

# 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 Material Office, Center for Quality Management of Metrology, The National Metrology Institute of Japan  
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 Emergency Contact : Same as above

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Identification of the Material : Certified Reference Material NMIJ CRM 5601-a  
 Quartz Glass for Positron Hole-size Measurements  
 Recommended Use of the Chemical and Restriction on Use : This reference material can be used for quality control of positron annihilation lifetime measurements for polymers with ortho-positronium lifetime of >1 ns and samples similar to polycarbonate as well as for validation of the measurement methods and measurement results. Do not use this reference material for other purposes than testing/research.

## 2. Hazards identification

GHS Classification : Not classifiable  
 GHS Label element : Not available  
 Signal word : -  
 Hazard communication : -  
 Other hazard communication: : Harmful if inhaled or swallowed. Irritates eye or mucous membrane upon contact. Symptoms such as discomfort, nausea, headache, etc. may occur due to long-term exposure  
 Precautionary statement: : [Preventative Measures]  
 Use protective gloves when handling  
 Breaks easily, handle gently, avoid applying strong shock, do not let it fall. Avoid cuts from broken fragments.  
 [Response]  
 If swallowed, drink large amount of water and induce vomit. Get medical advice upon unusual symptom.  
 [Storage]  
 Store in a clean environment at room temperature.  
 Store in dry air or nitrogen gas current recommended.  
 Make sure to store at a distance from radiation generating source  
 [Disposal]

Hazardous and toxic properties not specified in the above are not subject to the classification or not classifiable.

### 3. Composition/Information on Ingredients

Substance/Mixture	:	Single product
Chemical name	:	Fused Silica Glass for Thermal Diffusivity Measurement
Ingredient	:	Fused silica glass
Synonym	:	Quartz glass, Silica glass, Silicon dioxide
Amount	:	SiO <sub>2</sub>
Chemical formula	:	99.9 % or more
Molecular weight	:	-
Official Gazette	:	Act on the Evaluation of Chemical Substances and Regulation of
Reference No.	:	Their Manufacture, etc. : (1)-548
	:	Industrial Safety and Health Act : Published
CAS number	:	60676-86-0
Hazardous Ingredient	:	-

### 4. First-aid Measures

If in eyes	:	Rinse with plenty of clean water, get medical advice
If on skin	:	Wash with plenty of clean water, if inflamed, get medical advice
If inhaled	:	Low in harm in a normal handling
If swallowed	:	Drink a lot of water and induce vomit, get medical advice promptly
Anticipated acute & delayed symptoms	:	Irritates eyes or mucous membrane upon contact
Most significant characteristics & symptoms	:	-
Protecting the person applying first-aid	:	Low in harm in a normal handling

### 5. Fire-fighting Measures

Extinguishing media	:	Because the material is incombustible, select suitable media for the fire concerning surrounding area.
Specific hazards at the time of fire	:	Not in particular
Specific extinguishing measures and methods	:	Immediately remove combustible or ignitable materials from near the fire and start extinguishing with extinguishing agent, transfer movable containers to a safe place promptly.
Protecting fire-fighting personnel	:	Use personal protective equipment such as fire-safe clothing, self-contained compressed air breathing apparatus.

## 6. Accidental Release Measures

- Personal precaution : Promptly remove ignitable materials from the area, have extinguisher and extinguishing agents ready in case of a fire
- Protective equipment and emergency procedures : If indoor, ventilate well until the treatment is completed properly. Wear appropriate protective equipment to protect the skin from splattering droplets and prevent from inhaling dust/particulate or gas.
- Environmental precautions : To prevent causing environmental impact, do not release materials or products into rivers, etc. through drainage. Before discharging contaminated waste water, treat the waste water properly.
- Recovery, neutralization : Gather the fragments and broken pieces thoroughly and wash off the remains with plenty of water
- Secondary disaster prevention : -

## 7. Handling and Storage

### Handling

- Technical measures : Not in particular
- Local exhaust or central ventilation : When handling indoor, use local exhaust ventilation
- Safe handling precautions : Handle the container with care and avoid knocking over, dropping or dragging.  
Minimize vapor generation to prevent leakage, overflow or spatter.  
Seal the container after use.  
Wash hands, face, etc. well and gargle after handling.  
Before taking a break, take off contaminated protective equipment such as protective gloves, etc.  
Use appropriate personal protective equipment to prevent inhalation, eye injuries, dermal inflammation.

### Storage

- Condition for safe storage : Avoid exposure to direct sunlight or air, store at room temperature
- Safe packaging material : Plastic container

## 8. Exposure Controls/Personal Protection

### Standard control concentration

Not established

### Occupational exposure limit

- ACGIH TLV(s) : TWA 0.1 mg/m<sup>3</sup>
- Japan Society for : Not established

Occupational Health recommended reference value	
• OSHA PEL	: 8H TWA 10 mg/m <sup>3</sup> (% resp SiO <sub>2</sub> )
Facility engineering control	
Ventilation, exhaust	: If generating dust/particle, seal the source of release and install local exhaust ventilation equipment
Safety control, gas detection	: -
Storage precaution	: -
Protective equipment	
Respiratory tract protection	: For dust/particle, wear a dust-protective mask
Hands	: Protective gloves
Eyes	: Safety goggles
Skin and body	: Protective clothing

## 9. Physical and Chemical Properties

• Appearance, etc.	: Thickness 1.5 mm、15 mm solid square pieces
• Color	: Colorless, transparent
• 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
• <i>n</i> -Octanol/water partition coefficient (Log Po/w)	: No data
• Auto-ignition temperature	: No data

## 10. Stability and Reactivity

- ◇Stability
  - Stable under normal condition
- ◇Reactivity
  - No data available
- ◇Condition to avoid
  - Sunlight, heat, humidity
- ◇Hazardous decomposition products
  - No data available

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## 11. Toxicological Information

Acute toxicity	Oral rat LD50 3160 mg/kg, Interperitoneal rat LDLo 50 mg/kg Intravenous rat LD50 15 mg/kg, Endotracheal rat LDLo 10 mg/kg
Carcinogenicity	IARC Group 3 (Not classifiable as oncogenic for humans)

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## 12. Ecological Information

Degradability, concentration

- No data available

Bioaccumulation

- No data available

Ecotoxicity

- No data available
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## 13. Disposal Considerations

- No data available
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## 14. Transport Information

UN number	: Not available
UN classification	: Not available
Name	: -
Container class	: -
Marine pollutant	: Not applicable
Precautions	: Transfer with care avoiding direct sunlight, leakage or spill due to fall, keep away from fire sources

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## 15. Regulatory Information

- No applicable legislation

This SDS is originally prepared for the use of the material in Japan, thus the stated laws and regulations are stipulated and carried out in Japan. The use of the material in other countries should be referred to and by application of the relevant laws and regulations of the country in which the material will be used.

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## 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 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.

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