

SAFETY DATA SHEET



pH Buffer Package 4.00, 6.86, 9.18, Part Number 5190-0534

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

1.1 Product identifier

Product name : pH Buffer Package 4.00, 6.86, 9.18, Part Number 5190-0534
Part No. (Kit) : 5190-0534
Part No. : pH 4.00 buffer 5190-0538
pH 6.86 buffer 5190-0539
pH 9.18 buffer 5190-0540

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	
Analytical chemistry.	
pH 4.00 buffer	1 x 250 ml
pH 6.86 buffer	1 x 250 ml
pH 9.18 buffer	1 x 250 ml

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : pH 4.00 buffer Mixture
pH 6.86 buffer Mixture
pH 9.18 buffer Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

Ingredients of unknown toxicity : pH 4.00 buffer Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1%

Ingredients of unknown ecotoxicity : pH 4.00 buffer Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1%

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : pH 4.00 buffer No signal word.
pH 6.86 buffer No signal word.
pH 9.18 buffer No signal word.

Hazard statements :

Date of issue/Date of revision : 25/08/2016

SECTION 2: Hazards identification

pH 4.00 buffer	No known significant effects or critical hazards.
pH 6.86 buffer	No known significant effects or critical hazards.
pH 9.18 buffer	No known significant effects or critical hazards.

Precautionary statements

Prevention	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not applicable. Not applicable. Not applicable.
Response	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not applicable. Not applicable. Not applicable.
Storage	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not applicable. Not applicable. Not applicable.
Disposal	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not applicable. Not applicable. Not applicable.
Supplemental label elements	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not applicable. Not applicable. Safety data sheet available on request.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not applicable. Not applicable. Not applicable.

Special packaging requirements

Tactile warning of danger	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not applicable. Not applicable. Not applicable.
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2.3 Other hazards

Other hazards which do not result in classification	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	None known. None known. None known.
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SECTION 3: Composition/information on ingredients

3.2 Mixtures	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Mixture Mixture Mixture
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There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: pH 4.00 buffer	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.
	pH 6.86 buffer	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.
	pH 9.18 buffer	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	: pH 4.00 buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pH 6.86 buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
	pH 9.18 buffer	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	: pH 4.00 buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pH 6.86 buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	pH 9.18 buffer	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: pH 4.00 buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	pH 6.86 buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
	pH 9.18 buffer	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
Protection of first-aiders	: pH 4.00 buffer	No action shall be taken involving any personal risk or without suitable training.
	pH 6.86 buffer	No action shall be taken involving any personal risk or without suitable training.
	pH 9.18 buffer	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.
Inhalation	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.

SECTION 4: First aid measures

Skin contact	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.
Ingestion	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: pH 4.00 buffer	No specific data.
	pH 6.86 buffer	No specific data.
	pH 9.18 buffer	No specific data.
Inhalation	: pH 4.00 buffer	No specific data.
	pH 6.86 buffer	No specific data.
	pH 9.18 buffer	No specific data.
Skin contact	: pH 4.00 buffer	No specific data.
	pH 6.86 buffer	No specific data.
	pH 9.18 buffer	No specific data.
Ingestion	: pH 4.00 buffer	No specific data.
	pH 6.86 buffer	No specific data.
	pH 9.18 buffer	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: pH 4.00 buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pH 6.86 buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	pH 9.18 buffer	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: pH 4.00 buffer	No specific treatment.
	pH 6.86 buffer	No specific treatment.
	pH 9.18 buffer	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: pH 4.00 buffer	Use an extinguishing agent suitable for the surrounding fire.
	pH 6.86 buffer	Use an extinguishing agent suitable for the surrounding fire.
	pH 9.18 buffer	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: pH 4.00 buffer	None known.
	pH 6.86 buffer	None known.
	pH 9.18 buffer	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: pH 4.00 buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	pH 6.86 buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
	pH 9.18 buffer	In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: pH 4.00 buffer	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
	pH 6.86 buffer	No specific data.
	pH 9.18 buffer	No specific data.

5.3 Advice for firefighters

SECTION 5: Firefighting measures

Special precautions for fire-fighters	: pH 4.00 buffer	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.
	pH 6.86 buffer	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.
	pH 9.18 buffer	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	: pH 4.00 buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	pH 6.86 buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
	pH 9.18 buffer	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: pH 4.00 buffer	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 spilt material. Put on appropriate personal protective equipment.
	pH 6.86 buffer	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 spilt material. Put on appropriate personal protective equipment.
	pH 9.18 buffer	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 spilt material. Put on appropriate personal protective equipment.
For emergency responders	: pH 4.00 buffer	If specialised 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".
	pH 6.86 buffer	If specialised 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".
	pH 9.18 buffer	If specialised 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".

