SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier: Powder for buffer solution (pH4)
   Substance name: Potassium hydrogen phthalate
   CAS No.: 877-24-7
   EC No.: 212-889-4

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Used for preparing pH4 standard solution

1.3 Details of the supplier of the safety data sheet:
   Manufacture:
   Name: Yokogawa Electric Corporation
   Address: 2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan
   Telephone: +81-422-52-5555 (General affairs Dept.)
   Website: http://www.yokogawa.com

   Importer:
   Name: Yokogawa Europe B.V. (Regional Headquarters in EU)
   Address: Euroweg 2, 3825 HD Amersfoort, The Netherlands
   Postal Address: P.O. Box 163, 3800 AD Amersfoort, The Netherlands
   Phone: +31-(0)88-4641000
   Website: www.yokogawa.com/eu
   E-Mail: info@nl.yokogawa.com

1.4 EMERGENCY TELEPHONE NUMBER:
   +31-88-4641000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:
   Not classified according to Regulation (EC) No 1272/2008 [CLP]

2.2 Label elements
   Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]
   Product identifier: Powder for buffer solution (pH4)
   Substance name: Potassium hydrogen phthalate
   CAS No.: 877-24-7
   EC No.: 212-889-4
   Hazard pictograms: Not classified
   Signal word: Not classified
   Hazard statements: Not classified
   Precautionary statements: Not classified
   Supplemental Hazard information (EU): Not applicable.
SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name: Potassium hydrogen phthalate
INDEX No: N/A
EC No: 212-889-4
REACH Registration No: N/A
CAS No: 877-24-7

Purity: >99.8%
Synonyms: Potassium Biphthalate
Stabiliser: not available
Hazard impurities: not available

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: No information available.
Following inhalation: No information available.
Following skin contact: Wash with water.
Following eye contact: Rinse opened eye for several minutes under running water.
Following ingestion: Rinse out mouth and then drink plenty of water.
In case of persistent symptoms consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No special information available

4.3 Indication of any immediate medical attention and special treatment needed

No special information available

SECTION 5: Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Water, CO₂, foam, extinguishing powder.
Unsuitable extinguishing media: No information available

5.2 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating and toxic gases and vapors.
5.3 **Advice for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

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**SECTION 6: Accidental release measures**

6.1 **Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes. Special protective equipment is not required.

6.2 **Environmental precautions:**

Be careful not discharged to surface or ground water.

6.3 **Methods and material for containment and cleaning up**

For containment: Put in suitable, closed containers or plastic bags for disposal.
For cleaning up: Pick up the materials and wash the spill site with water.

6.4 **Reference to other sections**

For disposal refer to section 13.

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**SECTION 7: Handling and storage**

7.1 **Precautions for safe handling**

**Protective measures**: No special measures required.
**Advice on general occupational hygiene**: Not to eat, drink and smoke in work areas.

7.2 **Conditions for safe storage, including any incompatibilities**

**Further information on storage conditions**: Keep in cool and dried place, away from direct sunlight.

7.3 **Specific end uses**

Refer to section 1.

---

**SECTION 8: Exposure controls/personal protection**

8.1 **Control parameters**

Not applicable.

8.2 **Exposure controls**

No special measures required.

**Personal protective equipment:**

**Eye / Face protection**: Safety glasses recommended.
Safety Data Sheet
according to Regulation (EC) No 1907/2006 (REACH)  

Part No: K9020XA  
Rev.1.00  
Revision date: 11.04.2016

Skin protection: Protective gloves impervious to water recommended.
Respiratory protection: Not required.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
Physical state: Crystalline powder
Colour: White

Odour: Odourless

pH: No data available. (approx. 4 if dissolved in water)

Melting point / freezing point: 295-300 degrees C. (decomposition)
Initial boiling point / boiling range: No data available

Flash point: No data available
Evaporation rate: No data available
Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits
Upper: No data available
Lower: No data available

Vapour pressure: No data available
Vapour density: No data available
Relative density: 1.636 (20 degrees C)
Solubilities:
- water: freely soluble (7.4g/100ml at 20 degrees C)
- ethanol and diethyl ether: slightly soluble

Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: No data available
Decomposition temperature: 295-300 degrees C
Viscosity: No data available
Explosive properties: No data available
Oxidising properties: No data available

9.2 Other information:

Physical hazards: No data available

SECTION 10: Stability and reactivity

10.1 Reactivity: No data available

10.2 Chemical stability: Stable under recommended storage conditions. Refer to section 7.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: High temperature, high humidity and direct sunlight conditions are not recommended. It’s not hazardous but may reduce the quality.

10.5 Incompatible materials: No data available.

10.6 Hazardous decomposition products: No known hazardous decomposition products.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

(a) acute toxicity
   - Oral LD50: >3200 mg/kg (RAT)
   - Dermal LD50: No data available
   - Inhalation LC50: No data available

(b) skin corrosion/irritation: No data available
(c) serious eye damage/irritation: No data available
(d) respiratory or skin sensitization: No data available
(e) germ cell mutagenicity: No data available
(f) carcinogenicity: No data available
(g) reproductive toxicity: No data available
(h) STOT-single exposure: No data available
(i) STOT-repeated exposure: No data available
(j) aspiration hazard: No data available

11.2 Other information

When used and handled according to specifications, the product does not have any harmful effects.

SECTION 12: Ecological information

12.1 Toxicity:

Aquatic toxicity: No data available

12.2 Persistence and degradability: No information available

12.3 Bioaccumulative potential: No information available

12.4 Mobility in soil: No information available

12.5 Results of PBT and vPvB assessment: Not applicable.

12.6 Other adverse effects:

No ecological problems are to be expected when the product is handled and used with due care and attention.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product / Packaging disposal:
Disposal should be in accordance with applicable regional, national and local laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.
Empty ampoules can be treated like household refuse.

**Waste codes / waste designations according to EWC:**
16 03 04 / inorganic wastes other than those mentioned in 16 03 03 (cf.16 03 03; inorganic wastes containing dangerous substances)

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**SECTION 14: Transport information**

*Non-hazardous material. Not subject to transport regulations*

<table>
<thead>
<tr>
<th></th>
<th>Land transport (ADR/RID)</th>
<th>Inland waterway transport (ADN)</th>
<th>Sea transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
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<tbody>
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<tr>
<td>14.2 UN Proper shipping name</td>
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<td>14.3 Transport hazard class(es)</td>
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<td>14.4 Packing group</td>
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<td>14.5 Environmental hazards</td>
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<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

14.6 **Special precautions for user**

Not applicable

14.7 **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

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**SECTION 15: Regulatory information**

15.1 **Safety, health and environmental regulations/legislation specific for the substance or mixture**

Not applicable.

The material is not subject to classification according to regulation EC 1272/ 2008 [CLP].

Observe the normal safety regulations when handling chemicals.

15.2 **Chemical Safety Assessment:**

For this product a chemical safety assessment is not required.
SECTION 16: Other information

16.1 Indication of changes
No information available.

16.2 Key literature references and sources for data

Summary of Classification and Labelling in the ECHA classification and labelling inventory

SDS provided by Wako Pure Chemical Industries, Ltd
W01W0116-0382 JGHEEN  Potassium Hydrogen Phthalate (Version 1)

SDS provided by Koso Chemical Co, Ltd (No. 13071-6)

16.3 Further information:
The information provided in this Safety Data Sheet is based on the present state of knowledge and is believed to be correct. Its purpose is to characterize the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.