Conforms to Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals

# SAFETY DATA SHEET

Agilent Technologies

Organic Acids Solutions Kit

## Section 1. Identification

**Product identifier** : Organic Acids Solutions Kit

**Part no. (chemical kit)** : 5063-6510, 5063-6510-P

**Part no.** :

| | |
|---|---|
| Ultra Pure Water for CE | 5062-8578 |
| Sodium Hydroxide Solution 0.1N for HPCE | 5062-8575 |
| Sodium Hydroxide Solution 1.0N for HPCE | 5062-8576 |
| Organic Acids Buffer Solution pH 5.6 | 8500-6785 |
| Organic Acids Test Sample | 8500-6900 |

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

**Identified uses** : Reagents and Standards for Analytical Chemistry Laboratory Use

| | |
|---|---|
| Ultra Pure Water for CE | 500 ml |
| Sodium Hydroxide Solution 0.1N for HPCE | 250 ml |
| Sodium Hydroxide Solution 1.0N for HPCE | 250 ml |
| Organic Acids Buffer Solution pH 5.6 | 250 ml |
| Organic Acids Test Sample | 20 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**

**Sodium Hydroxide Solution 0.1N for HPCE**

| | |
|---|---|
| H290 | CORROSIVE TO METALS - Category 1 |
| H320 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B |

**Sodium Hydroxide Solution 1.0N for HPCE**

| | |
|---|---|
| H290 | CORROSIVE TO METALS - Category 1 |
| H314 | SKIN CORROSION/IRRITATION - Category 1B |
| H318 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 |

**GHS label elements**

**Hazard pictograms** : Sodium Hydroxide Solution 0.1N for HPCE

Sodium Hydroxide Solution 1.0N for HPCE

# Section 2. Hazard(s) identification

| | | |
|---|---|---|
| **Signal word** | : Ultra Pure Water for CE | No signal word. |
| | Sodium Hydroxide Solution 0.1N for HPCE | WARNING |
| | Sodium Hydroxide Solution 1.0N for HPCE | DANGER |
| | Organic Acids Buffer Solution pH 5.6 | No signal word. |
| | Organic Acids Test Sample | No signal word. |
| **Hazard statements** | : Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | Sodium Hydroxide Solution 0.1N for HPCE | H290 - May be corrosive to metals.<br>H320 - Causes eye irritation. |
| | Sodium Hydroxide Solution 1.0N for HPCE | H290 - May be corrosive to metals.<br>H314 - Causes severe skin burns and eye damage. |
| | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | Organic Acids Test Sample | No known significant effects or critical hazards. |
| **Precautionary statements** | | |
| **Prevention** | : Ultra Pure Water for CE | Not applicable. |
| | Sodium Hydroxide Solution 0.1N for HPCE | P234 - Keep only in original packaging. |
| | Sodium Hydroxide Solution 1.0N for HPCE | P280 - Wear protective gloves, protective clothing and eye or face protection. |
| | Organic Acids Buffer Solution pH 5.6 | Not applicable. |
| | Organic Acids Test Sample | Not applicable. |
| **Response** | : Ultra Pure Water for CE | Not applicable. |
| | Sodium Hydroxide Solution 0.1N for HPCE | P390 - Absorb spillage to prevent material damage.<br>P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| | Sodium Hydroxide Solution 1.0N for HPCE | P304 + P310 - IF INHALED: Immediately call a POISON CENTER or doctor.<br>P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.<br>P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. |
| | Organic Acids Buffer Solution pH 5.6 | Not applicable. |
| | Organic Acids Test Sample | Not applicable. |
| **Storage** | : Ultra Pure Water for CE | Not applicable. |
| | Sodium Hydroxide Solution 0.1N for HPCE | Not applicable. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Not applicable. |
| | Organic Acids Buffer Solution pH 5.6 | Not applicable. |
| | Organic Acids Test Sample | Not applicable. |
| **Disposal** | : Ultra Pure Water for CE | Not applicable. |
| | Sodium Hydroxide Solution 0.1N for HPCE | Not applicable. |
| | Sodium Hydroxide Solution 1.0N for HPCE | P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. |
| | Organic Acids Buffer | Not applicable. |

