: -10°C (14°F) - lit.

Initial Boiling Point/Range: 245°C (473°F) - lit.

Flash Point (Closed Cup): 143°C (289°F)

Evaporation Rate: < 0.01 (Butyl Acetate= 1)



Flammability (solid, gas): No data available

Upper/Lower Flammability or Explosive Limits

Upper Explosion Limit: 12.3% (V)

Lower Explosion Limit: 2% (V)

Vapor Pressure: 0.008 hPa (0.006 mmHg) at 25 °C (77 °F)

Vapor Density: 3.66 - (Air = 1.0)

Relative Density: 1.118 g/cm³ at 25°C (77°F)

Water Solubility: Completely miscible

Partition Coefficient (n-Octanol/Water): log Pow: -2.0

Auto-ignition Temperature: 372°C (702°F) at 1,013.25 hPa (760.00 mmHg)

Decomposition Temperature: No data available

Viscosity: No data available

Explosive Properties: No data available

Oxidizing Properties: No data available

Other Safety Information

Surface Tension: 48.5 mN/m at 25°C (77°F)

Relative Vapor Density: 3.66 (Air = 1.0)

Section 10. Stability and Reactivity

Reactivity: No data available

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: No data available

Conditions to Avoid: Heating in air. Exposure to moisture.

Incompatible Materials: Strong oxidizing agents, Strong acids, Zinc

Hazardous Decomposition Products: No data available

In the event of fire: see section 5

Section 11. Toxicological Information

Information on Toxicological Effects

Acute Toxicity

LD50 Oral - Rat - 12,565 mg/kg

LD50 Oral - Human - 1,000 mg/kg

Remarks: Effects due to ingestion may include: Drowsiness Gastrointestinal disturbance Liver disorders

Behavioral: Muscle weakness.

LD50 Dermal - Rabbit - 11,890 mg/kg



Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation (OECD Test Guideline 404)

Serious Eye Damage/Eye Irritation

Eyes - Rabbit

Result: No eye irritation

Respiratory or Skin Sensitization

Maximization Test - Guinea pig

Result: Did not cause sensitization on laboratory animals.

(Directive 67/548/EEC, Annex V, 8.6.)

Germ Cell Mutagenicity: No data available

Carcinogenicity

IARC: 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.

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

NTP: 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.

OSHA: 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.

Reproductive Toxicity: No data available

Specific Target Organ Toxicity - Single Exposure: No data available

Specific Target Organ Toxicity - Repeated Exposure: May cause damage to organs through prolonged or repeated exposure.

Oral - Kidney

Aspiration Hazard: No data available

Additional Information

Repeated dose toxicity - Rat - Oral - No observed adverse effect level - 100 mg/kg

RTECS: ID5950000

Symptoms and signs of poisoning are: Confusion, Dizziness, Kidney injury may occur, Unconsciousness, Convulsions, Nausea, Headache, Vomiting, Pulmonary edema. Effects may be delayed.

Liver- Irregularities- Based on Human Evidence



Section 12. Ecological Information

Toxicity

Toxicity to Fish

Toxicity to Daphnia and Other Aquatic Invertebrates

LC50 - Pimephales promelas (fathead minnow) - 75,200 mg/L - 96 h

LC50 - Carassius auratus (goldfish) - 5,000 mg/L - 24 h

EC50 - Daphnia magna (Water flea) - > 10,000 mg/L - 24 h (DIN 38412)

Persistence and Degradability

Biodegradability Anaerobic - Exposure time 28 d

Result: 90 - 100 % - Readily biodegradable. (OECD Test Guideline 301B)

Bioaccumulative Potential

Bioaccumulation Leuciscus idus melanotus - 3d - 0.05 mg/L

Mobility in Soil: No data available

Bioconcentration Factor (BCF): 100

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other Adverse Effects: No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT (US): Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

Section 15. Regulatory Information

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.



SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard

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

Pennsylvania Right to Know Components

Diethylene Glycol (CAS# 111-46-6)

Revision Date: 1989-08-11

New Jersey Right to Know Components

Diethylene Glycol (CAS# 111-46-6)

Revision Date: 1989-08-11

California Prop. 65 Components

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

Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

