# SAFETY DATA SHEET

Buffer solution pH 7

## Section 1. Identification

**Product identifier** : Buffer solution pH 7

**Other means of identification** : Not available.

**Product use** : Laboratory chemicals.

**Supplier's details** :

Manufacturer
**Metrohm AG**
Ionenstrasse
9100 Herisau
Switzerland
Tel.: +41 (0)71 353 85 85
Fax: +41 (0)71 353 89 01
E-Mail: info@metrohm.com
Web: www.metrohm.com

Supplier
**Metrohm Canada**
4160 Sladeview Crescent, #6
Mississauga, ON L5L 0A1
Canada

Tel.: +1 (905) 569-0664
E-Mail: info@metrohmca.com

**e-mail address of person responsible for this SDS** : datasheet@metrohm.com

**Emergency telephone number (with hours of operation)** : + 49 (0)6132-84463 (24 h, GBK GmbH)

## Section 2. Hazard identification

**Classification of the substance or mixture** : Not classified.

**GHS label elements**

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

**Precautionary statements**

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Hazards not otherwise classified** : None known.

# Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Other means of identification** : Not available.

| Ingredient name | % (w/w) | Identifiers |
|---|---|---|
| disodium hydrogenorthophosphate | ≥0.5 - ≤1.5 | CAS: 7558-79-4 |

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

# Section 4. First-aid measures

## Description of necessary first aid measures

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

### Over-exposure signs/symptoms

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

## Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**See toxicological information (Section 11)**

# Section 5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media** : Use dry chemical, $CO_2$, water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
phosphorus oxides
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Remark (Explosibility)** : Not considered to be a product presenting a risk of explosion.

# Section 6. Accidental release measures

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

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods and materials for containment and cleaning up**

**Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contain and collect spillage with non-combustible, absorbent material e. g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

# Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures** : Put on appropriate personal protective equipment (see Section 8).

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

# Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

# Section 8. Exposure controls/personal protection

**Control parameters**

**Occupational exposure limits**

None.

**Biological exposure indices**

None known.

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
**Recommended:** In accordance with CSA Z94.4-11.

# Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

| | | |
|---|---|---|
| **Physical state** | : | Liquid. |
| **Color** | : | Colorless. |
| **Odor** | : | Odorless. |
| **Odor threshold** | : | Not applicable. |
| **pH** | : | 7 |
| **Melting point/freezing point** | : | Not available. |
| **Boiling point or initial boiling point and boiling range** | : | Not available. |
| **Flash point** | : | Not available. |
| **Evaporation rate** | : | Not available. |
| **Flammability** | : | Not available. |
| **Lower and upper explosion limit/flammability limit** | : | Not available. |
| **Vapor pressure** | : | Not available. |
| **Relative vapor density** | : | Not available. |
| **Relative density** | : | Not available. |
| **Density** | : | 1.065 g/cm³ [20°C (68°F)] |
| **Solubility in water** | : | Not available. |
| **Partition coefficient: n-octanol/water** | : | Not applicable. |
| **Auto-ignition temperature** | : | Not available. |
| **Decomposition temperature** | : | Not available. |
| **Viscosity** | : | Dynamic (room temperature): Not available.<br>Kinematic (room temperature): Not available.<br>Kinematic (40°C (104°F)): Not available. |
| **Explosive properties** | : | Not considered to be a product presenting a risk of explosion. |

**Particle characteristics**

| | | |
|---|---|---|
| **Median particle size** | : | Not applicable. |

# Section 10. Stability and reactivity

| | | |
|---|---|---|
| **Reactivity** | : | No specific test data related to reactivity available for this product or its ingredients. |
| **Chemical stability** | : | The product is stable. |
| **Possibility of hazardous reactions** | : | Under normal conditions of storage and use, hazardous reactions will not occur. |
| **Conditions to avoid** | : | Keep away from heat, sparks and flame. |
| **Incompatible materials** | : | No specific data. |
| **Hazardous decomposition products** | : | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

# Section 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result and Species | Dose [Exposure] | Remarks |
|---|---|---|---|
| disodium hydrogenorthophosphate | Oral - Rat - Female - LD50 [OECD 420] | >2000 mg/kg | - |
| | Dermal - Rat - Male, Female - LD50 [OECD 402] | >2000 mg/kg | - |
| | Inhalation - Rat - Male, Female - LC50 Dusts and mists [OECD 403] | >0.83 mg/l [4 hours] | Mortality: None. |