# Section 2. Hazard(s) identification

| | | |
|---|---|---|
| | Solution pH 5.6 | |
| | Organic Acids Test Sample | Not applicable. |

**Supplemental label elements**

| | | | |
|---|---|---|---|
| **Additional warning phrases** | : | Ultra Pure Water for CE | Not applicable. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Not applicable. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not applicable. |
| | | Organic Acids Buffer Solution pH 5.6 | Not applicable. |
| | | Organic Acids Test Sample | Not applicable. |

| | | | |
|---|---|---|---|
| **Other hazards which do not result in classification** | : | Ultra Pure Water for CE | None known. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | None known. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Causes severe digestive tract burns. |
| | | Organic Acids Buffer Solution pH 5.6 | None known. |
| | | Organic Acids Test Sample | None known. |

# Section 3. Composition and ingredient information

| | | | |
|---|---|---|---|
| **Substance/mixture** | : | Ultra Pure Water for CE | Substance |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Mixture |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Mixture |
| | | Organic Acids Buffer Solution pH 5.6 | Mixture |
| | | Organic Acids Test Sample | Mixture |

**CAS number/other identifiers**

| Ingredient name | % (w/w) | CAS number |
|---|---|---|
| **Ultra Pure Water for CE** | | |
| water | 100 | 7732-18-5 |
| **Sodium Hydroxide Solution 0.1N for HPCE** | | |
| Sodium hydroxide | <1 | 1310-73-2 |
| **Sodium Hydroxide Solution 1.0N for HPCE** | | |
| Sodium hydroxide | ≤5 | 1310-73-2 |

**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.**

**The total concentration of ingredients in this product, reported or not in this section, is 100%.**

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

# Section 4. First aid measures

## Description of necessary first aid measures

| | | |
|---|---|---|
| **Eye contact** | : Ultra Pure Water for CE | 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. |
| | Sodium Hydroxide Solution 0.1N for HPCE | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. If irritation persists, get medical attention. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. |
| | Organic Acids Buffer Solution pH 5.6 | 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. |
| | Organic Acids Test Sample | 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** | : Ultra Pure Water for CE | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | Sodium Hydroxide Solution 0.1N for HPCE | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| | Organic Acids Buffer Solution pH 5.6 | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |
| | Organic Acids Test Sample | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. |

# Section 4. First aid measures

| | | | |
|---|---|---|---|
| **Skin contact** | : | Ultra Pure Water for CE | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| | | Organic Acids Buffer Solution pH 5.6 | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| | | Organic Acids Test Sample | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. |
| **Ingestion** | : | Ultra Pure Water for CE | 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. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| | | Organic Acids Buffer Solution pH 5.6 | 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. |
| | | Organic Acids Test Sample | 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 |

# Section 4. First aid measures

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** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Causes eye irritation. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Causes serious eye damage. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |
| **Inhalation** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |
| **Skin contact** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Causes severe burns. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |
| **Ingestion** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Severely corrosive to the digestive tract. Causes severe burns. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |

### Over-exposure signs/symptoms

| | | | |
|---|---|---|---|
| **Eye contact** | : | Ultra Pure Water for CE | No specific data. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Adverse symptoms may include the following:<br>pain<br>watering<br>redness |
| | | Organic Acids Buffer Solution pH 5.6 | No specific data. |
| | | Organic Acids Test Sample | No specific data. |
| **Inhalation** | : | Ultra Pure Water for CE | No specific data. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No specific data. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | No specific data. |
| | | Organic Acids Buffer Solution pH 5.6 | No specific data. |
| | | Organic Acids Test Sample | No specific data. |

# Section 4. First aid measures

**Skin contact**

| | |
|---|---|
| Ultra Pure Water for CE | No specific data. |
| Sodium Hydroxide Solution 0.1N for HPCE | No specific data. |
| Sodium Hydroxide Solution 1.0N for HPCE | Adverse symptoms may include the following:<br>pain or irritation<br>redness<br>blistering may occur |
| Organic Acids Buffer Solution pH 5.6 | No specific data. |
| Organic Acids Test Sample | No specific data. |

