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

Identity of Substance/Mixture: Certified Reference Material NMIJ CRM 3006-a
Recommended Use: This CRM can be used for the primary standard in titrimetric analysis. Do not use this reference material for other purposes than testing/research.

2. Hazards Identification

GHS Classification: Oxidizing solid : Hazard Category 2
Serious eye damage/ Eye irritation : Hazard Category 2B
Acute toxicity (Oral) : Hazard Category 4

GHS Label Element:

Signal Word: Danger
Hazard Statement: Risk of promoting fire
Oxidizing material
Harmful if swallowed
[Critical Hazard]
Oxidation, Hazard

Precautionary Statement: [Precaution]
Wash exposed face and hands thoroughly after handling this reference material.
Avoid drinking, eating and smoking when handling this reference material.
Remove heat, high temperature material, spark, bare fire and other
ignition sources in vicinity.
Keep clothes and flammable material at a distance.
Use appropriate personal protective equipment such as protective glove, protective cloth, protective glasses and protective mask.

[First-Aid Measure]
If in eyes, wash eyes with water for several minutes carefully. If possible take off contact lenses. Continue washing. Get medical advice/attention immediately, if eye irritation is lasting.
If ingested: rinse mouth with water.
Get medical advice/attention immediately.
In case of fire, use carbon-dioxide, powder (except hydrogen carbonate type) and foam extinguisher.

[Storage]
Store in a closed container in room-temperature environment with humidity of 60% or less.
Protect this reference material from effects of acids and alkalis.

[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

<table>
<thead>
<tr>
<th>Substance or Mixture</th>
<th>Substance</th>
<th>Chemical Identity</th>
<th>Potassium Iodate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonym</td>
<td>-</td>
<td></td>
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<tr>
<td>Chemical Formula or Structural Formula</td>
<td>KIO$_3$</td>
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<tr>
<td>Mass Fraction (%)</td>
<td>99.9 % or more</td>
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<tr>
<td>Molecular Weight</td>
<td>214.00</td>
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<tr>
<td>Reference Number in Gazetted List in Japan</td>
<td>Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. : (1)-440</td>
<td></td>
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<tr>
<td></td>
<td>The Industrial Safety and Health Law : Published</td>
<td></td>
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</tr>
<tr>
<td>CAS Number</td>
<td>7758-05-6</td>
<td></td>
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</tbody>
</table>

4. First-aid Measures

If in eyes : Rinse eyes carefully with plenty of water for several minutes.
Then take off contact lenses if possible. Get medical advice/attention immediately, if eye irritation is lasting.

If on Skin : Take off/remove all contaminated clothing and shoes immediately. Wash exposed skin area with plenty of soap and water.

If Inhale : Remove victim to fresh air. Make the person blow his/her nose and gargle. Get medical advice/attention.
If Ingested: Get medical advice/attention if feel bad. Rinse mouse with water.

5. Fire-fighting Measures

Extinguishing Media: Plenty of water (This reference material increases susceptibility of combustible materials to burn.), Sand, carbon-dioxide, powder (except hydrogen carbonate type) and foam.

Fire-Specific Hazards: Use appropriate personal protective equipment to avoid breathing smoke as irritating or toxic fume (or gas) is generated in the case of fire.

Specific Fire-Fighting Method: Eliminate ignition sources at the origin of a fire and put out fire by using plenty of water. Remove movable containers promptly to a safe place. In the case of immovable containers, cool them and their surroundings with sprayed water.

Protection of Fire-Fighters: Carry out fire-fighting from the windward in order to avoid breathing toxic gas. Use personal protective equipment such as compressed air open-circuit self-contained breathing apparatus.

6. Accidental Release Measures

Personal Precaution, Personal Protective Equipment and Emergency Procedures: Ventilate the affected areas thoroughly, if it is in an indoor environment, until the clean-up operation is completed. Use appropriate personal protective equipment to avoid contact with eye and skin and inhalation of gas. Mark the restricted area with rope etc. to keep out unauthorized people. Carry out the clean-up operation from the windward and make people on the leeward side evacuate.

