



Safety Data Sheet

Version 7.1
Revision Date: 30/08/2019

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **Poly(styrene-co-4-styrenesulfonic acid)**
Product abbreviation: SSO3H ionomer
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.
Severe eye irritant.
E. Corrosive material.
Corrosive to metals. Corrosive to skin.
GHS classification: Skin corrosion / irritation (Sub-category 1B).
Serious eye damage / eye irritation (Category 1).

GHS Label elements, including precautionary statements:

Pictogram:



Signal word: **Danger**
Hazard statements: H314. Causes severe skin burns and eye damage.
Precautionary statements: P280. Wear protective gloves / protective clothing / eye protection / face protection.
P304 + P340 + P310.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Immediately call a Poison center or doctor/physician.
P305 + P351 + P338.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

WHMIS classification:	Health hazard:	0
	Flammability:	0
	Physical hazards:	0
Potential health effects:	Inhalation:	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
	Skin:	May be harmful if absorbed through skin. Causes skin burns.
	Eyes:	Causes eye burns. Causes severe eye burns.
	Ingestion:	May be harmful if swallowed. Causes burns.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Formula:	Poly(styrene-co-4-styrenesulfonic acid):	$[(C_8H_8)_x(C_8H_8O_3S)_y]_n$
Concentration:	$\leq 100\%$	
CAS registry number:	Poly(styrene-co-4-styrenesulfonic acid):	n/a
	Poly(styrene):	9003-53-6
	Poly(4-styrenesulfonic acid):	28210-41-5

4. FIRST AID MEASURES

General advice:	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In case of eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
If swallowed:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

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, Sulphur oxides.
Explosion data:	Sensitivity to mechanical impact: no data available Sensitivity to static discharge: no data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental precautions:	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.

7. HANDLING AND STORAGE

Precautions for safe handling:	Avoid inhalation of vapour or mist.
Conditions for safe storage:	Keep container tightly closed in a dry and well-ventilated place. Do not freeze.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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: Tightly fitting safety goggles. Faceshield (8-inch minimum). 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: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
- Specific engineering controls: Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Form:	no data available
	Colour:	no data available
Safety data:	pH:	no data available
	Melting point / Freezing point:	no data available
	Boling point:	no data available

Flash point:	no data available
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

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.
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions: Carbon oxides, Sulphur oxides. Other decomposition products: no data available.

11. TOXICOLOGICAL INFORMATION

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. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
	Ingestion:	May be harmful if swallowed. Causes burns.
	Skin:	May be harmful if absorbed through skin. Causes skin burns.
	Eyes:	Causes eye burns. Causes severe eye burns.
Signs and symptoms of exposure:	Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea. <i>Note:</i> 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

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

Product:	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging:	Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US):	UN number:	2586
	Class:	8
	Packing group:	III
	Proper shipping name	Aryl sulfonic acids
	Marine pollutant:	No
	Poison inhalation hazard:	No
IMDG:	UN number:	2586
	Class:	8
	Packing group:	III
	EMS-No:	F-A, S-B
	Proper shipping name:	Aryl sulfonic acids
	Marine pollutant:	No
IATA:	UN number:	2586
	Class:	8
	Packing group:	III
	Proper shipping name:	Aryl sulfonic acids

15. REGULATORY INFORMATION

WHMIS classification:	D2B. Toxic material causing other toxic effects. Severe eye irritant.
	E. Corrosive material. Corrosive to metals. Corrosive to skin.

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

Date of the latest revision:	30 August 2019
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 www.polymersource.ca for additional terms and conditions of sale.