MATERIAL SAFETY DATA SHEET

MSDS No. EW160424 Revised Date: 2011/02/10

Revised Date: 2011/02/ CODE: 160-04258, 160-04275, 162-22555, 162-22631, 163-04243, 163-04265, 164-22635, 165-04242, 165-04247, 166-04255, 167-04241, 168-09391,

¹ 168-18463, 169-04245

IDENTITY Potassium Dihydrogen Phosphate

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

PRODUCT IDENTIFIER :Potassium Dihydrogen Phosphate MANUFACTURER : Wako Pure Chemical Industries, Ltd.

SUPPLIER: SUPPLIER(In JAPAN): Wako Pure Chemical Industries, Ltd.

ADDRESS: 1-2, Doshomachi 3-chome, Chuo-ku, Osaka, 540-8605, Japan TELEPHONE NUMBER & EMERGENCY TELEPHONE NUMBER: (06)6203-3741

SUPPLIER(In U.S.A.): Wako Chemicals USA, Inc.

ADDRESS: 1600 Bellwood Road, Richmond, VA 23237, U.S.A.

TELEPHONE NUMBER: (804)271-7677

EMERGENCY TELEPHONE NUMBER: (800)424-9300 (CHEMTREC)

SUPPLIER(In EUROPE): Wako Chemicals GmbH, Germany ADDRESS: Fuggerstrasse 12, D-41468 Neuss, GERMANY

TELEPHONE NUMBER & EMERGENCY TELEPHONE NUMBER: (02131)311-0

RECOMMENDED USE: Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION: Not classifiable.

PRECAUTIONARY STATEMENTS :_

EU CLASSIFICATIOn:

Not dangaerous according to Directive 67/548/EEC.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMILCAL IDENTITY: Potassium dihydrogenphosphate

SYNONYMS: Potassium phosphate, monobasic; Potassium diphosphate

FORMULA: KH2PO4
MOLECULAR WEIGHT: 136.09
CAS NUMBER: 7778-77-0
TSCA INVENTORY: Listed
EINECS No.: 231-913-4
EC INDEX NUMBER: Not listed

4. FIRST AID MEASURES

GENERAL ADVICE: Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.

INHALATION: Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.

SKIN CONTACT :Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. If irritation

persists, consult a physician.

EYE CONTACT: Remove any contact lenses at once. Flush eyes well with flooding amounts of running water for at least 15 minutes. Assure

adequate flushing by separating the eyelids with sterile fingers. If irritation persists, consult a physician.

INGESTION: Rinse mouth, give plenty of water to dilute the substance. Never give anything by mouth to an unconscious person. Consult a

physician.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Not combustible. Use extinguishing media appropriate to the surrounding fire.

FIRE & EXPLOSION HAZARDS: Toxic and irritating dust, fumes or smoke may be emitted.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS :Firemen should wear normal protective equipment(full bunker gear)and positive-

pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Remove ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory

equipment. Avoid raising dust and avoid contact with skin and eyes.

ENVIRONMENTAL PRECAUTIONS : Prevent spills from entering sewers, watercourses or low areas.

METHODS FOR CLEANING UP: Do not touch spilled material without suitable protection(See section 8). After material is completely picked up,

wash the spill site with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and

seal it tightly. Remove, clean, or dispose of contaminated clothing.

7. HANDLING AND STORAGE

PRECAUTION FOR SAFE HANDLING : Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Handle material with

suitable protection.

This material is hygroscopic.

CONDITIONS FOR SAFE STORAGE: Store away from sunlight in well-ventilated dry place at room temperature (preferably cool place). Keep

container tightly closed.

INCOMPATIBILITIES: Strong oxidizers

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits. Use only with adequate ventilation.

VENTILATION: Local Exhaust; Necessary, Mechanical(General); Recommended

INDIVIDUAL PROTECTION MEASURES;

Respiratory protection: Use a NIOSH/MSHA or European Standard EN149 approved respirator if the vapor concentrations exceed regulatory

guidelines.

Hand protection : Chemical resistant gloves
Eye protection : Safety glasses(goggles)
Skin protection : Protective clothing

CONTROL PARAMETER:

OSHA Final Limits :None established ACGIH TLV(s) : None established

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : White crystals - crystalline powder

ODOUR: Odourless

pH: 4.2 - 4.5 (50g/L at 25 °C= 77 °F)

MELTING POINT: 256 °C= 493 °F (Dec.)
INITIAL BOILING POINT: Not available

INITIAL BOILING POINT: Not available FLASH POINT: Not available FLAMMABILITY (solid, gas): Not available EXPLOSIVE LIMITS: Not available VAPOR PRESSURE: Not available SPECIFIC GRAVITY: 2.338

SOLUBILITY IN;

WATER: Freely soluble (33g/100mL at 20 °C= 68 °F)

ETHANOL: Practically insoluble PARTITION COEFFICIENT: Not available DECOMPOSITION TEMPERATURE: Not available

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Sunlight, heat, moisture INCOMPATIBILE MATERIALS: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS :Phosphor oxides and potassium compounds may be formed.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY(oral/dermal/inhalation): LDLo(orl,rat): 4640mg/kg (RTECS)

LD50(skin,rabbit): >4640mg/kg (RTECS)

SKIN CORROSION/IRRITATION: Not available EYE DAMAGE/EYE IRRITATION: Not available RESPIRATORY OR SKIN SENSITIZATION: Not available GERM CELL MUTAGENICITY: Not available TOXIC TO REPRODUCTION: Not available STOST-SINGLE EXPOSURE Not available STOST-REPEATED EXPOSURE: Not available ASPIRATION TOXICITY: Not available CARCINOGENICITY: Not available

ADDITIONAL INFORMATION;

NTP: Not listed IARC: Not listed OSHA: Not listed ACGIH: Not listed

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Not available PERSISTENCE AND DEGRADABILITY: Not available BIOACCUMULATION POTENTIAL: Not available MOBILITY IN SOIL: Not available OTHER ADVERSE EFFECTS: Not available

13. DISPOSAL CONSIDERATION (INCLUDING CONTAINER)

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environmental agency for specific rules).

After contents are completely removed, dispose of its container in accordance with local/regional/national/international regulation.

14. TRANSPORT INFORMATION

IATA: Not Restricted.

MARINE POLLUTANT: No

DOT(Department of Transportation): Not a Hazardous Material for DOT shipping.

15. REGULATORY INFORMATION

US REGULATIONS;

EPA: CERCLA RQ= Not listed EPCRA TPQ= Not listed OSHA: TQ= Not listed

16. OTHER INFORMATION INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

No specific notes

The above information is believed to be correct to be the best of our knowledge and information but does not purport to be all inclusive and shall be used only as a guide. This product is intended to be used by expert persons having chemical knowledge and skill, at their own discretion and risk and Wako shall not be held liable for any damageresulting from handling or from contact with the above material.