

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. : 029-861-4059 Fax No. : 029-861-4009
Emergency : Same as above
Contact

Prepared on : April 21, 2023

Revised on : —

Reference No. : 5722001

Identity of Substance/
Mixture : Certified reference material: NMIJ CRM 5722-a
Polystyrene Latex Particles (300 nm Monodisperse)
(Polystyrene Latex Particles (300 nm, Monodisperse))

Recommended Use of the Chemical and Restriction on Use : This CRM is intended to be used in the calibration and quality control of particle-size and particle-mass measurement systems such as differential mobility analyzer (DMA) and aerosol particle mass analyzer (APM) and validation of particle-size and particle-mass measurement methods.
Do not use this CRM 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 : Not classifiable
GHS Label Element : -
Signal Word : -
Hazard Statement : -
Precautionary Statement : [Safety Precautions]
Harmful if swallowed.
[First-Aid Measures]
If swallowed: Give plenty of water and induce vomiting. Get medical advice/attention.
[Storage]
Protect from direct sunlight. Store in a clean place at temperatures of 4 °C or higher and 30 °C or less. Keep this CRM unfrozen.
[Disposal]
Abide by applicable legislation and ordinances set by local governments.

Entrust disposal of this CRM to a professional waste disposal company licensed by prefectural governor.

The other hazards than the above do not result in classification or are not classifiable.

Other hazard information : Harmful if inhaled or swallowed.

3 . Composition/Information on Ingredients

Substance/Mixture	: Mixture
Chemical Identity/Common Expression	: Polystyrene Latex Particles
Ingredient (1)	Stylene polymer
CAS Number	: 9003-53-6
Content	: About 1 %
Chemical Formula	: $(C_8H_8)_i$; (i: Degree of polymerization)
Molecular Weight	: -
Reference Number in Gazetted List in Japan	: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.: (6)-120
Reference Number in Gazetted List in Japan	: Industrial Safety and Health Act: Existing chemical substance
Ingredient (2)	: Sodium azide
CAS Number	: 26628-22-8
Content	: About 0.05 %
Chemical Formula	: NaN_3
Molecular Weight	: 65.01
Reference Number in Gazetted List in Japan	: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.: (1)-482
Reference Number in Gazetted List in Japan	: Industrial Safety and Health Act: Existing chemical substance
Ingredient (2)	: Water
CAS Number	: 7732-18-5
Content	: About 99 %
Chemical Formula	: H_2O
Molecular Weight	: 18.02
Reference Number in Gazetted List in Japan	: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.: -
Reference Number in Gazetted List in Japan	: Industrial Safety and Health Act: -

4 . First-aid Measures

If Inhaled	: Remove victim to fresh air and keep at rest and warm. Get medical advice/attention.
If on Skin	: Rinse skin with clean water thoroughly. Remove/Take off contaminated clothing, shoes, etc. If skin irritation or rash occurs: Get medical advice/attention.
If in Eyes	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If Swallowed	: Rinse mouth with water thoroughly. Call a doctor/physician.
Precautions required to protect First-Aiders	: First-Aiders must use personal protective equipment.

5 . Fire-fighting Measures

Suitable Extinguishing Media	: Use fire extinguishing media such as powder and carbon dioxide in early stage of fire. Foam extinguishing agent for water-soluble liquid (Alcohol-resistant foam), Carbon dioxide, Powder, Sand, Water and Extinguishing media appropriate for surrounding fire
Unsuitable Extinguishing Media	: No data available
Fire-Specific Hazards	: In case of fire: May emit irritative or toxic fume (or gas).
Specific Fire-Fighting Method	: Eliminate ignition sources at the origin of fire and put out fire by using extinguishing media. Move movable containers promptly to a safe place. If containers are immovable, cool their surroundings with water spray.
Special protection equipment and precaution for Fire-Fighters	: Fight fire from upwind to avoid breathing hazardous gas. Use personal protective equipment such as fire protection clothing, heat-resistant clothing, protective clothing, compressed air open-circuit self-contained breathing apparatus, circulating oxygen respirator, rubber gloves and rubber boots.

6 . Accidental Release Measures

Personal Precaution, Personal Protective Equipment and Emergency Procedures	: Take thorough clean-up actions as it is highly likely that people slip over remains on floor, if any. Wear appropriate personal protective equipment during the operation to avoid skin contact of splash etc. and inhalation of dust and gas.
Environmental Precautions	: Take precautions to prevent spillages from draining into rivers etc. to adversely affect the environment. Take precautions to prevent untreated wastewater from being released into the surrounding environment.
Method and Tool for Confinement and Clean-	: Collect spillages in empty containers by getting them adsorbed to liquid absorbers (such as sand, diatomite earth, acid-binding agent,

up universal binding agent and sawdust).
Prevention of Secondary : Mark the restricted area with rope etc. to keep out unauthorized
Disaster people.