**Ingestion**

| | |
|---|---|
| Ultra Pure Water for CE | No specific data. |
| Sodium Hydroxide Solution 0.1N for HPCE | No specific data. |
| Sodium Hydroxide Solution 1.0N for HPCE | Adverse symptoms may include the following:<br>stomach pains |
| Organic Acids Buffer Solution pH 5.6 | No specific data. |
| Organic Acids Test Sample | No specific data. |

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

**Notes to physician**

| | |
|---|---|
| Ultra Pure Water for CE | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Sodium Hydroxide Solution 0.1N for HPCE | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Sodium Hydroxide Solution 1.0N for HPCE | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Organic Acids Buffer Solution pH 5.6 | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Organic Acids Test Sample | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |

**Specific treatments**

| | |
|---|---|
| Ultra Pure Water for CE | No specific treatment. |
| Sodium Hydroxide Solution 0.1N for HPCE | No specific treatment. |
| Sodium Hydroxide Solution 1.0N for HPCE | No specific treatment. |
| Organic Acids Buffer Solution pH 5.6 | No specific treatment. |
| Organic Acids Test Sample | No specific treatment. |

**Protection of first-aiders**

| | |
|---|---|
| Ultra Pure Water for CE | No action shall be taken involving any personal risk or without suitable training. |
| Sodium Hydroxide Solution 0.1N for HPCE | No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |
| Sodium Hydroxide Solution 1.0N for HPCE | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. |
| Organic Acids Buffer Solution pH 5.6 | No action shall be taken involving any personal risk or without suitable training. |

# Section 4. First aid measures

| | |
|---|---|
| Organic Acids Test Sample | No action shall be taken involving any personal risk or without suitable training. |

**See toxicological information (Section 11)**

# Section 5. Firefighting measures

## Extinguishing media

| | | |
|---|---|---|
| **Suitable extinguishing media** | : Ultra Pure Water for CE | Use an extinguishing agent suitable for the surrounding fire. |
| | Sodium Hydroxide Solution 0.1N for HPCE | Use an extinguishing agent suitable for the surrounding fire. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Use an extinguishing agent suitable for the surrounding fire. |
| | Organic Acids Buffer Solution pH 5.6 | Use an extinguishing agent suitable for the surrounding fire. |
| | Organic Acids Test Sample | Use an extinguishing agent suitable for the surrounding fire. |
| **Unsuitable extinguishing media** | : Ultra Pure Water for CE | None known. |
| | Sodium Hydroxide Solution 0.1N for HPCE | None known. |
| | Sodium Hydroxide Solution 1.0N for HPCE | None known. |
| | Organic Acids Buffer Solution pH 5.6 | None known. |
| | Organic Acids Test Sample | None known. |
| **Specific hazards arising from the chemical** | : Ultra Pure Water for CE | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | Sodium Hydroxide Solution 0.1N for HPCE | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | Sodium Hydroxide Solution 1.0N for HPCE | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | Organic Acids Buffer Solution pH 5.6 | In a fire or if heated, a pressure increase will occur and the container may burst. |
| | Organic Acids Test Sample | In a fire or if heated, a pressure increase will occur and the container may burst. |
| **Hazardous thermal decomposition products** | : Ultra Pure Water for CE | No specific data. |
| | Sodium Hydroxide Solution 0.1N for HPCE | No specific data. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Decomposition products may include the following materials:<br>metal oxide/oxides |
| | Organic Acids Buffer Solution pH 5.6 | No specific data. |
| | Organic Acids Test Sample | No specific data. |
| **Special protective actions for fire-fighters** | : Ultra Pure Water for CE | 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. |
| | Sodium Hydroxide Solution 0.1N for HPCE | 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. |
| | Sodium Hydroxide Solution 1.0N for HPCE | 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. |
| | Organic Acids Buffer Solution pH 5.6 | Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No |

