




# Safety Data Sheet

Version 7.0  
Revision Date: 11/12/2020

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **Ethylene-d<sub>4</sub> glycol**  
Product abbreviation: d4EG  
Product use: For laboratory research purposes.  
Supplier / Manufacturer: Polymer Source, Inc.  
Address: 124 Avro street, Dorval (Montreal), Quebec H9P 2X8, Canada  
Telephone: (+1) 514-421-5517  
Toll free: 1-866-422-9842  
Fax: (+1) 514-421-5518  
Emergency phone: (+1) 514-887-5517  
E-mail: [info@polymersource.com](mailto:info@polymersource.com)

## 2. HAZARDS IDENTIFICATION

Emergency overview: GHS classification: Acute toxicity – Oral (Category 4).  
GHS Label elements, including precautionary statements:  
Pictogram:   
Signal word: Warning  
Hazard statements: H302. Harmful if swallowed.  
Precautionary statements: P264. Wash skin thoroughly after handling.  
P270. Do not eat, drink or smoke when using this product.  
P301 + P312 + P330. *IF SWALLOWED:*  
Call a Poison Center / doctor if you feel unwell.  
Rinse mouth.  
P501. Dispose of contents / container to an approved waste disposal plant.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Formula: Ethylene-d<sub>4</sub> glycol: C<sub>2</sub>D<sub>2</sub>H<sub>2</sub>O  
Molecular weight: 66 g/mol  
Concentration: ≤ 100 %  
CAS registry number: 2219-51-4

#### 4. FIRST AID MEASURES

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General advice:	Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.	
If inhaled:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.	
In case of skin contact:	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.	
In case of eye contact:	Flush eyes with water as a precaution.	
If swallowed:	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:		See section 2 and 11, and/or label.
Indication of any immediate medical attention and special treatment needed:		No data available

#### 5. FIRE-FIGHTING MEASURES

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Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.	
Special protective equipment for firefighters:	Wear self contained breathing apparatus for firefighting if necessary.	
Hazardous combustion products:	Hazardous decomposition products formed under fire conditions: Carbon oxides.	
Explosion data:	Sensitivity to mechanical impact:	no data available
	Sensitivity to static discharge:	no data available
Further information:	no data available	

#### 6. ACCIDENTAL RELEASE MEASURES

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Personal precautions:	Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.	
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:	Clean up promptly by sweeping or vacuum.	

#### 7. HANDLING AND STORAGE

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Precautions for safe handling:	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.	
Conditions for safe storage:	Keep container tightly closed in a dry and well-ventilated place.	
	Store under inert gas. Hygroscopic Storage class (TRGS 510): 10: Combustible liquids.	

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters: Ingredients with workplace control parameters:

<i>Component</i>	<i>CAS #</i>	<i>Value</i>	<i>Control parameters</i>	<i>Basis</i>	<i>Remarks</i>
Ethylene-d4 glycol	2219-51-4	(c)	100 mg/m <sup>3</sup>	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL).	Occupational exposure limit is based on irritation effects and its adjustment to compensate for unusual work schedules is not required.
		TWA	10 mg/m <sup>3</sup>	Canada. British Columbia OEL.	
		STEL	20 mg/m <sup>3</sup>	Canada. British Columbia OEL.	
		C	100 mg/m <sup>3</sup>	Canada. British Columbia OEL.	
		C	50 ppm	Canada. British Columbia OEL.	
		C	50 ppm <i>or</i> 127 mg/m <sup>3</sup>	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants.	A substance which may not be recirculated in accordance with section 108.
		TWA	25 ppm	USA. ACGIH Threshold Limit Values (TLV).	
		STEL	50 ppm	USA. ACGIH Threshold Limit Values (TLV).	
		STEL	10 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV).	

### Exposure control:

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:

- Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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).
- Hand 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.

- Eye 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 and 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.
- Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
- Control of environmental exposure: Do not let product enter drains.
- Specific engineering controls: Use mechanical exhaust or laboratory fumehood to avoid exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance:	Form:	Liquid
	Colour:	Clear
Safety data:	pH:	no data available
	Melting point / Freezing point:	m.p.(lit.): -13 °C (9 °F)
	Boling point:	b.p.(lit.): 196–198 °C (385–388 °F)
	Flash point:	(lit.): 113 °C (235 °F) - closed cup
	Ignition temperature:	no data available
	Auto-ignition temperature:	no data available
	Lower explosion limit:	no data available
	Upper explosion limit:	no data available
	Vapour pressure:	no data available
	Density:	(lit.): 1.184 g/mL at 25 °C (77°F)
	Water solubility:	no data available
	Partition coefficient: n-octanol/water:	no data available
	Relative vapour density:	no data available
	Odour:	no data available
	Odour threshold:	no data available
	Evaporation rate:	no data available

## 10. STABILITY AND REACTIVITY

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Chemical stability:	Stable under recommended storage conditions.
Radioactivity:	Stable isotope compound. Not radioactive.
Possibility of hazardous reactions:	no data available
Conditions to avoid:	no data available
Materials to avoid:	Strong oxidizing agents.

Hazardous decomposition products:

Hazardous decomposition products formed under fire conditions:  
Carbon oxides.

Other decomposition products: no data available.

## 11. TOXICOLOGICAL INFORMATION

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Acute toxicity: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

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.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity: Single exposure (GHS): no data available

Repeated exposure (GHS): no data available

Aspiration hazard: no data available

Additional information: RTECS: not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

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Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other adverse effects: no data available

## 13. DISPOSAL CONSIDERATIONS

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Product: Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Dispose of as unused product.

## 14. TRANSPORT INFORMATION

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DOT (US):	UN number: 3082 Class: 9 Packing group: III Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. Reportable Quantity (RQ): 5,000 lbs Poison Inhalation Hazard: No
IMDG:	Not dangerous goods.
IATA:	Not dangerous goods.

## 15. REGULATORY INFORMATION

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This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR), (SOR/2015-17) and the SDS contains all the information required by the HPR.

## 16. OTHER INFORMATION

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Date of the latest revision:	11 December 2020
Further information:	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. Polymer Source, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See <a href="http://www.polymersource.ca">www.polymersource.ca</a> for additional terms and conditions of sale.