

Buffer solution pH 4,01 ±0,01 (20°C)

article number: **KAY0**
Version: **GHS 1.0 en**

date of compilation: 2019-04-02

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

1.1 Product identifier

Identification of the substance

Buffer solution

Article number

KAY0

Registration number (REACH)

not relevant (mixture)

1.2 Relevant identified uses of the substance or mixture and uses advised against**Identified uses:**laboratory and analytical use
laboratory chemical**1.3 Details of the supplier of the safety data sheet**

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

Telephone: +49 (0) 721 - 56 06 0**Telefax:** +49 (0) 721 - 56 06 149**e-mail:** sicherheit@carlroth.de**Website:** www.carlroth.de

Competent person responsible for the safety data sheet : Department Health, Safety and Environment

e-mail (competent person)**: sicherheit@carlroth.de****1.4 Emergency telephone number**

Emergency information service

Poison Centre Munich: +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture**Classification acc. to GHS**

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC. This mixture does not meet the criteria for classification.

2.2 Label elements**Labelling GHS**

not required

Signal word not required**2.3 Other hazards**

There is no additional information.

Buffer solution pH 4,01 ±0,01 (20°C)

article number: **KAY0**

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

This mixture does not meet the criteria for classification.

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

Hazardous combustion products

May produce toxic fumes of carbon monoxide if burning.

Buffer solution pH 4,01 ±0,01 (20°C)article number: **KAY0****5.3 Advice for firefighters**

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

No special measures are necessary.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and cleaning up**Advices on how to contain a spill**

Covering of drains.

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

No special measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice**• Ventilation requirements**

Use local and general ventilation.

• Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C.

7.3 Specific end use(s)

No information available.

Buffer solution pH 4,01 ±0,01 (20°C)

article number: **KAY0**

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Data are not available.

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



- **hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

>0,11 mm

- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation.

Environmental exposure controls

Keep away from drains, surface and ground water.

Buffer solution pH 4,01 ±0,01 (20°C)article number: **KAY0**

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties**Appearance**

| | |
|-----------------|-----------------------------------|
| Physical state | liquid (fluid) |
| Colour | colourless |
| Odour | this information is not available |
| Odour threshold | No data available |

Other physical and chemical parameters

| | |
|---|--|
| pH (value) | 4.01 |
| Melting point/freezing point | ~ 0 °C |
| Initial boiling point and boiling range | ~ 100 °C |
| Flash point | not determined |
| Evaporation rate | no data available |
| Flammability (solid, gas) | not relevant (fluid) |
| <u>Explosive limits</u> | |
| • lower explosion limit (LEL) | this information is not available |
| • upper explosion limit (UEL) | this information is not available |
| Explosion limits of dust clouds | not relevant |
| Vapour pressure | This information is not available. |
| Density | ~ 1 g/cm ³ |
| Vapour density | This information is not available. |
| Bulk density | Not applicable |
| Relative density | Information on this property is not available. |
| <u>Solubility(ies)</u> | |
| Water solubility | miscible in any proportion |
| <u>Partition coefficient</u> | |
| n-octanol/water (log KOW) | This information is not available. |
| Auto-ignition temperature | Information on this property is not available. |
| Decomposition temperature | no data available |
| Viscosity | not determined |
| Explosive properties | Shall not be classified as explosive |
| Oxidising properties | none |

9.2 Other information

There is no additional information.

Buffer solution pH 4,01 ±0,01 (20°C)

article number: **KAY0**

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Strong oxidiser

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Shall not be classified as acutely toxic.