# Section 5. Firefighting measures

| | | | |
|---|---|---|---|
| | | | action shall be taken involving any personal risk or without suitable training. |
| | | Organic Acids Test Sample | 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** | : | Ultra Pure Water for CE | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | | Organic Acids Buffer Solution pH 5.6 | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| | | Organic Acids Test Sample | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
| **Hazchem code** | : | Ultra Pure Water for CE | Not available. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | 2R |
| | | Sodium Hydroxide Solution 1.0N for HPCE | 2R |
| | | Organic Acids Buffer Solution pH 5.6 | Not available. |
| | | Organic Acids Test Sample | Not available. |

# Section 6. Accidental release measures

## Personal precautions, protective equipment and emergency procedures

| | | | |
|---|---|---|---|
| **For non-emergency personnel** | : | Ultra Pure Water for CE | 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. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | 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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
| | | Organic Acids Buffer Solution pH 5.6 | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected |

# Section 6. Accidental release measures

| | | |
|---|---|---|
| | | personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment. |
| | Organic Acids Test Sample | 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** : | Ultra Pure Water for CE | 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". |
| | Sodium Hydroxide Solution 0.1N for HPCE | 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". |
| | Sodium Hydroxide Solution 1.0N for HPCE | 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". |
| | Organic Acids Buffer Solution pH 5.6 | 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". |
| | Organic Acids Test Sample | 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** : | Ultra Pure Water for CE | 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). |
| | Sodium Hydroxide Solution 0.1N for HPCE | 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). |
| | Sodium Hydroxide Solution 1.0N for HPCE | 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). |
| | Organic Acids Buffer Solution pH 5.6 | 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). |
| | Organic Acids Test Sample | 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** : | Ultra Pure Water for CE | 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. |
| | Sodium Hydroxide Solution 0.1N for HPCE | Stop leak if without risk. Move containers from spill area. 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. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Stop leak if without risk. Move containers from spill area. 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. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor. |
| | Organic Acids Buffer Solution pH 5.6 | 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. |
| | Organic Acids Test Sample | 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** : | Ultra Pure Water for CE | Put on appropriate personal protective equipment (see Section 8). |
| | Sodium Hydroxide Solution 0.1N for HPCE | Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage. |
| | Organic Acids Buffer Solution pH 5.6 | Put on appropriate personal protective equipment (see Section 8). |
| | Organic Acids Test Sample | Put on appropriate personal protective equipment (see Section 8). |

# Section 7. Handling and storage

| | | | |
|---|---|---|---|
| **Advice on general occupational hygiene** | : | Ultra Pure Water for CE | 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. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | 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. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | 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. |
| | | Organic Acids Buffer Solution pH 5.6 | 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. |
| | | Organic Acids Test Sample | 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** | : | Ultra Pure Water for CE | 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. See Section 10 for incompatible materials before handling or use. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Store between the following temperatures: 15 to 25°C (59 to 77°F). 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. Store in corrosive resistant container with a resistant inner liner. Separate from acids. Keep away from metals. 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. See Section 10 for incompatible materials before handling or use. |
| | | Sodium Hydroxide Solution | Store in accordance with local regulations. Store in |

# Section 7. Handling and storage

| | |
|---|---|
| 1.0N for HPCE | 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. Store in corrosive resistant container with a resistant inner liner. Store locked up. Separate from acids. Keep away from metals. 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. See Section 10 for incompatible materials before handling or use. |
| Organic Acids Buffer Solution pH 5.6 | 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. See Section 10 for incompatible materials before handling or use. |
| Organic Acids Test Sample | 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. See Section 10 for incompatible materials before handling or use. |

# Section 8. Exposure controls and personal protection

## Control parameters

### Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| **Sodium Hydroxide Solution 0.1N for HPCE**<br>Sodium hydroxide | **Safe Work Australia (Australia, 10/2022).**<br>PEAK: 2 mg/m³ |
| **Sodium Hydroxide Solution 1.0N for HPCE**<br>Sodium hydroxide | **Safe Work Australia (Australia, 10/2022).**<br>PEAK: 2 mg/m³ |

### Biological exposure indices

No exposure indices 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.

