

# 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  
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Emergency Contact : Same as above

Prepared on : December 27, 2017

Revised on : April 18, 2018

Reference No. : 3001003

Identity of : Certified reference material: NMIJ CRM 3001-c  
Substance/Mixture Potassium hydrogen phthalate  
Recommended Use of : This CRM is intended to be used for standardizing titrants for acidimetry  
the Chemical and and other similar uses. This CRM is also intended to be used for  
Restriction on Use standardizing determination of organic carbon. Do not use this reference  
material for other purposes than testing/research.

## 2. Hazards Identification

GHS classification : Not specified  
GHS label element : Not specified  
Signal word : -  
Hazard and toxicity : -  
Other hazard and : Harmful if swallowed.  
toxicity Causes irritation if in contact with eyes, skin and mucous membrane.  
Precautionary : [Precaution]  
statement Avoid any exposures. Wear appropriate personal protective equipment  
such as protective gloves and eye protection.  
[Action]  
If swallowed: Drink lot of water and induce vomiting.  
[Storage]  
Store in a clean environment at normal room temperature.  
Close cap tightly and hermetically after use. Avoid exposure to acids and  
alkalis.  
[Disposal]  
Incinerate this reference material and its containers in an appropriate  
incinerator. Or entrust disposal of this reference material and its  
containers to a professional waste disposal company licensed by  
prefectural government.  
The other hazards than the above do not result in classification or are not  
covered by the GHS.

### 3. Composition/Information on Ingredients

|   |  |
|---|--|
| Substance or Mixture                          | : Substance  |
| Chemical name                                 | : Potassium hydrogen phthalate   |
| Synonym                                       | : Potassium biphthalate  |
| Content                                       | : 99.99 %  |
| Chemical Formula                              | : $C_8H_5O_4K$   |
| Structural Formula                            | : $C_6H_4(COOK)(COOH)$   |
| Molecular Weight                              | : 204.22   |
| Reference Number in<br>Gazetted List in Japan | : Act on the Evaluation of Chemical Substances and Regulation of Their<br>Manufacture, etc. : (3)-1342<br>Industrial Safety and Health Act : - |
| CAS Number                                    | : 877-24-7   |

### 4. First-aid Measures

|                                       |  |
|---------------------------------------|--|
| If in eyes                            | : Rinse cautiously with clean water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| If on skin                            | : Rinse thoroughly with clean water.   |
| If inhaled                            | : Remove victim to fresh air and keep at rest in a position comfortable for breathing.   |
| If swallowed                          | : Rinse mouth thoroughly with water. Drink a lot of water then it induces vomiting. Seek medical attention, if necessary.  |
| Expected Acute and<br>Delayed Symptom | : Eye, skin, mucous membrane irritation.   |
| Most Critical                         | : -  |
| Characteristic and<br>Symptom         |  |
| Protection of First-Aid<br>Responder  | : Use personal protective equipment.   |

### 5. Fire-fighting Measures

|                                  |  |
|----------------------------------|--|
| Extinguishing Media              | : Water, powder, foam and $CO_2$   |
| Fire-Specific Hazards            | : In the case of fire, irritating or toxic fume (or gas) may be generated.                                   |
| Specific Fire-Fighting<br>Method | : Remove any combustible sources from the seat of fire and extinguish using appropriate extinguishing agent. |
| Protection of<br>Fire-Fighters   | : Use protective equipment such as fire-resistant clothing, air-breathing apparatus, etc.                    |

### 6. Accidental Release Measures

|                                       |  |
|---------------------------------------|--|
| Personal precautions                  | : Remove ignition source from the vicinity immediately. Prepare fire-fighting equipment for the possibility of fires.  |
| Equipment and<br>Emergency Procedures | : If an indoor environment, ventilate affected areas thoroughly until the clean-up operation is completed. Use appropriate personal protective equipment during the operation to avoid skin contact from splashes, etc., and inhalation of dust and gas. |
| Environmental<br>Precautions          | : Take precautions to prevent spillage from draining into rivers etc. to avoid an adverse impact on the environment.   |

|  |   |
|--|---|
| <p>Recovery and Neutralization</p> <p>Prevention of Secondary Disaster</p> | <p>: Appropriately treat contaminated wastewater to prevent untreated wastewater from being released into the surrounding environment.</p> <p>: Adsorb spillage with waste clothes, wiping cloths or dry sand, and collect in empty containers. Rinse away the remains with copious water.</p> <p>: Mark the restricted area with rope etc. to keep out unauthorized personnel. Carry out the clean-up operation from the windward direction and evacuate people on the leeward side.</p> |
|--|---|

