Section 1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>pH Buffer Package (4.01, 7.00, 10.01), Part Number 5190-0533</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part No. (Chemical Kit)</td>
<td>5190-0533</td>
</tr>
<tr>
<td>Part No.</td>
<td>Buffer, pH 4.01 - Color Coded Red, Standard</td>
</tr>
<tr>
<td></td>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
</tr>
<tr>
<td></td>
<td>Buffer, pH 10.01 - Color Coded Blue, Standard</td>
</tr>
<tr>
<td></td>
<td>Part No. (Chemical Kit)</td>
</tr>
<tr>
<td></td>
<td>5190-0535-1</td>
</tr>
<tr>
<td></td>
<td>5190-0537-1</td>
</tr>
<tr>
<td></td>
<td>5190-0536-1</td>
</tr>
</tbody>
</table>

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

- Analytical chemistry.
  - Buffer, pH 4.01 - Color Coded Red, Standard: 1 x 250 ml
  - Buffer, pH 7.00 - Color Coded Yellow, Standard: 1 x 250 ml
  - Buffer, pH 10.01 - Color Coded Blue, Standard: 1 x 250 ml

Supplier/Manufacturer: Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia
1800 802 402

Emergency telephone number (with hours of operation): CHEMTREC®: (61)-290372994

Section 2. Hazard(s) identification

Classification of the substance or mixture
- Not classified.

| Buffer, pH 4.01 - Color Coded Red, Standard | Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1% |
| Buffer, pH 7.00 - Color Coded Yellow, Standard | Not applicable. |
| Buffer, pH 10.01 - Color Coded Blue, Standard | Not applicable. |
| Buffer, pH 4.01 - Color Coded Red, Standard | Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 1% |
| Buffer, pH 7.00 - Color Coded Yellow, Standard | Not applicable. |
| Buffer, pH 10.01 - Color Coded Blue, Standard | Not applicable. |

GHS label elements

| Signal word | Buffer, pH 4.01 - Color Coded Red, Standard | No signal word. |
| Signal word | Buffer, pH 7.00 - Color Coded Yellow, Standard | No signal word. |
| Signal word | Buffer, pH 10.01 - Color Coded Blue, Standard | No signal word. |
Section 2. Hazard(s) identification

Hazard statements:
- Buffer, pH 4.01 - Color Coded Red, Standard: No known significant effects or critical hazards.
- Buffer, pH 7.00 - Color Coded Yellow, Standard: No known significant effects or critical hazards.
- Buffer, pH 10.01 - Color Coded Blue, Standard: No known significant effects or critical hazards.

Precautionary statements:
Prevention:
- Buffer, pH 4.01 - Color Coded Red, Standard: Not applicable.
- Buffer, pH 7.00 - Color Coded Yellow, Standard: Not applicable.
- Buffer, pH 10.01 - Color Coded Blue, Standard: Not applicable.

Response:
- Buffer, pH 4.01 - Color Coded Red, Standard: Not applicable.
- Buffer, pH 7.00 - Color Coded Yellow, Standard: Not applicable.
- Buffer, pH 10.01 - Color Coded Blue, Standard: Not applicable.

Storage:
- Buffer, pH 4.01 - Color Coded Red, Standard: Not applicable.
- Buffer, pH 7.00 - Color Coded Yellow, Standard: Not applicable.
- Buffer, pH 10.01 - Color Coded Blue, Standard: Not applicable.

Disposal:
- Buffer, pH 4.01 - Color Coded Red, Standard: Not applicable.
- Buffer, pH 7.00 - Color Coded Yellow, Standard: Not applicable.
- Buffer, pH 10.01 - Color Coded Blue, Standard: Not applicable.

Supplemental label elements:
- Buffer, pH 4.01 - Color Coded Red, Standard: Not applicable.
- Buffer, pH 7.00 - Color Coded Yellow, Standard: Not applicable.
- Buffer, pH 10.01 - Color Coded Blue, Standard: Not applicable.