# Section 8. Exposure controls and personal protection

## 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: chemical splash goggles.

## 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.

# Section 9. Physical and chemical properties and safety characteristics

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

## Appearance

**Physical state** :

| | |
|---|---|
| Ultra Pure Water for CE | Liquid. |
| Sodium Hydroxide Solution 0.1N for HPCE | Liquid. [Clear.] |
| Sodium Hydroxide Solution 1.0N for HPCE | Liquid. [Clear.] |
| Organic Acids Buffer Solution pH 5.6 | Liquid. |
| Organic Acids Test Sample | Liquid. |

**Colour** :

| | |
|---|---|
| Ultra Pure Water for CE | Clear. / Colourless. |
| Sodium Hydroxide Solution 0.1N for HPCE | Colourless. |
| Sodium Hydroxide Solution 1.0N for HPCE | Colourless. |
| Organic Acids Buffer Solution pH 5.6 | Colourless. |
| Organic Acids Test Sample | Not available. |

**Odour** :

| | |
|---|---|
| Ultra Pure Water for CE | Odourless. |
| Sodium Hydroxide Solution 0.1N for HPCE | Not available. |
| Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| Organic Acids Buffer Solution pH 5.6 | Odourless. |

# Section 9. Physical and chemical properties and safety characteristics

| | | | |
|---|---|---|---|
| | | Organic Acids Test Sample | Not available. |
| **Odour threshold** | : | Ultra Pure Water for CE | Not available. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Not available. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| | | Organic Acids Buffer Solution pH 5.6 | Not available. |
| | | Organic Acids Test Sample | Not available. |
| **pH** | : | Ultra Pure Water for CE | 7 |
| | | Sodium Hydroxide Solution 0.1N for HPCE | 13 |
| | | Sodium Hydroxide Solution 1.0N for HPCE | >11.5 |
| | | Organic Acids Buffer Solution pH 5.6 | 5.6 |
| | | Organic Acids Test Sample | Not available. |
| **Melting point/freezing point** | : | Ultra Pure Water for CE | 0°C (32°F) |
| | | Sodium Hydroxide Solution 0.1N for HPCE | 0°C (32°F) |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| | | Organic Acids Buffer Solution pH 5.6 | 0°C (32°F) |
| | | Organic Acids Test Sample | 0°C (32°F) |
| **Boiling point, initial boiling point, and boiling range** | : | Ultra Pure Water for CE | 100°C (212°F) |
| | | Sodium Hydroxide Solution 0.1N for HPCE | 100°C (212°F) |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| | | Organic Acids Buffer Solution pH 5.6 | 100°C (212°F) |
| | | Organic Acids Test Sample | 100°C (212°F) |
| **Flash point** | : | Ultra Pure Water for CE | Closed cup: Not applicable. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Not available. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| | | Organic Acids Buffer Solution pH 5.6 | Not available. |
| | | Organic Acids Test Sample | Not available. |
| **Evaporation rate** | : | Ultra Pure Water for CE | Not available. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Not available. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| | | Organic Acids Buffer Solution pH 5.6 | Not available. |
| | | Organic Acids Test Sample | Not available. |
| **Flammability** | : | Ultra Pure Water for CE | Not applicable. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Not applicable. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not applicable. |
| | | Organic Acids Buffer Solution pH 5.6 | Not applicable. |
| | | Organic Acids Test Sample | Not applicable. |

# Section 9. Physical and chemical properties and safety characteristics

**Lower and upper explosion limit/flammability limit** :

| | |
|---|---|
| Ultra Pure Water for CE | Not available. |
| Sodium Hydroxide Solution 0.1N for HPCE | Not available. |
| Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| Organic Acids Buffer Solution pH 5.6 | Not available. |
| Organic Acids Test Sample | Not available. |

**Vapour pressure** :

| | |
|---|---|
| Ultra Pure Water for CE | 2.3 kPa (17.5 mm Hg) [room temperature]<br>12.3 kPa (92.258 mm Hg) [50°C (122°F)] |
| Sodium Hydroxide Solution 0.1N for HPCE | <2.4 kPa (<18 mm Hg) |
| Sodium Hydroxide Solution 1.0N for HPCE | <2.4 kPa (<18 mm Hg) |

| Ingredient name | Vapour Pressure at 20°C | | | Vapour pressure at 50°C | | |
|---|---|---|---|---|---|---|
| | mm Hg | kPa | Method | mm Hg | kPa | Method |
| **Organic Acids Buffer Solution pH 5.6** | | | | | | |
| water | 17.5 | 2.3 | - | 92.258 | 12.3 | - |
| **Organic Acids Test Sample** | | | | | | |
| water | 17.5 | 2.3 | - | 92.258 | 12.3 | - |