SECTION 6: Accidental release measures

6.2 Environmental precautions	: pH 4.00 buffer	Avoid dispersal of spilt 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).
	pH 6.86 buffer	Avoid dispersal of spilt 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).
	pH 9.18 buffer	Avoid dispersal of spilt 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).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	: pH 4.00 buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	pH 6.86 buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
	pH 9.18 buffer	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections	: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: pH 4.00 buffer	Put on appropriate personal protective equipment (see Section 8).
	pH 6.86 buffer	Put on appropriate personal protective equipment (see Section 8).
	pH 9.18 buffer	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	: pH 4.00 buffer	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.
	pH 6.86 buffer	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.
	pH 9.18 buffer	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

7.2 Conditions for safe storage, including any incompatibilities

Storage	: pH 4.00 buffer	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
	pH 6.86 buffer	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.
	pH 9.18 buffer	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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not applicable. Not applicable. Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

SECTION 8: Exposure controls/personal protection

8.2 Exposure controls

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

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.

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.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Liquid. Liquid. Liquid.
Colour	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Pink [Light] Yellow. [Light] Light / Blue.
Odour	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Odour threshold	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
pH	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	4 6.86 9.18
Melting point/freezing point	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	0°C 0°C 0°C
Initial boiling point and boiling range	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	100°C 100°C 100°C

SECTION 9: Physical and chemical properties

Flash point	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Evaporation rate	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Flammability (solid, gas)	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not applicable. Not applicable. Not applicable.
Upper/lower flammability or explosive limits	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Vapour pressure	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Vapour density	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Relative density	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	1 1 1
Solubility(ies)	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water. Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Auto-ignition temperature	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Decomposition temperature	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Viscosity	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Explosive properties	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.
Oxidising properties	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Not available. Not available. Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients. No specific test data related to reactivity available for this product or its ingredients.
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SECTION 10: Stability and reactivity

10.2 Chemical stability	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	The product is stable. The product is stable. The product is stable.
10.3 Possibility of hazardous reactions	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	No specific data. No specific data. No specific data.
10.5 Incompatible materials	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials. May react or be incompatible with oxidising materials.
10.6 Hazardous decomposition products	: pH 4.00 buffer pH 6.86 buffer pH 9.18 buffer	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Not available.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitiser

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure

: pH 4.00 buffer
pH 6.86 buffer
pH 9.18 buffer

Not available.
Not available.
Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Inhalation

: pH 4.00 buffer
pH 6.86 buffer
pH 9.18 buffer

No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

Ingestion

: pH 4.00 buffer
pH 6.86 buffer
pH 9.18 buffer

No known significant effects or critical hazards.
No known significant effects or critical hazards.
No known significant effects or critical hazards.

SECTION 11: Toxicological information

Skin contact	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.
Eye contact	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: pH 4.00 buffer	No specific data.
	pH 6.86 buffer	No specific data.
	pH 9.18 buffer	No specific data.
Ingestion	: pH 4.00 buffer	No specific data.
	pH 6.86 buffer	No specific data.
	pH 9.18 buffer	No specific data.
Skin contact	: pH 4.00 buffer	No specific data.
	pH 6.86 buffer	No specific data.
	pH 9.18 buffer	No specific data.
Eye contact	: pH 4.00 buffer	No specific data.
	pH 6.86 buffer	No specific data.
	pH 9.18 buffer	No specific data.

Delayed and immediate effects as well as 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

General	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.
Carcinogenicity	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.
Mutagenicity	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.
Teratogenicity	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.
Developmental effects	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.
Fertility effects	: pH 4.00 buffer	No known significant effects or critical hazards.
	pH 6.86 buffer	No known significant effects or critical hazards.
	pH 9.18 buffer	No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised 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.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

Regulatory information

ADR/RID / IMDG / IATA : Not regulated.

14.6 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: pH 4.00 buffer	Not applicable.
	pH 6.86 buffer	Not applicable.
	pH 9.18 buffer	Not applicable.

Other EU regulations

Europe inventory : All components are listed or exempted.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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.

International lists

National inventory

Australia	: All components are listed or exempted.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Japan	: Japan inventory (ENCS) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
Malaysia	: Not determined.
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.
Turkey	: Not determined.
United States	: All components are listed or exempted.

SECTION 15: Regulatory information

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

SECTION 16: Other information

 Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

Full text of abbreviated H statements

Not applicable.

Full text of classifications [CLP/GHS]

Not applicable.

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Date of previous issue : No previous validation.

Version : 1

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