• Acute toxicity of components of the mixture

| Name of substance | CAS No | Exposure route | ATE |
|------------------------------|----------|----------------|-------------|
| Potassium hydrogen phthalate | 877-24-7 | oral | 3,200 mg/kg |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

• Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

data are not available

Buffer solution pH 4,01 ±0,01 (20°C)article number: **KAY0****• If in eyes**

data are not available

• If inhaled

data are not available

• If on skin

data are not available

Other information

None

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)**Aquatic toxicity (acute) of components of the mixture**

| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
|------------------------------|----------|----------|------------|----------------|---------------|
| Potassium hydrogen phthalate | 877-24-7 | LC50 | >100 mg/l | fish | 96 h |
| Potassium hydrogen phthalate | 877-24-7 | ErC50 | 329.5 mg/l | algae | 72 h |
| Potassium hydrogen phthalate | 877-24-7 | EC50 | 997 mg/l | microorganisms | 96 h |

12.2 Process of degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Degradability of components of the mixture

| Name of substance | CAS No | Process | Degradation rate | Time |
|------------------------------|----------|------------------|------------------|------|
| Potassium hydrogen phthalate | 877-24-7 | oxygen depletion | 97.34 % | 28 d |

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture

| Name of substance | CAS No | BCF | Log KOW | BOD5/COD |
|------------------------------|----------|-----|---------|----------|
| Potassium hydrogen phthalate | 877-24-7 | | -2.73 | |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

Buffer solution pH 4,01 ±0,01 (20°C)

article number: **KAY0**

SECTION 13: Disposal considerations

13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

| | | |
|-------------|---|--|
| 14.1 | UN number | (not subject to transport regulations) |
| 14.2 | UN proper shipping name | not relevant |
| 14.3 | Transport hazard class(es) | not relevant |
| | Class | - |
| 14.4 | Packing group | not relevant not assigned to a packing group |
| 14.5 | Environmental hazards | none (non-environmentally hazardous acc. to the dangerous goods regulations) |
| 14.6 | Special precautions for user | |
| | | There is no additional information. |
| 14.7 | Transport in bulk according to Annex II of MARPOL and the IBC Code | |
| | | The cargo is not intended to be carried in bulk. |
| 14.8 | Information for each of the UN Model Regulations | |
| | • Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) | |
| | | Not subject to ADR, RID and ADN. |
| | • International Maritime Dangerous Goods Code (IMDG) | |
| | | Not subject to IMDG. |
| | • International Civil Aviation Organization (ICAO-IATA/DGR) | |
| | | Not subject to ICAO-IATA. |

Buffer solution pH 4,01 ±0,01 (20°C)article number: **KAY0****SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National inventories**

| Country | National inventories | Status |
|---------|----------------------|----------------------------|
| AU | AICS | all ingredients are listed |
| CA | DSL | all ingredients are listed |
| CN | IECSC | all ingredients are listed |
| EU | ECSI | all ingredients are listed |
| EU | REACH Reg. | all ingredients are listed |
| JP | CSCL-ENCS | all ingredients are listed |
| KR | KECI | all ingredients are listed |
| MX | INSQ | all ingredients are listed |
| NZ | NZIoC | all ingredients are listed |
| PH | PICCS | all ingredients are listed |
| TW | TCSI | all ingredients are listed |
| US | TSCA | all ingredients are listed |

Legend

| | |
|------------|---|
| AICS | Australian Inventory of Chemical Substances |
| CSCL-ENCS | List of Existing and New Chemical Substances (CSCL-ENCS) |
| DSL | Domestic Substances List (DSL) |
| ECSI | EC Substance Inventory (EINECS, ELINCS, NLP) |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ | National Inventory of Chemical Substances |
| KECI | Korea Existing Chemicals Inventory |
| NZIoC | New Zealand Inventory of Chemicals |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances |
| REACH Reg. | REACH registered substances |
| TCSI | Taiwan Chemical Substance Inventory |
| TSCA | Toxic Substance Control Act |

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Abbreviations and acronyms**

| Abbr. | Descriptions of used abbreviations |
|-------|---|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road) |
| ATE | Acute Toxicity Estimate |
| BCF | bioconcentration factor |
| BOD | Biochemical Oxygen Demand |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CMR | Carcinogenic, Mutagenic or toxic for Reproduction |

Buffer solution pH 4,01 ±0,01 (20°C)

article number: **KAY0**

| Abbr. | Descriptions of used abbreviations |
|----------|---|
| COD | chemical oxygen demand |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IATA | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |
| log KOW | n-octanol/water |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant") |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| vPvB | very Persistent and very Bioaccumulative |

Key literature references and sources for data

- UN Recommendations on the Transport of Dangerous Good
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

not relevant.

Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.