Other hazards which do not result in classification:
- Buffer, pH 4.01 - Color Coded Red, Standard: None known.
- Buffer, pH 7.00 - Color Coded Yellow, Standard: None known.
- Buffer, pH 10.01 - Color Coded Blue, Standard: None known.

Section 3. Composition and ingredient information

Substance/mixture:
- Buffer, pH 4.01 - Color Coded Red, Standard: Mixture
- Buffer, pH 7.00 - Color Coded Yellow, Standard: Mixture
- Buffer, pH 10.01 - Color Coded Blue, Standard: Mixture

CAS number/other identifiers:
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 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**
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - 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.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - 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.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - 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**
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

**Skin contact**
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion**
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - 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.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - 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.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - 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.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

**Eye contact**
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - No known significant effects or critical hazards.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - No known significant effects or critical hazards.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - No known significant effects or critical hazards.
Section 4. First aid measures

**Inhalation**
- Buffer, pH 4.01 - Color Coded Red, Standard
- Buffer, pH 7.00 - Color Coded Yellow, Standard
- Buffer, pH 10.01 - Color Coded Blue, Standard

No known significant effects or critical hazards.

**Skin contact**
- Buffer, pH 4.01 - Color Coded Red, Standard
- Buffer, pH 7.00 - Color Coded Yellow, Standard
- Buffer, pH 10.01 - Color Coded Blue, Standard

No known significant effects or critical hazards.

**Ingestion**
- Buffer, pH 4.01 - Color Coded Red, Standard
- Buffer, pH 7.00 - Color Coded Yellow, Standard
- Buffer, pH 10.01 - Color Coded Blue, Standard

No known significant effects or critical hazards.

Over-exposure signs/symptoms

**Eye contact**
- Buffer, pH 4.01 - Color Coded Red, Standard
- Buffer, pH 7.00 - Color Coded Yellow, Standard
- Buffer, pH 10.01 - Color Coded Blue, Standard

No specific data.

**Inhalation**
- Buffer, pH 4.01 - Color Coded Red, Standard
- Buffer, pH 7.00 - Color Coded Yellow, Standard
- Buffer, pH 10.01 - Color Coded Blue, Standard

No specific data.

**Skin contact**
- Buffer, pH 4.01 - Color Coded Red, Standard
- Buffer, pH 7.00 - Color Coded Yellow, Standard
- Buffer, pH 10.01 - Color Coded Blue, Standard

No specific data.

**Ingestion**
- Buffer, pH 4.01 - Color Coded Red, Standard
- Buffer, pH 7.00 - Color Coded Yellow, Standard
- Buffer, pH 10.01 - Color Coded Blue, Standard

No specific data.

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

**Notes to physician**
- Buffer, pH 4.01 - Color Coded Red, Standard
  - Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Buffer, pH 7.00 - Color Coded Yellow, Standard
  - Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Buffer, pH 10.01 - Color Coded Blue, Standard
  - Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments**
- Buffer, pH 4.01 - Color Coded Red, Standard
  - No specific treatment.
- Buffer, pH 7.00 - Color Coded Yellow, Standard
  - No specific treatment.
- Buffer, pH 10.01 - Color Coded Blue, Standard
  - No specific treatment.
### Section 4. First aid measures

<table>
<thead>
<tr>
<th>Protection of first-aiders</th>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
<th>No action shall be taken involving any personal risk or without suitable training.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
<tr>
<td></td>
<td>Buffer, pH 10.01 - Color Coded Blue, Standard</td>
<td>No action shall be taken involving any personal risk or without suitable training.</td>
</tr>
</tbody>
</table>

See toxicological information (Section 11)

### Section 5. Firefighting measures

#### Extinguishing media

<table>
<thead>
<tr>
<th>Suitable extinguishing media</th>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
<th>Use an extinguishing agent suitable for the surrounding fire.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
</tr>
<tr>
<td></td>
<td>Buffer, pH 10.01 - Color Coded Blue, Standard</td>
<td>Use an extinguishing agent suitable for the surrounding fire.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unsuitable extinguishing media</th>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
<th>None known.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
<td>None known.</td>
</tr>
<tr>
<td></td>
<td>Buffer, pH 10.01 - Color Coded Blue, Standard</td>
<td>None known.</td>
</tr>
</tbody>
</table>

