

Safety Data Sheet



1. Identification of the Substance/Mixture and the Supplier

Supplier : National Institute of Advanced Industrial Science and Technology (AIST)
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 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

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 Reference No. : 4603001

Identity of Substance/
 Mixture : Certified reference material: NMIJ CRM 4603-a
 Reference material for quantitative NMR (¹H)
 Potassium Hydrogen Phthalate
 (Potassium Hydrogen Phthalate for Quantitative NMR(¹H))

Recommended Use of the Chemical and Restriction on Use : This CRM is intended to be used in the calibration of ¹H signal area in the quantitative analysis using nuclear magnetic resonance (NMR) spectroscopy, and validation of analytical 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 : —
 GHS Label Element : —
 Signal Word : —
 Hazard Statement : —
 Precautionary Statement : [Safety Precautions]
 Wash exposed skin of face, hands, etc. thoroughly after handling.
 Use personal protective equipment.
 [First-Aid Measures]
 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 on skin: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
 [Storage]
 Protect from sunlight. Store in a clean place at temperatures of

15 °C to 35 °C and relative humidity of 60 % or less.

[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.

3 . Composition/Information on Ingredients

Substance/Mixture	: Substance
Chemical Identity or trivial name	: Potassium Hydrogen Phthalate
Ingredient	
CAS Number	: 877-24-7
Content	: 99% or more
Chemical Formula	: C ₈ H ₅ KO ₄
Molecular Weight	: 204.22
Reference Number in Gazetted List in Japan	: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.: (3)-1342
Reference Number in Gazetted List in Japan	: Industrial Safety and Health Act: (3)-1272

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 thoroughly with clean water. Remove/Take off all 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 thoroughly with water. Call a doctor/physician.
Precautions required to protect First-Aiders	: First-Aiders must use personal protective equipment.

5 . Fire-fighting Measures

Suitable Extinguishing Media	: Water, Powder, Carbon dioxide, Dry sand, Foam
Unsuitable Extinguishing	: No data available

Media

- Fire-Specific Hazards : May emit irritating or toxic fumes (or gases) in case of fire.
- 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 : Use appropriate personal protective equipment to avoid contact with skin and eyes and contamination of personal clothes. Ventilate the affected areas thoroughly, if it is in an indoor environment, until the clean-up operation is completed. 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-up : Collect spillages in empty containers. Rinse away the remains with plenty of water.
- Prevention of Secondary Disaster : Mark the restricted area with rope etc. to keep out unauthorized people. Carry out the clean-up operation from the upwind side and make people on the downwind side evacuate.

7 . Handling and Storage Precautions

Handling

- Engineering Precautions (Local and General Ventilation, etc.) : Install facilities to rinse eyes and wash body near a handling place to prepare for emergency.
Avoid rough handling such as knocking over, dropping, dragging and giving a shock to container.
Prevent this CRM from leaking, overflowing and splashing. Do not allow vapors to be emitted.
Avoid breathing vapor (dust) if emitted.
Take precautions against temperature drop in winter as this CRM is solidified when it is cooled.
Use local ventilation equipment when handling this CRM.
- Precautions for Safe Handling : Handle this CRM in a way to prevent aerosol and dust from being emitted.
- Incompatible Materials : Do not allow contact with strong oxidizers.
- Hygiene Controls : Handle this CRM in accordance with industrial health and safety code.

Restrict drinking, eating and smoking to a designated area.
Wash hands, face, etc. thoroughly and gargle after handling.
Do not bring gloves and other contaminated personal protective equipment into staff room.
Make a place handling this CRM a restricted area to keep out unauthorized people.
Use appropriate personal protective equipment to avoid inhalation and contact with eyes, skin and clothing.

Storage

Safe Storage : Protect from sunlight. Store in a clean place at temperatures of 15 °C
Conditions : to 35 °C and relative humidity of 60 % or less
Safe Container : Glass
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

(Substance)

ACGIH TLV-TWA : Not specified

Values recommended by : Not specified

Japan Society for
Occupational Health

OSHA PEL TWA : Not specified

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 separated from strong oxidizers.

Personal Protective

Equipment

Respiratory System : Dust respirator as necessary

Hands : Protective gloves

Eyes and Face : Eye protector (Normal eye glasses type, Normal eye glasses type with side plates, and Goggle-type)

Skin and Body : Protective garment

9 . Physical and Chemical Properties

• Physical State : Powder

• Color	:	White
• Odor	:	Odorless
• Melting Point/Freezing Point	:	295-300 °C
• 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	:	About 4 (Water-soluble)
• Kinetic Viscosity	:	No data available
• Solubility	:	Soluble in water. Hardly soluble in ethanol.
• Partition Coefficient: <i>n</i> -octanol/Water	:	No data available
• Vapor Pressure	:	No data available
• Density and/or Relative Density	:	1.636
• Relative Gas Density	:	No data available
• Particle Characteristics	:	No data available

10. Stability and Reactivity

Reactivity	:	In contact with oxidizers: May be reactive
Chemical Stability	:	Stable under recommended storage conditions
Possibility of Hazardous Reactions	:	No hazardous reactions under conditions of normal handling
Conditions to Avoid	:	Sunlight, Heat
Incompatible Materials	:	Oxidizers
Hazardous	:	Carbon monoxide, Carbon dioxide
Decomposition Products	:	

11. Toxicological Information

Acute Toxicity	:	Oral Rat LD ₅₀ > 3200 mg/kg Dermal Guinea Pig LD ₅₀ > 1 g/kg
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	:	No data available

(Repeated Exposure)

Aspiration Hazard : No data available

12. Ecological Information

Ecotoxicity : No data available

Persistence and Degradability : No data available

Bioaccumulation Potential : No data available

Mobility in Soil : No data available

Harmful Effects on Ozone Layer : No data available

13. Disposal Considerations

Residual Waste : Neutralization method
 Mix this CRM gradually with lime milk etc. which is being stirred to neutralize it. Then dilute the mixture with plenty of water.
 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 Package : Dispose of containers after thoroughly removing their contents.

14. Transport Information

International Regulations

UN Number : Not applicable

Shipping Name : —

UN Classification : —

Packing Group : —

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 and regulations

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.
