

# SAFETY DATA SHEET



Polystyrene Standard

## Section 1. Identification

### 1.1 Product identifier

- Product name** : Polystyrene Standard
- Part no.** :  PSS-PS1.2K, PSS-PS1.5M, PSS-PS1.8K, PSS-PS1.8M, PSS-PS100K, PSS-PS10K, PSS-PS10M, PSS-PS120K, PSS-PS12K, PSS-PS136K, PSS-PS15M, PSS-PS180K, PSS-PS18K, PSS-PS1K, PSS-PS1M, PSS-PS2.1K, PSS-PS2.5M, PSS-PS200K, PSS-PS20K, PSS-PS238K, PSS-PS25K, PSS-PS266, PSS-PS3.2K, PSS-PS320K, PSS-PS33K, PSS-PS360, PSS-PS370, PSS-PS4.5K, PSS-PS4K, PSS-PS5.6K, PSS-PS500, PSS-PS560K, PSS-PS56K, PSS-PS5M, PSS-PS6.5M, PSS-PS62K, PSS-PS700, PSS-PS750, PSS-PS7K, PSS-PS800K, PSS-PS890, PSS-PS9K, PSS-PSB100K, PSS-PSB145K, PSS-PSB200K, PSS-PSB250K, PSS-PSB25K, PSS-PSB350K, PSS-PSB450K, PSS-PSB45K, PSS-PSB4K, PSS-PSB60K, PSS-PSB7K, PSS-PS999

**Validation date** : 2/26/2024

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** :  Reagents and Standards for Analytical Chemistry Laboratory Use

PSS-PS1.2K	PS, nominal Mw 1,200 g/mol	1 g
PSS-PS1.5M	PS, nominal Mw 1,500,000 g/mol	1 g
PSS-PS1.8K	PS, nominal Mw 1,800 g/mol	1 g
PSS-PS1.8M	PS, nominal Mw 1,800,000 g/mol	1 g
PSS-PS100K	PS, nominal Mw 100,000 g/mol	1 g
PSS-PS10K	PS, nominal Mw 10,000 g/mol	1 g
PSS-PS10M	PS, nominal Mw 10,000,000 g/mol	1 g
PSS-PS120K	PS, nominal Mw 120,000 g/mol	1 g
PSS-PS12K	PS, nominal Mw 12,000 g/mol	1 g
PSS-PS136K	PS, nominal Mw 136,000 g/mol	1 g
PSS-PS15M	PS, nominal Mw 15,000,000 g/mol	1 g
PSS-PS180K	PS, nominal Mw 180,000 g/mol	1 g
PSS-PS18K	PS, nominal Mw 18,000 g/mol	1 g
PSS-PS1K	PS, nominal Mw 1,000 g/mol	1 g
PSS-PS1M	PS, nominal Mw 1,000,000 g/mol	1 g
PSS-PS2.1K	PS, nominal Mw 2,100 g/mol	1 g
PSS-PS2.5M	PS, nominal Mw 2,500,000 g/mol	1 g
PSS-PS200K	PS, nominal Mw 200,000 g/mol	1 g
PSS-PS20K	PS, nominal Mw 20,000 g/mol	1 g
PSS-PS238K	PS, nominal Mw 238,000 g/mol	1 g
PSS-PS25K	PS, nominal Mw 25,000 g/mol	1 g
PSS-PS266	PS, nominal Mw 266 g/mol	1 g
PSS-PS3.2K	PS, nominal Mw 3,200 g/mol	1 g
PSS-PS320K	PS, nominal Mw 320,000 g/mol	1 g
PSS-PS33K	PS, nominal Mw 33,000 g/mol	1 g
PSS-PS360	PS, nominal Mw 360 g/mol	1 g
PSS-PS370	PS, nominal Mw 370 g/mol	1 g
PSS-PS4.5K	PS, nominal Mw 4,500 g/mol	1 g
PSS-PS4K	PS, nominal Mw 4,000 g/mol	1 g
PSS-PS5.6K	PS, nominal Mw 5,600 g/mol	1 g
PSS-PS500	PS, nominal Mw 500 g/mol	1 g
PSS-PS560K	PS, nominal Mw 560,000 g/mol	1 g
PSS-PS56K	PS, nominal Mw 56,000 g/mol	1 g
PSS-PS5M	PS, nominal Mw 5,000,000 g/mol	1 g
PSS-PS6.5M	PS, nominal Mw 6,500,000 g/mol	1 g
PSS-PS62K	PS, nominal Mw 62,000 g/mol	1 g
PSS-PS700	PS, nominal Mw 700 g/mol	1 g
PSS-PS750	PS, nominal Mw 750 g/mol	1 g
PSS-PS7K	PS nominal Mw 800,000 g/mol	1 g
PSS-PS890	PS, nominal Mw 890 g/mol	1 g