**Relative vapour density** :

| | |
|---|---|
| Ultra Pure Water for CE | 0.62 [Air = 1] |
| Sodium Hydroxide Solution 0.1N for HPCE | <1 [Air = 1] |
| Sodium Hydroxide Solution 1.0N for HPCE | <1 [Air = 1] |
| Organic Acids Buffer Solution pH 5.6 | Not available. |
| Organic Acids Test Sample | Not available. |

**Relative density** :

| | |
|---|---|
| Ultra Pure Water for CE | 1 |
| Sodium Hydroxide Solution 0.1N for HPCE | Not available. |
| Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| Organic Acids Buffer Solution pH 5.6 | 0.999 |
| Organic Acids Test Sample | Not available. |

**Solubility(ies)** :

| Media | Result |
|---|---|
| **Ultra Pure Water for CE** | |
| water | Soluble |
| **Sodium Hydroxide Solution 0.1N for HPCE** | |
| water | Soluble |
| **Sodium Hydroxide Solution 1.0N for HPCE** | |
| water | Soluble |
| **Organic Acids Buffer Solution pH 5.6** | |
| water | Soluble |
| **Organic Acids Test Sample** | |
| water | Soluble |

# Section 9. Physical and chemical properties and safety characteristics

| | | | |
|---|---|---|---|
| **Partition coefficient: n-octanol/water** | : | Ultra Pure Water for CE | -1.38 |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Not applicable. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not applicable. |
| | | Organic Acids Buffer Solution pH 5.6 | Not applicable. |
| | | Organic Acids Test Sample | Not applicable. |
| **Auto-ignition temperature** | : | Ultra Pure Water for CE | Not applicable. |
| **Decomposition temperature** | : | Ultra Pure Water for CE | Not available. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Not available. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| | | Organic Acids Buffer Solution pH 5.6 | Not available. |
| | | Organic Acids Test Sample | Not available. |
| **Viscosity** | : | Ultra Pure Water for CE | Not available. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Not available. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not available. |
| | | Organic Acids Buffer Solution pH 5.6 | Not available. |
| | | Organic Acids Test Sample | Not available. |

**Particle characteristics**

| | | | |
|---|---|---|---|
| **Median particle size** | : | Ultra Pure Water for CE | Not applicable. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Not applicable. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Not applicable. |
| | | Organic Acids Buffer Solution pH 5.6 | Not applicable. |
| | | Organic Acids Test Sample | Not applicable. |

# Section 10. Stability and reactivity

| | | | |
|---|---|---|---|
| **Reactivity** | : | Ultra Pure Water for CE | No specific test data related to reactivity available for this product or its ingredients. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No specific test data related to reactivity available for this product or its ingredients. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | No specific test data related to reactivity available for this product or its ingredients. |
| | | Organic Acids Buffer Solution pH 5.6 | No specific test data related to reactivity available for this product or its ingredients. |
| | | Organic Acids Test Sample | No specific test data related to reactivity available for this product or its ingredients. |
| **Chemical stability** | : | Ultra Pure Water for CE | The product is stable. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | The product is stable. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | The product is stable. |
| | | Organic Acids Buffer Solution pH 5.6 | The product is stable. |
| | | Organic Acids Test Sample | The product is stable. |

