

# 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 (NMIJ)  
 Person in Charge : Person in Charge of Certified Reference Materials  
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 Emergency Contact : Same as above

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Reference No : 6202001

Identity of Substance/Mixture : Reference material NMIJ CRM 6202-a  
 Human Serum Albumin  
 Recommended Use of the Chemical and Restriction on Use : This reference material can be used for the calibration and accuracy control of analytical instruments, and the validation of analysis methods and analyzers in the qualitative analysis of albumin through amino acid analysis, chromatography, absorption spectrometry, or other appropriate method using the equipment.  
 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 : Classification not possible  
 GHS-labeling element : -  
 Signal word : -  
 Hazard and toxicity information : -  
 Other toxicity information : This reference material uses human serum as the material. Although the material tested negative for HBs antigen, HCV antibody, and HIV antibody, as well as in their genetic tests, the infectiousness of such is undeniable. Wear protective gloves when using and handle with sufficient care in the same manner as the specimens.  
 Cautionary statement : [Safety Measures]  
 Never drop it in the eyes, and never take it by administration or injection.  
 Wear a protective mask, protective gloves, protective glasses, and

other appropriate protective equipment when using. Pay attention to prevent ingestion and contact with the skin.

[Emergency Measures]

Ingestion: Rinse the mouth thoroughly with water.

Eye contact: Immediately wash eyes thoroughly with tap water. In case of abnormal state, seek medical attention.

Skin contact: Wash thoroughly with plenty of water or soapy water. If there is a change in appearance or pain persists, seek medical attention.

[Storage]

Keep out of direct sunlight and store in a clean area at 4 °C.

Avoid freezing.

[Disposal]

Follow the related regulations and ordinances of the local government and dispose of the material as medical waste after sterilization.

Use a waste-treatment firm certified by prefectural governor.

Classification is impossible or not applicable for hazards not mentioned above.

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### 3. Composition/Information on Ingredients

Single substance or compound	:	Compound
Ingredient 1	:	
Chemical name	:	Albumin (originating from human serum)
Chemical formula	:	Approximately 7%
Molecular weight	:	
CAS number	:	70024-90-7
Content	:	Approximately 7 %
Reference Number in Gazetted List in Japan	:	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : - Industrial Safety and Health Act : -
Ingredient 2	:	
Chemical name	:	Sodium chloride
Chemical formula	:	NaCl
Molecular weight	:	58.44
CAS number	:	7647-14-5
Content	:	Approximately 0.1%
Reference Number in Gazetted List in Japan	:	Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. :(1)-236 Industrial Safety and Health Act : Published

Ingredient 3

Chemical name	: Sodium azide
Chemical formula	: $\text{NaN}_3$
Molecular weight	: 65.01
CAS number	: 26628-22-8
Content	: Approximately 0.05%
Reference Number in Gazetted List in Japan	: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : (1)-482 Industrial Safety and Health Act : Published
Hazardous component	: Sodium azide

#### 4. First-aid Measures

Eye contact	: Immediately wash eyes thoroughly with tap water. In case of abnormal state, seek medical attention.
Skin contact	: Wash thoroughly with plenty of water or soapy water. If there is a change in appearance or pain persists, seek medical attention.
Inhalation	: Move to a place with fresh air. Seek medical attention, if necessary.
Ingestion	: Rinse the mouth thoroughly with tap water.
Estimated acute and late symptom	: -
Most important symptoms and effects	: -
Protection of first- aiders	: Wear appropriate protective equipment to prevent exposure.

#### 5. Fire-fighting Measures

Extinguishing media	: Extinguishing media suitable for peripheral fire.
Specific hazards with regard to fire-fighting	: None
Specific methods of fire-fighting	: Eliminate the origin of fire and put the fire out with extinguishing media. If possible, move containers to a safe place. If not, cool the peripheral areas with water spray.
Protection for firefighters	: Work from the windward side to prevent the inhalation of toxic gas. Use fire-prevention clothing, fireproof clothing, fire-protection clothing, respirator, circulating oxygen breathing apparatus, rubber gloves, rubber boots, or other appropriate protective equipment.

#### 6. Accidental Release Measures

Personal precautions	: Promptly remove all potential ignition sources from peripheral areas. In case of ignition, prepare the equipment for firefighting.
Protective equipment	: When accidental release takes place indoors, thoroughly clear the

and emergency measures	air until the emergency measures are complete. Before the operation, wear appropriate protective equipment to protect skin from droplets and to prevent inhalation of dust and gas.
Environmental precautions	: Prevent the released product from being drained into a river or other area that might cause environmental damage. Prevent the polluted discharge from being drained into the environment without being processed properly.
Recovery and neutralization	: In case of a small amount of release, wipe with a damp cloth. In case of a large amount of release, wash away with water.
Prevention of secondary accidents	: Enclose the area with a rope, etc., to prevent unauthorized people from entering the area. Work from the windward side and evacuate people to the leeward side.

## 7. Handling and Storage

### Handling

Technical measures	: Never drop it in the eyes, and never take it by administration or injection. Wear a protective mask, protective gloves, protective glasses, and other appropriate protective equipment when using and pay attention to prevent ingestion and contact with the skin.
Local ventilation and general ventilation	: In case steam or mist is generated, seal the source and provide local exhaust ventilation.
Precautions for safe handling	: Wear protective gloves and other appropriate protective equipment when using, and handle the material with care, in the same manner as specimens originating from humans that have the potential for infection. Avoid rough handling such as dropping, shocking, dragging, or otherwise agitating the container. Seal the container after use. Wash hands, face, and other necessary parts thoroughly, and gargle after handling. Do not bring gloves and other contaminated protective equipment into the break area. Wear appropriate protective equipment to prevent contact with eyes, skin, or clothing.