## Section 1. Identification

PSS-PS9K	PS, nominal Mw 9,000 g/mol	1 g
PSS-PSB100K	PS br, nominal Mw 100,000 g/mol	1 g
PSS-PSB145K	PS br, nominal Mw 145,000 g/mol	1 g
PSS-PSB200K	PS br, nominal Mw 200,000 g/mol	1 g
PSS-PSB250K	PS br, nominal Mw 250,000 g/mol	1 g
PSS-PSB25K	PS br, nominal Mw 25,000 g/mol	1 g
PSS-PSB350K	PS br, nominal Mw 350,000 g/mol	1 g
PSS-PSB450K	PS br, nominal Mw 450,000 g/mol	1 g
PSS-PSB45K	PS br, nominal Mw 45,000 g/mol	1 g
PSS-PSB4K	PS br, nominal Mw 4,000 g/mol	1 g
PSS-PSB60K	PS br, nominal Mw 60,000 g/mol	1 g
PSS-PSB7K	PS br, nominal Mw 7,000 g/mol	1 g
PSS-PS999	Custom standard, Polystyrene	0.5-500g

### [1.3 Details of the supplier of the safety data sheet](#)

**Supplier/Manufacturer** : Agilent Technologies, Inc.  
5301 Stevens Creek Blvd  
Santa Clara, CA 95051, USA  
800-227-9770

### [1.4 Emergency telephone number](#)

**In case of emergency** : CHEMTREC®: 1-800-424-9300

## Section 2. Hazards identification

### [2.1 Classification of the substance or mixture](#)

**OSHA/HCS status** : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

### [Classification of the substance or mixture](#)

Not classified.

### [2.2 GHS label elements](#)

**Signal word** : No signal word.  
**Hazard statements** : No known significant effects or critical hazards.  
**Precautionary statements**  
**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.

### [2.3 Other hazards](#)

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Substance

Ingredient name	%	CAS number
Styrene, oligomers	100	9003-53-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

## Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### 4.1 Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

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

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray (fog).
- Unsuitable extinguishing media** : None known.

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

- Specific hazards arising from the chemical** : No specific fire or explosion hazard.

## Section 5. Fire-fighting measures

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

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

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

**Methods for cleaning up** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

## Section 7. Handling and storage

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**7.2 Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

**Recommendations** : Industrial applications, Professional applications.

**Industrial sector specific solutions** : Not available.

## Section 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Styrene, oligomers	<b>ACGIH TLV (United States).</b> TWA: 10 mg/m <sup>3</sup> Form: Inhalable TWA: 3 mg/m <sup>3</sup> Form: Respirable

#### Biological exposure indices

No exposure indices known.