#### Specific hazards arising from the chemical

<table>
<thead>
<tr>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
<th>In a fire or if heated, a pressure increase will occur and the container may burst.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
</tr>
<tr>
<td>Buffer, pH 10.01 - Color Coded Blue, Standard</td>
<td>In a fire or if heated, a pressure increase will occur and the container may burst.</td>
</tr>
</tbody>
</table>

#### Hazardous thermal decomposition products

<table>
<thead>
<tr>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
<th>Decomposition products may include the following materials: carbon dioxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
<td>carbon monoxide</td>
</tr>
<tr>
<td>Buffer, pH 10.01 - Color Coded Blue, Standard</td>
<td>metal oxide/oxides</td>
</tr>
<tr>
<td></td>
<td>No specific data.</td>
</tr>
</tbody>
</table>

| Buffer, pH 7.00 - Color Coded Yellow, Standard | No specific data. |

#### Special protective actions for fire-fighters

<table>
<thead>
<tr>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
<td>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.</td>
</tr>
<tr>
<td>Buffer, pH 10.01 - Color Coded Blue, Standard</td>
<td>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.</td>
</tr>
</tbody>
</table>

#### Special protective equipment for fire-fighters

<table>
<thead>
<tr>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
<th>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
<td>Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</td>
</tr>
</tbody>
</table>

Date of issue/Date of revision: 24/06/2016  Date of previous issue: 17/06/2014  Version: 3
Section 5. Firefighting measures

Buffer, pH 10.01 - Color Coded Blue, Standard
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Buffer, pH 4.01 - Color Coded Red, Standard
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.

Buffer, pH 7.00 - Color Coded Yellow, Standard
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.

Buffer, pH 10.01 - Color Coded Blue, Standard
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:

Buffer, pH 4.01 - Color Coded Red, Standard
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".

Buffer, pH 7.00 - Color Coded Yellow, Standard
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".

Buffer, pH 10.01 - Color Coded Blue, Standard
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".

Environmental precautions:

Buffer, pH 4.01 - Color Coded Red, Standard
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).

Buffer, pH 7.00 - Color Coded Yellow, Standard
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).

Buffer, pH 10.01 - Color Coded Blue, Standard
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).

Methods and material for containment and cleaning up
Section 6. Accidental release measures

**Methods for cleaning up**

| Buffer, pH 4.01 - Color Coded Red, Standard | 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. |
| Buffer, pH 7.00 - Color Coded Yellow, Standard | 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. |
| Buffer, pH 10.01 - Color Coded Blue, Standard | 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. |

Section 7. Handling and storage

**Precautions for safe handling**

**Protective measures**

| Buffer, pH 4.01 - Color Coded Red, Standard | Put on appropriate personal protective equipment (see Section 8). |
| Buffer, pH 7.00 - Color Coded Yellow, Standard | Put on appropriate personal protective equipment (see Section 8). |
| Buffer, pH 10.01 - Color Coded Blue, Standard | Put on appropriate personal protective equipment (see Section 8). |

**Advice on general occupational hygiene**

| Buffer, pH 4.01 - Color Coded Red, Standard | 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. |
| Buffer, pH 7.00 - Color Coded Yellow, Standard | 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. |
| Buffer, pH 10.01 - Color Coded Blue, Standard | 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. |

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

| Buffer, pH 4.01 - Color Coded Red, Standard | 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. |
| Buffer, pH 7.00 - Color Coded Yellow, Standard | 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. |
Section 7. Handling and storage

Buffer, pH 10.01 - Color Coded Blue, Standard

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.

Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits
None.

Appropriate engineering controls

Environmental exposure controls

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.
Section 9. Physical and chemical properties

Appearance

Physical state
- Buffer, pH 4.01 - Color Coded Red, Standard Liquid.
- Buffer, pH 7.00 - Color Coded Yellow, Standard Liquid.
- Buffer, pH 10.01 - Color Coded Blue, Standard Liquid.