7. Handling and Storage Precautions

Handling

Engineering : Install facilities to rinse eyes and to wash hands and body for
Precautions emergency in the vicinity of a place handling this CRM.
(Local and General Avoid rough handling such as knocking over, dropping, dragging and
Ventilation, etc.) giving a shock to container.
Prevent this CRM from leaking, overflowing and splashing. Do not
allow vapors to be emitted.
Avoid breathing vapor (dust) diffused.
Close container tightly every time after handling.

Precautions for Safe : Do not allow emission of aerosol and dust when handling
Handling
Incompatible : No data available
Materials
Hygiene Controls : Handle this CRM in accordance with industrial health and safety
code.

Storage

Safe Storage : Protect from direct sunlight. Store in a clean place at temperatures of
Conditions 4 °C or higher and 30 °C or less.
Safe Container : Polypropylene
Packaging Materials

※Refer to the Certificate for appropriate storage conditions and instructions for use as a
reference material.

8. Exposure Controls/Personal Protection

Threshold Limit Value

Not specified

Permissible Concentration (Polystyrene Latex Particles)

ACGIH TLV-TWA : No data available
Values recommended by : No data available
Japan Society for
Occupational Health
OSHA PEL TWA : No data available

Engineering Controls

Ventilation/Exhaust : Local ventilation system or general ventilation system
Safety Control/Gas : Measuring equipment, Detecting tube
Detection

Storage Precautions : Ventilation along floor surface. Keep container tightly closed.

Keep away from flammable substances, reductive substances and strong oxidizers.

Personal Protective Equipment

Respiratory System	: Protective mask
Hands	: Protective gloves
Eyes and Face	: Eye protector
Skin and Body	: Protective clothing

9. Physical and Chemical Properties

• Physical State	: Water suspension
• Color	: Clouded
• Odor	: No data available
• Melting Point/Freezing Point	: No data available
• Boiling Point or Initial Boiling Point and Boiling Point Range	: No data available
• Flammability	: No data available
• Lower Explosion Limit and Upper Explosion Limit/Flammability Limit	: No data available
• Flashing Point	: No data available
• Auto-Ignition Temperature	: No data available
• pH	: No data available
• Kinetic Viscosity	: No data available
• Solubility	: No data available
• Partition Coefficient: <i>n</i> -octanol/Water	: No data available
• Vapor Pressure	: No data available
• Density and/or Relative Density	: No data available
• Relative Gas Density	: No data available
• Particle Characteristics	: No data available

10. Stability and Reactivity

Reactivity	: Get decomposed to emit harmful fume such as styrene, if heated to 300 °C or higher.
Chemical Stability	: Stable against acids and alkalis. Low resistance against oils.
Possibility of Hazardous Reactions	: No data available
Conditions to Avoid	: Sunlight, Heat
Incompatible Materials	: No data available
Hazardous Decomposition Products	: Carbon monoxide

11. Toxicological Information

Acute Toxicity	: No data available
Skin Corrosion/ Irritation	: No data available
Serious Eye Damage/ Eye Irritation	: No data available
Sensitization – Respiratory or Sensitization - Skin	: No data available
Germ Cell Mutagenicity (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

※The toxicological information is prepared based on the information on the raw materials since the information on the mixture is not available.

Under normal conditions, this CRM is stable and has no such risk as elution of hazardous additives. In case of special handling such as handling at high temperatures, however, sufficient safety precautions must be taken.

12. Ecological Information

Ecotoxicity	: No data available
Persistence and Degradability	: No microbial degradability
Bioaccumulation Potential	: Considered to have no or low bioconcentration and bioaccumulation potential in fish and shellfish
Mobility in Soil	: No data available
Harmful Effects on Ozone Layer	: No data available

13. Disposal Considerations

Residual Waste	: Dispose of this CRM in accordance with applicable legislation and local government ordinance. Entrust disposal of residual waste to a professional waste disposal company licensed by prefectural governor etc., or to a local government if it provides disposal services. If entrusting disposal of residual waste, make a waste disposal company etc. fully understand relevant risks and hazards.
Contaminated Container and	: Dispose of containers after thoroughly removing their contents.

Package

14. Transport Information

International Regulations

UN Number	: Not applicable
Shipping Name	: -
UN Classification	: -
Packing Group	: -
Marine Pollutant	: Not applicable
Special Safety Precautions for Transportation or Transportation Means	: Transport this CRM carefully while keeping it away from direct sunlight and fire and preventing accidental release due to falling, being knocked over, etc.

Japanese Regulations

Land Transportation	: Comply with Fire Service Act, Poisonous and Deleterious Substances Control Act, and High-Pressure Gas Safety Act.
Marine Transportation	: Comply with Ship Safety Act and Act on Port Regulations.
Air Transportation	: Comply with Civil Aeronautics Act.

15. Regulatory Information

No applicable laws

16. Other Information

Others

The information in this document is not intended to be exhaustive and is based on currently available information and data. The precautions given in this document are applicable only to conditions of normal handling. When handling this CRM under special conditions etc., it is recommended to take safety precautions 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 CRM.