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

#### Appearance

**Physical state** : Solid. [(Molecular weight (Low)= liquid [Viscous], Molecular weight (High) = Solid.)]

**Color** : Not available.

**Odor** : Odorless.

**Odor threshold** : Not available.

## Section 9. Physical and chemical properties and safety characteristics

pH	: Not available.
Melting point/freezing point	: 240°C (464°F)
Boiling point, initial boiling point, and boiling range	: Not available.
Flash point	: Closed cup: >360°C (>680°F)
Evaporation rate	: Not available.
Flammability	: Not available.
Lower and upper explosion limit/flammability limit	: Not applicable.
Vapor pressure	: Not available.
Relative vapor density	: Not applicable.
Relative density	: Not available.

Solubility(ies)	<b>Media</b>	<b>Result</b>
	water	Insoluble

Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: <input checked="" type="checkbox"/> Not available
Decomposition temperature	: <input checked="" type="checkbox"/> Not available
Viscosity	: Not applicable.
<u>Particle characteristics</u>	
Median particle size	: Not available.

## Section 10. Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: The product is stable.
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: No specific data.
10.5 Incompatible materials	: May react or be incompatible with oxidizing materials.
10.6 Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Not available.

#### Irritation/Corrosion

Not available.

#### Conclusion/Summary

Skin	: May cause skin irritation.
Eyes	: May cause eye irritation.
Respiratory	: May cause respiratory irritation.

## Section 11. Toxicological information

### Sensitization

Not available.

### Mutagenicity

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Experimental tumorigen.: Equivocal (RTECS)

### Classification

Product/ingredient name	OSHA	IARC	NTP
Styrene, oligomers	-	3	-

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

### Potential chronic health effects

**General** : No known significant effects or critical hazards.

## Section 11. Toxicological information

- Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

N/A

## Section 12. Ecological information

### 12.1 Toxicity

Not available.

### 12.2 Persistence and degradability

Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

- Soil/water partition coefficient ( $K_{oc}$ )** : Not available.

- 12.5 Other adverse effects** : The products of degradation are more toxic than the product itself.

## Section 13. Disposal considerations

### 13.1 Waste treatment methods

- Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.**

**The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**



## Section 14. Transport information

**DOT / TDG / Mexico / IMDG / IATA** : Not regulated.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** This material is listed or exempted.

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

#### SARA 302/304

##### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

#### SARA 311/312

**Classification** : Not applicable.

##### Composition/information on ingredients

No products were found.

#### State regulations

**Massachusetts** : This material is not listed.

**New York** : This material is not listed.

**New Jersey** : This material is not listed.

**Pennsylvania** : This material is not listed.

#### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

#### International regulations

##### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

##### Montreal Protocol

Not listed.

## Section 15. Regulatory information

### [Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

### [Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

### [UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

### [Inventory list](#)

<a href="#">Australia</a>	: This material is listed or exempted.
<a href="#">Canada</a>	: This material is listed or exempted.
<a href="#">China</a>	: This material is listed or exempted.
<a href="#">Japan</a>	: <b>Japan inventory (CSCL)</b> : This material is listed or exempted. <b>Japan inventory (ISHL)</b> : This material is listed or exempted.
<a href="#">New Zealand</a>	: This material is listed or exempted.
<a href="#">Philippines</a>	: This material is listed or exempted.
<a href="#">Republic of Korea</a>	: This material is listed or exempted.
<a href="#">Taiwan</a>	: This material is listed or exempted.
<a href="#">Thailand</a>	: This material is listed or exempted.
<a href="#">Turkey</a>	: This material is listed or exempted.
<a href="#">United States</a>	: This material is active or exempted.
<a href="#">Viet Nam</a>	: This material is listed or exempted.

## Section 16. Other information

### [Procedure used to derive the classification](#)

Classification	Justification
Not classified.	

### [History](#)

<a href="#">Date of issue/Date of revision</a>	: 02/26/2024
<a href="#">Date of previous issue</a>	: 06/09/2023
<a href="#">Version</a>	: 2

<a href="#">Key to abbreviations</a>	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations
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✔ Indicates information that has changed from previously issued version.

### [Notice to reader](#)

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