Environmental Precautions: Take precautions to prevent spillage from draining into rivers etc. to adversely impact the environment. Make it sure to appropriately treat contaminated wastewater in order to prevent untreated wastewater from being released into the surrounding environment.

Recovery and Neutralization Prevention of Secondary Disaster: Collect spillage in containers which can be kept tightly closed. Rinse away the remains with plenty of water.

7. Handling and Storage

Handling Engineering: Strict ban on fire.
Precautions

Keep away from shock, hot surface and spark.
Avoid contact with organic materials and reducing agents.

Local and General Ventilation

Use local ventilation system in indoor handling areas.

Precautions for Safe Handling

Avoid rough handling such as turning over, dropping, giving a shock to or dragging containers.
Prevent spill, overflow and scattering, and avoid dust generation.
Keep container tightly closed after using this reference material.
Wash hands, face etc. thoroughly and gargle after handling this reference material.
Restrict drinking, eating and smoking to a designated area.
Use appropriate personal protective equipment to avoid inhalation and contact with eyes, skin and clothing.
Make a place handling this reference material a restricted area to keep out unauthorized people.

Storage

Appropriate Storage Conditions
Store in a closed container in room temperature environment with humidity of 60% or less.
Protect this reference material from effects of acids and alkalis.

Safe Container Packing Material
Glass

※ Please refer the certificate about the details of appropriate storage conditions and precautions for the use as reference material.

8. Exposure Controls/Personal Protection

Engineering Controls
Keep container tightly closed and install local ventilation system if dust is generated.
Install facilities to rinse eyes and to wash hands and body in the vicinity of a place handling this reference material and label them.

Personal Protective Equipment (PPE)
◇Respiratory System:Dust protective mask
◇Hands:Protective gloves
◇Eyes:Eye protector with side plates
◇Skin and Body:Work clothes with long sleeves

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

9. Physical and Chemical Properties

- Appearance, etc.: Powder
- Color: White
- Odor: Odorless
10. Stability and Reactivity

◇ Stability
Discomposed and release oxygen to increase susceptibility of substances to burn if heated.

◇ Reactivity
Its aqueous solution acts as a strong oxidizer. 
May react in contact with reducing agents.

◇ Conditions to Avoid
Sunlight, Heat, Shock, Being mixed with combustible materials

◇ Hazardous Decomposition Products
No data available

11. Toxicological Information

Acute Toxicity
Oral Mouse  LDLo: 531 mg/kg (RTECS)
Abdominal cavity Mouse  LD50: 136 mg/kg (RTECS)
Oral Dog  LDLo: 200 mg/kg (RTECS)

Skin Corrosion/Irritation
No data available

Serious Eye Damage/ Eye Irritation
No data available

Germ Cell Mutagenicity
No data available

Carcinogenicity
No data available

12. Ecological Information

Persistence and Degradability
No data available

Bioaccumulative Potential
No data available

Ecotoxicity
No data available
13. Disposal Considerations

- Dispose of this reference material in accordance with applicable legislation and local government ordinance.
- Dispose of container after thoroughly removing its contents.

14. Transport Information

UN Number : 1479
UN Classification : Class 5.1 (Oxidizer)
Shipping Name : Oxidizing solid, n.o.s
Packing Group : PG II
Marine Pollutant : Not applicable

Precautions : When transporting this reference material, make it sure that its containers are not leaky, load it in a way to prevent turning over, dropping and being damaged, and take appropriate measures to avoid collapse.

15. Regulatory Information

Fire Defense Law
- Class 1 (Iodates) Danger Rating 1

Poisonous and Deleterious Substances Control Act
- Not applicable

Industrial Safety and Health Act
- Enforcement Order Appendix 1-3 Hazardous Substance (Oxidizing Material)

Ship Safety Law (Dangerous Material Rule)
- Other Oxidizer

Civil Aeronautics Act
- Oxidizer

Pollutant Release and Transfer Register Act (PRTR Act)
- Not applicable

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.