

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)

YOKOGAWA

Part No: K9220XD/ K9084KF/ K9084LL

Rev.1.03 Revision date: 19th December 2025

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

1.1 Product identifier : pH4 Standard solution

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
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

Phone 81-422-52-5649 (Analyzer Marketing Dept., Sensing Center, YPHQ)

Website <http://www.yokogawa.com>

Importer (only in Europe):

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 (only in Europe):
+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: pH4 Standard solution

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

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Supplemental Hazard information (EU) : Not applicable.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Mixtures

Description of the mixture:

The concentrations of substances including non-hazardous components are listed below.

Substance name	CAS No.	EC No.	Concentration	Classification according Regulation (EC) No. 1272/2008
Potassium hydrogen phthalate	877-24-7	212-889-4	Approx. 1%	Not Classified
Water	7732-18-5	231-791-2	Balance	Not Classified

SECTION 4: First aid measures

4.1 Description of first aid measures

General information : No information available.
Following inhalation : Move into fresh air and rinse nose and mouth with water.
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

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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.

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 : Wipe with waste clothes or papers, and wash the spill site with water.

6.4 Reference to other sections

For disposal refer to section 13.

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.

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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.

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 : Liquid

Colour : Colourless and clear

Odour : Odourless

pH : 4.01 (25 degree)

Melting point / freezing point : No data available (approx.100degree / 0degree)

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 : No data available (approx.1.0)

Solubilities : Water and acetone very freely miscible.

Partition coefficient(n-octanol/water) : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

Explosive properties : No data available

Oxidising properties : No data available

9.2 Other information:

Physical hazards: No data available

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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** : Extremes of temperature and direct sunlight.
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 ; ATEmix(oral) = no data available
ATEmix (dermal) = no data available
ATEmix (Inhalation) = no data available

(Information of single component)

Potassium Hydrogen Phthalate Oral LD50>3200 mg/kg(RAT)

Dermal LD50>1g/kg(MARMOT)

- (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

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12.4 Mobility in soil

: No information available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 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)

SECTION 14: Transport information

Non-hazardous material. Not subject to transport regulations

	Land transport (ADR/RID)	Inland waterway transport (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN No.	-	-	-	-
14.2 UN Proper shipping name	Non-hazardous material	Non-hazardous material	Non-hazardous material	Non-hazardous material
14.3 Transport hazard class(es)	-	-	-	-
Hazard label(s)	-	-	-	-

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14.4 Packing group	-	-	-	-
14.5 Environmental hazards	Not applicable	Not applicable	Not applicable	Not applicable

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

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

Revised on 19th December 2025 (Rev.1.03):

Change of department name in Section 1.3

Addition of information to Section 2.3, 11.2, 12.5 and 12.6

Revised on 24th December 2020 (Rev.1.02):

Change of manufacture's phone number in Section 1.3

Revised on 25th October 2018(Rev.1.01):

Addition of Part No "K9084LL" at header on each page

Change of manufacture's phone number in Section 1.3

Issued on 31st March 2016(Rev.1.00)

16.2 Key literature references and sources for data

SDS provided by Toko Chemical ILaboratory, Ltd (SDS No. A0034)

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.