# Section 10. Stability and reactivity

| | | |
|---|---|---|
| **Possibility of hazardous reactions** | : Ultra Pure Water for CE | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | Sodium Hydroxide Solution 0.1N for HPCE | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | Organic Acids Buffer Solution pH 5.6 | Under normal conditions of storage and use, hazardous reactions will not occur. |
| | Organic Acids Test Sample | Under normal conditions of storage and use, hazardous reactions will not occur. |
| **Conditions to avoid** | : Ultra Pure Water for CE | No specific data. |
| | Sodium Hydroxide Solution 0.1N for HPCE | No specific data. |
| | Sodium Hydroxide Solution 1.0N for HPCE | No specific data. |
| | Organic Acids Buffer Solution pH 5.6 | No specific data. |
| | Organic Acids Test Sample | No specific data. |
| **Incompatible materials** | : Ultra Pure Water for CE | May react or be incompatible with oxidising materials. |
| | Sodium Hydroxide Solution 0.1N for HPCE | Reactive or incompatible with the following materials:<br><br>acids<br>metals<br>metals |
| | Sodium Hydroxide Solution 1.0N for HPCE | Reactive or incompatible with the following materials:<br><br>acids<br>metals |
| | Organic Acids Buffer Solution pH 5.6 | May react or be incompatible with oxidising materials. |
| | Organic Acids Test Sample | May react or be incompatible with oxidising materials. |
| **Hazardous decomposition products** | : Ultra Pure Water for CE | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | Sodium Hydroxide Solution 0.1N for HPCE | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | Sodium Hydroxide Solution 1.0N for HPCE | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | Organic Acids Buffer Solution pH 5.6 | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| | Organic Acids Test Sample | 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

# Section 11. Toxicological information

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| **Sodium Hydroxide Solution 0.1N for HPCE** | | | | | |
| Sodium hydroxide | Eyes - Severe irritant | Rabbit | - | 1 % | - |
| | Eyes - Severe irritant | Rabbit | - | 0.5 minutes 1 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 50 ug | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 500 mg | - |
| **Sodium Hydroxide Solution 1.0N for HPCE** | | | | | |
| Sodium hydroxide | Eyes - Severe irritant | Rabbit | - | 1 % | - |
| | Eyes - Severe irritant | Rabbit | - | 0.5 minutes 1 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 50 ug | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 500 mg | - |

## Sensitisation

Not available.

## Mutagenicity

**Conclusion/Summary** : Not available.

## Carcinogenicity

**Conclusion/Summary** : Not available.

## Reproductive toxicity

**Conclusion/Summary** : Not available.

## Teratogenicity

**Conclusion/Summary** : Not available.

## Specific target organ toxicity (single exposure)

| Name | Category | Route of exposure | Target organs |
|---|---|---|---|
| **Sodium Hydroxide Solution 0.1N for HPCE** | | | |
| Sodium hydroxide | Category 3 | - | Respiratory tract irritation |
| **Sodium Hydroxide Solution 1.0N for HPCE** | | | |
| Sodium hydroxide | Category 3 | - | Respiratory tract irritation |

## Specific target organ toxicity (repeated exposure)

Not available.

## Aspiration hazard

Not available.

**Information on likely routes of exposure** :

| | |
|---|---|
| Ultra Pure Water for CE | Not available. |
| Sodium Hydroxide Solution 0.1N for HPCE | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |
| Sodium Hydroxide Solution 1.0N for HPCE | Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes. |
| Organic Acids Buffer Solution pH 5.6 | Not available. |
| Organic Acids Test Sample | Not available. |

## Potential acute health effects

# Section 11. Toxicological information

| | | | |
|---|---|---|---|
| **Eye contact** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Causes eye irritation. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Causes serious eye damage. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |
| **Inhalation** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |
| **Skin contact** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Causes severe burns. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |
| **Ingestion** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Severely corrosive to the digestive tract. Causes severe burns. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |

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

| | | | |
|---|---|---|---|
| **Eye contact** | : | Ultra Pure Water for CE | No specific data. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | Adverse symptoms may include the following:<br>irritation<br>watering<br>redness |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Adverse symptoms may include the following:<br>pain<br>watering<br>redness |
| | | Organic Acids Buffer Solution pH 5.6 | No specific data. |
| | | Organic Acids Test Sample | No specific data. |
| **Inhalation** | : | Ultra Pure Water for CE | No specific data. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No specific data. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | No specific data. |
| | | Organic Acids Buffer Solution pH 5.6 | No specific data. |
| | | Organic Acids Test Sample | No specific data. |