Colour
- Buffer, pH 4.01 - Color Coded Red, Standard Pink [Light]
- Buffer, pH 7.00 - Color Coded Yellow, Standard Yellow [Light]
- Buffer, pH 10.01 - Color Coded Blue, Standard Blue [Light]

Odour
- Buffer, pH 4.01 - Color Coded Red, Standard Not available.
- Buffer, pH 7.00 - Color Coded Yellow, Standard Not available.
- Buffer, pH 10.01 - Color Coded Blue, Standard Not available.

Odour threshold
- Buffer, pH 4.01 - Color Coded Red, Standard Not available.
- Buffer, pH 7.00 - Color Coded Yellow, Standard Not available.
- Buffer, pH 10.01 - Color Coded Blue, Standard Not available.

pH
- Buffer, pH 4.01 - Color Coded Red, Standard 4.01
- Buffer, pH 7.00 - Color Coded Yellow, Standard 7
- Buffer, pH 10.01 - Color Coded Blue, Standard 10.01

Melting point
- Buffer, pH 4.01 - Color Coded Red, Standard 0°C (32°F)
- Buffer, pH 7.00 - Color Coded Yellow, Standard 0°C (32°F)
- Buffer, pH 10.01 - Color Coded Blue, Standard 0°C (32°F)

Boiling point
- Buffer, pH 4.01 - Color Coded Red, Standard 100°C (212°F)
- Buffer, pH 7.00 - Color Coded Yellow, Standard 100°C (212°F)
- Buffer, pH 10.01 - Color Coded Blue, Standard 100°C (212°F)

Flash point
- Buffer, pH 4.01 - Color Coded Red, Standard Not available.
- Buffer, pH 7.00 - Color Coded Yellow, Standard Not available.
- Buffer, pH 10.01 - Color Coded Blue, Standard Not available.

Evaporation rate
- Buffer, pH 4.01 - Color Coded Red, Standard Not available.
- Buffer, pH 7.00 - Color Coded Yellow, Standard Not available.
- Buffer, pH 10.01 - Color Coded Blue, Standard Not available.

Flammability (solid, gas)
- Buffer, pH 4.01 - Color Coded Red, Standard Not applicable.
- Buffer, pH 7.00 - Color Coded Yellow, Standard Not applicable.
- Buffer, pH 10.01 - Color Coded Blue, Standard Not applicable.
## Section 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
<th>Buffer, pH 7.00 - Color Coded Yellow, Standard</th>
<th>Buffer, pH 10.01 - Color Coded Blue, Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lower and upper explosive (flammable) limits</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Vapour density</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
<td>Easily soluble in the following materials: cold water and hot water.</td>
</tr>
<tr>
<td><strong>Partition coefficient: n-octanol/water</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Section 10. Stability and reactivity

### Reactivity
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### Chemical stability
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - The product is stable.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - The product is stable.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - The product is stable.

### Possibility of hazardous reactions
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - May react or be incompatible with oxidising materials.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - May react or be incompatible with oxidising materials.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - May react or be incompatible with oxidising materials.

### Conditions to avoid
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - No specific data.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - No specific data.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - No specific data.

### Incompatible materials
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - May react or be incompatible with oxidising materials.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - May react or be incompatible with oxidising materials.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - May react or be incompatible with oxidising materials.

### Hazardous decomposition products
- **Buffer, pH 4.01 - Color Coded Red, Standard**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **Buffer, pH 7.00 - Color Coded Yellow, Standard**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- **Buffer, pH 10.01 - Color Coded Blue, Standard**
  - Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

### Information on toxicological effects
- **Acute toxicity**
  - Not available.
- **Irritation/Corrosion**
  - Not available.
- **Sensitisation**
  - Not available.
- **Mutagenicity**
  - Not available.
- **Carcinogenicity**
  - Not available.
Section 11. Toxicological information

Not available.

Reproductive toxicity
Not available.