### Storage

Appropriate storage conditions	: Keep out of direct sunlight and store in a clean area at 4 °C. Avoid freezing.
Safe packaging materials	: Glass

## 8. Exposure Controls/Personal Protection

Standard control concentration

N/A

Threshold limit values (Sodium chloride)

- ACGIH TLV-TWA : N/A
- Value recommended by Japanese Society of Occupational Health : N/A
- OSHA PEL TWA : N/A

Threshold limit values (Sodium azide)

- ACGIH TLV-TWA : Ceiling 0.11 ppm; as hydrazoic acid vapor  
Ceiling 0.29 mg/m<sup>3</sup>; as sodium azide
- Value recommended by Japanese Society of Occupational Health : N/A
- OSHA PEL TWA : N/A

Engineering controls

- Ventilation and emission : Local ventilation equipment or general ventilation equipment
- Safety management and gas detection : -
- Storage precautions : Keep out of direct sunlight and store in a clean area after sealing.

Protective equipment

- Respiratory protection : Protective mask
- Hand protection : Protective gloves
- Eye protection : Protective glasses
- Skin and body protection : Protective clothing

Hygiene measures

- Replace the absorbents of a mask, etc. periodically or at every use.

## 9. Physical and Chemical Properties

- Appearance, etc. : Liquid
- Color : Colorless and clear
- Odor : No data
- pH : 6.68 (21 °C)
- 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 : (Bulk) 1.0201 (20 °C), 1.0190 (25 °C)
- Solubility : No data
- *n*-Octanol/water partition : No data

coefficient (Log P<sub>o/w</sub>)

- Auto-ignition temperature : No data

## 10. Stability and Reactivity

### ◇Stability

- Stable under normal conditions.

### ◇Reactivity

- None

### ◇Conditions to avoid

- Sunlight, heat

### ◇Hazardous decomposition products

- No data

## 11. Toxicological Information

Although only a minute quantity of hazardous components (sodium chloride and sodium azide) are contained, handle with care to prevent ingestion and contact with skin and secure safety.

Acute toxicity	<p>[Sodium chloride]            Oral rat LD<sub>50</sub>: 3000 mg/kg            Abdominal cavity mouse LD<sub>50</sub>: 2602 mg/kg            Vein mouse LD<sub>50</sub>: 645 mg/kg</p> <p>[Sodium azide]            Oral rat LD<sub>50</sub>: 27 mg/kg                Mouse LD<sub>50</sub>: 27 mg/kg                Human woman LDLo: 14 mg/kg                Convulsion or impact on seizure threshold, heart:                arrhythmia, change in contractile force                Human man LDLo: 129 mg/kg                Coma, heart: heartbeat, other changes</p> <p>Inhalation rat LC<sub>50</sub>: 37 mg/m<sup>3</sup>                Impact on eyes, convulsion or impact on seizure                threshold, functional change in trachea, bronchus                Mouse LC<sub>50</sub>: 32400 mg/m<sup>3</sup>                Impact on eyes, convulsion or impact on seizure                threshold, functional change in trachea, bronchus</p> <p>Dermal rat LD<sub>50</sub>: 50 mg/kg            Abdominal cavity mouse LD<sub>50</sub>: 28 mg/kg                Convulsion or impact on seizure threshold, change in                movements and actions, respiratory irritation</p>
Skin corrosivity/irritation	<p>[Sodium chloride]            Dermal rabbit 500 mg/24 hours: Light</p> <p>[Sodium azide]            Animal testing result: Corrosivity by contact for four hours</p>
Severe eye damage/eye irritation	<p>[Sodium chloride]            Eye irritation rabbit 10 mg: Medium</p>

Germ-cell mutagenicity	<p>Eye irritation rabbit 100 mg/24 hours: Medium [Sodium azide]</p> <p>Although it has been tested as positive in the in vitro microorganism mutagenicity test, it has been tested as negative in the in vitro mammal mutagenicity test and there is no in vivo test data for mammals.</p> <p>It has been considered that the strong mutagenicity is unique to microorganisms and plant life.</p>
Carcinogenicity	<p>[Sodium azide]</p> <p>A4 (Impossible to classify the carcinogenicity against human)</p>
Specific target organ/systemic toxicity (single exposure)	<p>[Sodium azide]</p> <p>Many cases for humans have been reported for blood pressure lowering (used as therapeutic medication before) and side effects to respiratory system, digestive organs, etc.).</p>
Specific target organ/systemic toxicity (repeated exposure)	<p>[Sodium azide]</p> <p>Long-term use for the treatment of high blood pressure for humans: An increase in sensitivity identified for some patients. Impact on the liver with the dose of 10 (mg/kg) or less per day identified in animal experiments.</p>

## 12. Ecological Information

Degradability/Concentration

- No data

Bioaccumulation

- No data

Ecotoxicity

- No data

## 13. Disposal Considerations

Residues	:	Dispose by classifying as medical wastes or industrial wastes in accordance with the waste material regulations.
Contaminated containers and packaging	:	To dispose of an empty container, completely remove the contents.

## 14. Transport Information

UN Dangerous Goods Number	:	Not applicable
UN classification	:	Not applicable
Product name	:	-
Packing group	:	-
ICAO/IATA	:	-
Marine	:	Not applicable

pollutant

Matters to be attended to : Avoid direct sunlight. Prevent leakage and fires caused by overturning, falling, etc. and transport with caution.

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## 15. Regulatory Information

- No applicable laws and regulations
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## 16. Other Information

This reference material shall not be used directly for medical behaviors.

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.

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