## 7. Handling and Storage

### Handling

|   |  |
|---|--|
| <p>Engineering</p> <p>Precautions</p> <p>Local and General Ventilation</p> <p>Precautions for Safe Handling</p> | <p>: Avoid the influence of acids and alkalis.</p> <p>: Use a local ventilation system in indoor handling areas.</p> <p>: Avoid rough handling such as turning over, dropping, shocking, or dragging containers.<br/>Prevent spill, overflow and scattering, and avoid vapor generation. Keep container tightly closed after using this reference material. Wash hands, face etc. thoroughly and gargle with water after handling this reference material.<br/>Do not take gloves and other contaminated personal protective equipment into staff area.<br/>Designate a restricted area for handling this reference material to keep out unauthorized personnel.<br/>Use appropriate personal protective equipment to avoid inhalation and contact with eyes, skin and clothing.</p> |
|---|--|

### Storage

|   |  |
|---|--|
| <p>Appropriate Storage Conditions</p> <p>Safe Container</p> <p>Packaging Material</p> | <p>: Stored in a clean place at normal room temperature.</p> <p>: Hard glass</p> |
|---|--|

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

## 8. Exposure Controls/Personal Protection

### Threshold Limit Value

Not established

### Occupational exposure limit

|   |  |
|---|--|
| <p>• ACGIH TLV-TWA</p> <p>• Japan Society for Occupational Health Recommended Reference Value</p> <p>• OSHA PEL TWA</p> | <p>: Not established</p> <p>: Not established</p> <p>: Not established</p> |
|---|--|

### Facility engineering control

|                            |  |
|----------------------------|--|
| <p>Ventilation/Exhaust</p> | <p>: Local ventilation system or General ventilation system.<br/>Provide a safety shower, a hand wash, eyewash facility close to the handling location. And, display the position clearly.</p> |
|----------------------------|--|

|   |   |   |
|---|---|---|
| Safety Control/   | : | -   |
| Gas Detection   |   |   |
| Storage Precaution  | : | Keep away from strong oxidants.                                     |
| Personal Protective Equipment (PPE)   |   |   |
| Respiratory System  | : | Protective mask, Self-contained compressed air breathing apparatus. |
| Hands   | : | Protective gloves   |
| Eyes  | : | Safety google   |
| Skin and Body   | : | Protective clothing   |
| Hygiene Controls  |   |   |
| Handle this reference material in accordance with industrial health and safety standards. |   |   |

## 9. Physical and Chemical Properties

|  |   |  |
|--|---|--|
| • Appearance, etc.   | : | Powder   |
| • Color  | : | White  |
| • Odor   | : | No data  |
| • pH   | : | Ca. 4.0  |
| • Melting point  | : | 295 °C to 300 °C (Decomposition)                             |
| • 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   | : | Soluble in water and insoluble in ethanol and diethyl ether. |
| • <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 storage conditions           |
| Reactivity                       | : | No data available                                |
| Conditions to avoid              | : | Sunlight, Heat, contact with oxidizing materials |
| Incompatible materials           | : | Oxidizing materials                              |
| Hazardous decomposition products | : | Carbon monoxide                                  |

## 11. Toxicological information

|                                      |   |                                     |
|--------------------------------------|---|-------------------------------------|
| Acute toxicity                       | : | Oral Rat LD50 : >3200 mg/kg (RTECS) |
| Skin corrosivity/irritation          | : | -                                   |
| Severe damage to eyes/eye irritation | : | -                                   |
| Respiratory sensitization            | : | -                                   |
| Skin sensitization                   | : | -                                   |

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## 12. Ecological Information

|                               |   |                   |
|-------------------------------|---|-------------------|
| Persistence and Degradability | : | No data available |
| Bioaccumulation               | : | No data available |
| Ecotoxicity                   | : | No data available |
| Mobility in soil              | : | No data available |
| Ozone depletion potential     | : | No data available |

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## 13. Disposal Considerations

|                                    |   |  |
|------------------------------------|---|--|
| Residual waste                     | : | Incinerate in an incinerator equipped with scrubber. Disposal should be in compliance with the related laws and regulations of the local government. |
| Contaminated container and package | : | Disposal of the empty container should only occur after complete removal of the content.   |

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

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## 14. Transport Information

|                   |   |   |
|-------------------|---|---|
| UN Number         | : | Not specified   |
| UN Classification | : | Not specified   |
| Shipping Name     | : | Potassium hydrogen phthalate  |
| Packing Group     | : | -   |
| ICAO/IATA         | : | -   |
| Marine 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. |

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## 15. Regulatory Information

- No applicable laws and regulations
- ◎ **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.