Teratogenicity
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

<table>
<thead>
<tr>
<th>Route</th>
<th>pH 4.01</th>
<th>pH 7.00</th>
<th>pH 10.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Not av.</td>
<td>Not av.</td>
<td>Not av.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Not av.</td>
<td>Not av.</td>
<td>Not av.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Aspiration</td>
<td>Not available.</td>
<td>Not available.</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Potential acute health effects

<table>
<thead>
<tr>
<th>Route</th>
<th>pH 4.01</th>
<th>pH 7.00</th>
<th>pH 10.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Symptoms related to the physical, chemical and toxicological characteristics

<table>
<thead>
<tr>
<th>Route</th>
<th>pH 4.01</th>
<th>pH 7.00</th>
<th>pH 10.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>No specific data.</td>
<td>No specific data.</td>
<td>No specific data.</td>
</tr>
</tbody>
</table>
Section 11. Toxicological information

Inhalation: Buffer, pH 4.01 - Color Coded Red, Standard
           Buffer, pH 7.00 - Color Coded Yellow, Standard
           Buffer, pH 10.01 - Color Coded Blue, Standard
No specific data.

Skin contact: Buffer, pH 4.01 - Color Coded Red, Standard
              Buffer, pH 7.00 - Color Coded Yellow, Standard
              Buffer, pH 10.01 - Color Coded Blue, Standard
No specific data.

Ingestion: Buffer, pH 4.01 - Color Coded Red, Standard
           Buffer, pH 7.00 - Color Coded Yellow, Standard
           Buffer, pH 10.01 - Color Coded Blue, Standard
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
Not available.

General: Buffer, pH 4.01 - Color Coded Red, Standard
         Buffer, pH 7.00 - Color Coded Yellow, Standard
         Buffer, pH 10.01 - Color Coded Blue, Standard
No known significant effects or critical hazards.

Carcinogenicity: Buffer, pH 4.01 - Color Coded Red, Standard
                  Buffer, pH 7.00 - Color Coded Yellow, Standard
                  Buffer, pH 10.01 - Color Coded Blue, Standard
No known significant effects or critical hazards.

Mutagenicity: Buffer, pH 4.01 - Color Coded Red, Standard
               Buffer, pH 7.00 - Color Coded Yellow, Standard
               Buffer, pH 10.01 - Color Coded Blue, Standard
No known significant effects or critical hazards.

Teratogenicity: Buffer, pH 4.01 - Color Coded Red, Standard
                Buffer, pH 7.00 - Color Coded Yellow, Standard
                Buffer, pH 10.01 - Color Coded Blue, Standard
No known significant effects or critical hazards.
Section 11. Toxicological information

<table>
<thead>
<tr>
<th>Developmental effects</th>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Buffer, pH 10.01 - Color Coded Blue, Standard</td>
<td>No known significant effects or critical hazards.</td>
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</table>

<table>
<thead>
<tr>
<th>Fertility effects</th>
<th>Buffer, pH 4.01 - Color Coded Red, Standard</th>
<th>No known significant effects or critical hazards.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Buffer, pH 7.00 - Color Coded Yellow, Standard</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td></td>
<td>Buffer, pH 10.01 - Color Coded Blue, Standard</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

Numerical measures of toxicity

Acute toxicity estimates
Not available.

Section 12. Ecological information

Toxicity
Not available.

Persistence and degradability
Not available.

Bioaccumulative potential
Not available.

Mobility in soil

| Soil/water partition coefficient (KOC) | 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 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. 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 spilt material and runoff and contact with soil, waterways, drains and sewers.
Section 14. Transport information

Regulatory information

ADG / IMDG / IATA : Not regulated as Dangerous Goods according to the ADG Code.

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.

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

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

6

Model Work Health and Safety Regulations - Scheduled Substances

No listed substance

Australia inventory (AICS) : All components are listed or exempted.

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 Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : 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 16. Any other relevant information

History

Date of issue/Date of revision : 24/06/2016
Date of previous issue : 17/06/2014.
Version : 3

Key to abbreviations : ADG = Australian Dangerous Goods
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
NOHSC = National Occupational Health and Safety Commission
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not classified.</td>
<td></td>
</tr>
</tbody>
</table>

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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