Safety Data Sheet

1. Identification of the Substance/Mixture and the Supplier

Supplier	:	National Institute of Advanced Industrial Science and Technology (AIST)
Address	:	1-3-1 Kasumigaseki, Chiyoda, Tokyo, Japan
Office in Charge	:	Reference Materials Office, Center for Quality Management of Metrology, National Metrology Institute of Japan
Person in Charge	:	Certified Reference Material Staff
Telephone No.	:	+81-29-861-4059 Fax No. : +81-29-861-4009
Emergency Contact	:	Same as above
		Prepared on : August 29, 2007
		Revised on : August 31, 2022
		ID Number : 5001001
Identity of Substance/Mixture	:	Certified reference material: NMIJ CRM 5001-a Polystyrene 2400
Recommended Use of the Chemical and Restriction on Use	:	This reference material can be used for calibration, quality control of analysis equipment and validation of analysis method/equipment for measurement of molecular weight distribution/average molecular weight of polymers. Do not use this reference material for other purposes than testing/research. This CRM is a reference material (specified in the Japanese Industrial Standard (JIS) Q 0030).

2. Hazards Identification

GHS Classification	:	Cannot be classified
GHS Label Element		Cannot be classified
Signal Word	:	-
Hazards Statement	:	-
Other Hazards Statement	:	Harmful if inhaled or swallowed
Precautionary Statement	:	[Precaution] Toxic if orally ingested [Action] If ingested: Make victim drink plenty of water to induce vomiting. Get medical advice/attention. [Storage] Keep container tightly closed. Protect from sunlight. Store in a room-temperature clean environment. [Disposal] Entrust disposal of this reference material to a professional waste disposal company licensed by prefectural governor.

The other hazards than the above do not result in classification or are not covered by the GHS.

3. Composition/Information on Ingredients

Substance/Mixture	:	Single substance
Chemical Identity	:	Polystyrene
Synonym	:	Styrene polymer
Chemical formula	:	$(C_8H_8)i$; (i: Degree of polymerization)
Molecular weight	:	Weight-average moeuclar weight (M_w) : 2,423 ± 20 Number-average molecular weight (M_n) : 2,307 ± 18
CAS Number	:	9003-53-6
Content	:	Over 99.9 %
Reference Number in Gazetted List in Japan	:	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : (6)-120 Industrial Safety and Health Act : Published

4. First-aid Measures

If in Eyes
1. Rinse away thoroughly with clean water.
2. Get medical advice/attention.

If on Skin
1. Rinse away thoroughly with clean water.
2. Take off/Remove contaminated clothing, shoes, etc. Get medical advice/attention.

If Inhaled
1. Remove victim to fresh air and keep at rest. Get medical advice/attention.
2. Keep victim warm with blanket etc. and keep at rest.

If Ingested
1. Rinse mouth with water thoroughly.
2. Do not give anything if victim is unconscious.
3. Get medical advice/attention.

Measures to be taken to protect the person applying first aid
Use personal protective equipment.

5. Fire-fighting Measures

Extinguishing Media	:	Water spray, Carbon dioxide (CO_2), Dry chemical extinguishing agent, Alcohol-resistant foam.
Fire-Specific Hazards	:	No risk of ignition or catching fire in ordinary environment. Carry out fire-fighting operation from the windward as much as possible, as combustion gas contains CO, NOx and CN, so as not to breathe them.
Specific Fire-Fighting Method	:	Eliminate ignition sources at the origin of a fire and put out fire by using extinguishing media. Remove movable containers promptly to a safe place. In the case of immovable containers, cool their surroundings with sprayed water. Carry out fire-

fighting from the windward in order to avoid breathing hazardous gas.

Protection of Fire-Fighters : Protective clothing, Compressed air open-circuit self-contained breathing apparatus, Compressed oxygen closed-circuit self-contained breathing apparatus, Rubber boots

6. Accidental Release Measures

・Collect spillage in empty containers.

7. Handling and Storage

Handling

・Avoid contact with eyes, skin and clothing.
・Do not eat, drink or smoke when handling this reference material.
・Do not touch directly with hands
・Wash hands thoroughly after handling this reference material.
・Keep away from any possible contact with strong oxidizers.
・Avoid dust and vapor generation.

Storage

・Store in a closed container in a clean light-shielded environment at room temperature.

8. Exposure Controls/Personal Protection

Safety Precautions

Not defined

Permissible Concentration (Polystyrene)

Not specified

Engineering Controls

◇Precautions for storage

・Store in a closed container in a clean light-shielded environment at room temperature.
・Keep container tightly closed and install local ventilation system when dust is generated.

Personal Protective Equipment (PPE)

・Protective mask, Protective gloves, Eye protector, Eye protector with side plates (Goggle-type as required), Protective clothing, Protective boots

Hygiene measure

Treat in accordance with rules on Industrial hygiene and Industrial safety.

9. Physical and Chemical Properties

・Appearance, etc.	:	Powder
・Color	:	White
・Odor	:	No data
・pH	:	No data
・Melting point	:	No data
・Boiling point	:	No data
・Flashing point	:	No data
・Explosive range	:	No data

・Vapor pressure	:	No data
・Relative vapor density(Air=1)	:	No data
・Specific gravity or bulk specific gravity	:	No data
・Solubility	:	No data
・*n*-Octanol/water partition coefficient (Log Po/w)	:	No data
・Auto-ignition temperature	:	No data

10. Stability and Reactivity

Stability

・Stable against acids and alkalis but poor oil resistance

Reactivity

・Decomposed, when being heated above 300 °C, to generate toxic fumes such as styrene.

Conditions to Avoid

・Sunlight, Heat

Hazardous Decomposition Products

・Carbon monoxide (CO)

11. Toxicological Information

No data available

12. Ecological Information

Persistence and Degradability

・Not biodegradable etc.

Bioaccumulative Potential

・No or limited concentration or bio-accumulation in fish/shellfish body

Ecotoxicity

・No data available

13. Disposal Considerations

・Entrust disposal of this reference material and its containers to a professional waste disposal company licensed by prefectural governor.

14. Transport Information

UN Number	:	Not applicable
UN Classification	:	Not applicable
Shipping Name	:	Not applicable
Packing Group	:	-
ICAO/IATA	:	Not applicable
Marine	:	Not applicable

Pollutant

Precautions : Transport this reference material carefully while keeping it away from direct sunlight and fire and preventing accidental release due to falling, overturning, etc.

15. Regulatory Information

・No applicable legislation

16. Other Information

Other

The information in this document is not intended to be exhaustive and is based on currently available information and data. The measures given in this document are applicable only to normal handling conditions. When handling this reference material under special conditions etc., it is recommended to take safety measures appropriate to each specific application and context of use. This document is intended to provide information and not intended to guarantee anything in handling this reference material.