# Section 11. Toxicological information

| | | | |
|---|---|---|---|
| **Skin contact** | : | Ultra Pure Water for CE | No specific data. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No specific data. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Adverse symptoms may include the following:<br>pain or irritation<br>redness<br>blistering may occur |
| | | Organic Acids Buffer Solution pH 5.6 | No specific data. |
| | | Organic Acids Test Sample | No specific data. |
| **Ingestion** | : | Ultra Pure Water for CE | No specific data. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No specific data. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | Adverse symptoms may include the following:<br>stomach pains |
| | | Organic Acids Buffer Solution pH 5.6 | No specific data. |
| | | Organic Acids Test Sample | 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** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |
| **Carcinogenicity** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |
| **Mutagenicity** | : | Ultra Pure Water for CE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| | | Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| | | Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| | | Organic Acids Test Sample | No known significant effects or critical hazards. |

# Section 11. Toxicological information

**Reproductive toxicity** :

| | |
|---|---|
| Ultra Pure Water for CE | No known significant effects or critical hazards. |
| Sodium Hydroxide Solution 0.1N for HPCE | No known significant effects or critical hazards. |
| Sodium Hydroxide Solution 1.0N for HPCE | No known significant effects or critical hazards. |
| Organic Acids Buffer Solution pH 5.6 | No known significant effects or critical hazards. |
| Organic Acids Test Sample | No known significant effects or critical hazards. |

## Numerical measures of toxicity

### Acute toxicity estimates

N/A

# Section 12. Ecological information

## Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| **Sodium Hydroxide Solution 0.1N for HPCE** | | | |
| Sodium hydroxide | Acute EC50 40.38 mg/l Fresh water | Crustaceans - *Ceriodaphnia dubia* - Neonate | 48 hours |
| | Acute LC50 125 ppm Fresh water | Fish - *Gambusia affinis* - Adult | 96 hours |
| **Sodium Hydroxide Solution 1.0N for HPCE** | | | |
| Sodium hydroxide | Acute EC50 40.38 mg/l Fresh water | Crustaceans - *Ceriodaphnia dubia* - Neonate | 48 hours |
| | Acute LC50 125 ppm Fresh water | Fish - *Gambusia affinis* - Adult | 96 hours |

## Persistence and degradability

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| **Ultra Pure Water for CE** | | | |
| water | - | - | Readily |
| **Sodium Hydroxide Solution 0.1N for HPCE** | | | |
| Sodium hydroxide | - | - | Readily |
| **Sodium Hydroxide Solution 1.0N for HPCE** | | | |
| Sodium hydroxide | - | - | Readily |

## Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| **Ultra Pure Water for CE** | | | |
| water | -1.38 | - | Low |

## Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** : 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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. 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

| | ADG | IMDG | IATA |
|---|---|---|---|
| **UN number** | UN3316 | UN3316 | UN3316 |
| **UN proper shipping name** | CHEMICAL KIT | CHEMICAL KIT | Chemical kit |
| **Transport hazard class(es)** | 9  | 9  | 9  |
| **Packing group** | II | II | II |
| **Environmental hazards** | No. | No. | No. |

**Additional information**

**ADG** : **Hazchem code** 2Z
**Special provisions** 251, 340

**IMDG** : **Emergency schedules** F-A, _S-P_
**Special provisions** 251, 340

**IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960. Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960.
**Special provisions** A44, A163

**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 IMO instruments** : Not available.

# Section 15. Regulatory information

**Standard for the Uniform Scheduling of Medicines and Poisons**

5

**Model Work Health and Safety Regulations - Scheduled Substances**

No listed substance

**International regulations**

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

Not listed.

# Section 15. Regulatory information

## 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.

## Inventory list

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

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

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

# Section 16. Any other relevant information

## History

**Date of issue/Date of revision** : 14/11/2024

**Date of previous issue** : 16/09/2021

**Version** : 8

**Key to abbreviations** : ADG = Australian Dangerous Goods
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
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
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
SUSMP = Standard Uniform Schedule of Medicine and Poisons
UN = United Nations

## Procedure used to derive the classification

| