

## SAFETY DATA SHEET

Version 6.10  
Revision Date 09/06/2024  
Print Date 09/07/2024**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**Product name : Poly(3,4-ethylenedioxythiophene)-  
poly(styrenesulfonate)Product Number : 655201  
Brand : Aldrich  
CAS-No. : 155090-83-8**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&amp;D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&amp;D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

**1.3 Details of the supplier of the safety data sheet**Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATESTelephone : +1 314 771-5765  
Fax : +1 800 325-5052**1.4 Emergency telephone**Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-  
527-3887 CHEMTREC (International) 24  
Hours/day; 7 Days/week**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Skin corrosion (Category 1), H314

Serious eye damage (Category 1), H318

Specific target organ toxicity - repeated exposure, Oral (Category 2), Kidney, H373

Aldrich - 655201

Page 1 of 13

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard Statements

H314

Causes severe skin burns and eye damage.

H373

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

Precautionary Statements

P260

Do not breathe mist or vapors.

P264

Wash skin thoroughly after handling.

P280

Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P310

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 +

IF IN EYES: Rinse cautiously with water for several minutes.

P310

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P314

Get medical advice/ attention if you feel unwell.

P363

Wash contaminated clothing before reuse.

P405

Store locked up.

P501

Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

Synonyms

: Poly(2,3-dihydrothieno-1,4-dioxin)-poly(styrenesulfonate)  
PEDOT/PSS

Component	Classification	Concentration
<b>ethylene glycol</b>		
CAS-No.	107-21-1	Acute Tox. 4; STOT RE 2; H302, H373
EC-No.	203-473-3	
Index-No.	603-027-00-1	
Registration number	01-2119456816-28-XXXX	
<b>Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer</b>		
CAS-No.	155090-83-8	Skin Corr. 1B; Eye Dam. >= 1 - < 5 %

Aldrich - 655201

Page 2 of 13

EC-No.	629-200-1	1; H314, H318	
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For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Call in physician.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Sulfur oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### 5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6: Accidental release measures

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

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.  
For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H<sup>+</sup>, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons.

#### Storage stability

 Recommended storage temperature

2 - 8 °C

#### Storage class

Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Aldrich - 655201

Page 4 of 13

Component	CAS-No.	Value	Control parameters	Basis
ethylene glycol	107-21-1	TWA	25 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Not classifiable as a human carcinogen		
		STEL	50 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen		
		STEL	10 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen		
		C	40 ppm 100 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

## 8.2 Exposure controls

### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

#### Skin protection

required

#### Body Protection

Acid-resistant protective clothing

#### Respiratory protection

Recommended Filter type: Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- a) Appearance                      Form: liquid

b) Odor	No data available
c) Odor Threshold	No data available
d) pH	2 at 20 °C (68 °F)
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	( )Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Density	1 g/mL at 20 °C (68 °F)
Relative density	No data available
n) Water solubility	soluble
o) Partition coefficient: n-octanol/water	No data available
p) Autoignition temperature	Not applicable
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	Not classified as explosive.
t) Oxidizing properties	none

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Aldrich - 655201

Page 6 of 13

The generally known reaction partners of water.

#### **10.4 Conditions to avoid**

no information available

#### **10.5 Incompatible materials**

No data available

#### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

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### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

##### **Mixture**

##### **Acute toxicity**

Acute toxicity estimate Oral - > 5,000 mg/kg

(Calculation method)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages: , damage of respiratory tract

Acute toxicity estimate Dermal - > 5,000 mg/kg

(Calculation method)

##### **Skin corrosion/irritation**

No data available

##### **Serious eye damage/eye irritation**

Remarks: Mixture causes serious eye damage.

Risk of blindness!

##### **Respiratory or skin sensitization**

No data available

##### **Germ cell mutagenicity**

No data available

##### **Carcinogenicity**

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient 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 on OSHA's list of regulated carcinogens.

##### **Reproductive toxicity**

No data available

##### **Specific target organ toxicity - single exposure**

No data available

### **Specific target organ toxicity - repeated exposure**

Mixture may cause damage to organs through prolonged or repeated exposure.

- Kidney

### **Aspiration hazard**

No data available

## **11.2 Additional Information**

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Central nervous system - Irregularities - Based on Human Evidence

### **Components**

#### **ethylene glycol**

##### **Acute toxicity**

Acute toxicity estimate Oral - 500.1 mg/kg

(Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

LC50 Inhalation - Rat - male and female - 6 h - > 2.5 mg/l - aerosol

Remarks: (ECHA)

LD50 Dermal - Mouse - male and female - > 3,500 mg/kg

Remarks: (ECHA)

##### **Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 20 h

Remarks: (ECHA)

##### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation - 24 h

Remarks: (ECHA)

##### **Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

##### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Result: negative

Species: Rat - male and female

Result: negative

Remarks: (ECHA)



**Carcinogenicity**

This product is or contains a component that is probably not carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

**Reproductive toxicity**

Laboratory experiments have shown teratogenic effects.  
Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

Oral - May cause damage to organs through prolonged or repeated exposure.  
- Kidney

**Aspiration hazard**

No data available

**Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer****Acute toxicity**

Oral: No data available  
Inhalation: No data available  
Dermal: No data available  
No data available

**Skin corrosion/irritation**

Remarks: No data available

**Serious eye damage/eye irritation**

Remarks: No data available

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Mixture

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Endocrine disrupting properties

No data available

### 12.7 Other adverse effects

No data available

#### Components

##### ethylene glycol

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 72,860 mg/l - 96 h (US-EPA)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test NOEC - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to fish(Chronic toxicity)	flow-through test LC50 - Menidia peninsulae (tidewater silverside) - > 1,500 mg/l - 28 d Remarks: (ECHA) The value is given in analogy to the following substances: triethylene glycol
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test NOEC - Ceriodaphnia dubia (water flea) - 8,590 mg/l - 7 d (US-EPA)

#### **Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer**

No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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## SECTION 14: Transport information

### DOT (US)

UN number: 3265 Class: 8 Packing group: III  
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer) (Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer)  
Reportable Quantity (RQ):  
Poison Inhalation Hazard: No

### IMDG

UN number: 3265 Class: 8 Packing group: III EMS-  
No: F-A, S-B  
Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer) (Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer)

### IATA

UN number: 3265 Class: 8 Packing group: III  
Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer) (Benzenesulfonic acid, ethenyl-, homopolymer, compd. with 2,3-dihydrothieno[3,4-b]-1,4-dioxin homopolymer)

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## SECTION 15: Regulatory information

### CERCLA Reportable Quantity

Listed substances in the product are at low enough levels to not be expected to exceed the RQ

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

## SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

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

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

ethylene glycol 107-21-1 >= 5 - < 10 %

### US State Regulations

#### Massachusetts Right To Know

water 7732-18-5  
ethylene glycol 107-21-1

#### Pennsylvania Right To Know

ethylene glycol 107-21-1

#### Maine Chemicals of High Concern

water 7732-18-5

#### Vermont Chemicals of High Concern

water 7732-18-5  
ethylene glycol 107-21-1

#### Washington Chemicals of High Concern

water 7732-18-5  
ethylene glycol 107-21-1

#### California Prop. 65

WARNING: This product can expose you to chemicals including ethylene glycol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### The ingredients of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

#### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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## SECTION 16: Other information

### Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its

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