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Irritation/Corrosion

| Product/ingredient name | Result and Species | Exposure | Remarks |
|---|---|---|---|
| disodium hydrogenorthophosphate | Skin - Rabbit - Not irritant - [OECD 404] | Duration of treatment/ exposure: 24 hours | - |
| | Eyes - Rabbit - Not irritant - [OECD 405] | Duration of treatment/ exposure: 0.5 minutes | - |

**Conclusion/Summary**

**Skin** : Based on available data, the classification criteria are not met.

**Eyes** : Based on available data, the classification criteria are not met.

**Respiratory** : Not available.

### Respiratory or skin sensitization

| Product/ingredient name | Route of exposure and Species | Result | Remarks |
|---|---|---|---|
| disodium hydrogenorthophosphate | skin - Mouse [OECD 429] | Not sensitizing | - |

**Conclusion/Summary**

**Skin** : Based on available data, the classification criteria are not met.

**Respiratory** : Not available.

### Mutagenicity

| Product/ingredient name | Result | Experiment | Remarks |
|---|---|---|---|
| disodium hydrogenorthophosphate | Negative [OECD 487] | Mammalian-Human - Metabolic activation: with and without | - |
| | Negative | In vitro - Mouse - Metabolic activation: with and without | - |
| | Negative [OECD 473] | In vitro - Mammalian-Human - Metabolic activation: with and without | - |

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

# Section 11. Toxicological information

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**Conclusion/Summary** : Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| disodium hydrogenorthophosphate | N/A | N/A | N/A | N/A | N/A |

# Section 12. Ecological information

**Toxicity**

| Product/ingredient name | Result [Exposure] | Species | Remarks |
|---|---|---|---|
| disodium hydrogenorthophosphate | Acute - LC50<br>>100 mg/l [96 hours]<br>[OECD 203] | Fish - *Oncorhynchus mykiss* | - |
| | Acute - EC50<br>>100 mg/l - Static [48 hours]<br>[OECD 202] | Daphnia - *Daphnia magna* | - |
| | Acute - EC50<br>>100 mg/l - Static [72 hours]<br>[OECD 201] | Algae - *Desmodesmus subspicatus* | - |
| | Acute - EC50<br>>1000 mg/l - Static [3 hours]<br>[OECD 209] | Activated sludge | - |

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

**Persistence and degradability**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Bioaccumulative potential**

Not available.

**Mobility in soil**

**Soil/Water partition coefficient** : Not available.

**Mobility** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

# Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

# Section 14. Transport information

| | TDG Classification | DOT Classification | ADR/RID | IMDG | IATA |
|---|---|---|---|---|---|
| **UN number** | Not regulated. | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| **UN proper shipping name** | - | - | - | - | - |
| **Transport hazard class(es)** | - | - | - | - | - |

# Section 14. Transport information

| | | | | | |
|---|---|---|---|---|---|
| **Label** | | | | | |
| **Packing group** | - | - | - | - | - |
| **Environmental hazards** | No. | No. | No. | Marine Pollutant: No | No. |

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

# Section 15. Regulatory information

**Canadian lists**

**Canadian NPRI** : The following components are listed: phosphorus (total)

**CEPA Toxic substances** : None of the components are listed.

**International regulations**

**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**OECD Comprehensive Global PFAS Database**

Not listed.

**Inventory list**

**Australia** : All components are listed or exempted.

**Canada** : All components are listed or exempted.

**China** : All components are listed or exempted.

**Colombia** : All components are listed or exempted.

**Eurasian Economic Union** : **Russian Federation inventory**: All components are listed or exempted.

**Japan** : **Japan inventory (CSCL):**
All components are listed or exempted.
**Japan inventory (ISHL):**
All components are listed or exempted.

**New Zealand** : All components are listed or exempted.

**Philippines** : All components are listed or exempted.

**Republic of Korea** : All components are listed or exempted.

**Taiwan** : All components are listed or exempted.

**Thailand** : All components are listed or exempted.

**Turkey** : All components are listed or exempted.

**United States** : All components are active or exempted.

**Viet Nam** : All components are listed or exempted.

# Section 16. Other information

**History**

| | | |
|---|---|---|
| **Date of printing** | : | 2026-05-20 |
| **Date of issue/Date of revision** | : | 2026-05-20 |
| **Date of previous issue** | : | 2023-09-25 |
| **Version** | : | 2 |

**Key to abbreviations** : ADR = Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SGG = Segregation Group
TDG = Transportation of Dangerous Goods
UN = United Nations

**Procedure used to derive the classification**

| Classification | Justification |
|---|---|
| Not classified. | |

**References** : Not available.

**Indicates information that has changed from previously issued version.**

**Notice to reader**

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.**
**Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**