



# Safety Data Sheet

Version 7.0  
Revision Date: 16/10/2018

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **Poly(ethylene imine)**  
Product abbreviation: EI  
Product use: For laboratory research purposes.  
Supplier / Manufacturer: Polymer Source, Inc.  
Address: 124 Avro street, Dorval (Montreal), Quebec H9P 2X8, Canada  
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## 2. HAZARDS IDENTIFICATION

Emergency overview: WHMIS classification: D2B. Toxic material causing other toxic effects:  
Moderate skin irritant. Moderate eye irritant.

GHS classification: Skin corrosion / irritation (Category 2).  
Serious eye damage / eye irritation (Category 2A).

GHS Label elements, including precautionary statements:

Pictogram:



Signal word: Warning

Hazard statements: H315. Causes skin irritation.  
H319. Causes serious eye irritation.

Precautionary statements: P305 + P351 + P338.  
*If in eyes:* Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS classification: Health hazard: 2  
Flammability: 0  
Physical hazards: 0

Potential health effects: Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.  
Skin: May be harmful if absorbed through skin. Causes skin irritation.  
Eyes: Causes eye irritation.  
Ingestion: May be harmful if swallowed.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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Formula:	Poly(ethylene imine):	(CH <sub>2</sub> CH <sub>2</sub> NH) <sub>n</sub>
Synonyms:	Linear polyethyleneimine, PEI	
Concentration:	≤ 100%	
CAS registry number:	Polyethyleneimine:	26913-06-4

### 4. FIRST AID MEASURES

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If inhaled:	If breathed in, move person into fresh air. If not breathing, give artificial respiration.
In case of skin contact:	Wash off with soap and plenty of water.
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.

### 5. FIRE-FIGHTING MEASURES

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Conditions of flammability:	Not flammable or combustible.	
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, Nitrogen oxides (NO <sub>x</sub> ).	
Explosion data:	Sensitivity to mechanical impact:	no data available
	Sensitivity to static discharge:	no data available

### 6. ACCIDENTAL RELEASE MEASURES

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Personal precautions:	Avoid dust formation. Avoid breathing vapours, mist or gas.
Environmental precautions:	Do not let product enter drains.
Methods and materials for containment and cleaning up:	Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 7. HANDLING AND STORAGE

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Precautions for safe handling:	Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Conditions for safe storage:	Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 2–8 °C. Hygroscopic. Handle and store under inert gas.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Personal protective equipment:

- **Respiratory protection:** For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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:** Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- **Skin and body protection:** Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- **Hygiene measures:** General industrial hygiene practice.
- **Specific engineering controls:** Use mechanical exhaust or laboratory fumehood to avoid exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance:	Form:	Solid
	Colour:	White or ivory
Safety data:	pH:	no data available
	Melting point / Freezing point:	m.p. 59–64 °C (lit.)
	Boiling point:	no data available
	Flash point:	> 110 °C (lit.)
	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:	no data available
	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.
Possibility of hazardous reactions:	no data available
Conditions to avoid:	no data available
Materials to avoid:	Strong oxidizing agents. Strong acids. Strong bases.
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions: Carbon oxides, Nitrogen oxides. Other decomposition products: no data available.

## 11. TOXICOLOGICAL INFORMATION

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Acute toxicity:	Oral LD50:	no data available
	Inhalation LC50:	no data available
	Dermal LD50:	no data available
	Other information on 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 (Globally Harmonized System):	no data available
	Repeated exposure (Globally Harmonized System):	no data available
Aspiration hazard:	no data available	
Potential health effects:	Inhalation:	May be harmful if inhaled. May cause respiratory tract irritation.
	Ingestion:	May be harmful if swallowed.
	Skin:	May be harmful if absorbed through skin. May cause skin irritation.
	Eyes:	May cause eye irritation.
	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.	
Signs and symptoms of exposure:	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.	
Synergistic effects:	no data available	
Additional information:	RTECS:	not available

## 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:	no data available
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. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging:	Dispose of as unused product

## 14. TRANSPORT INFORMATION

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DOT (US):	Not dangerous goods
IMDG:	Not dangerous goods
IATA:	Not dangerous goods

## 15. REGULATORY INFORMATION

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WHMIS classification:	D2B. Toxic material causing other toxic effects. Moderate skin irritant. Moderate respiratory irritant. Moderate eye irritant.
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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

## 16. OTHER INFORMATION

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Date of the latest revision:	16 October 2018
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.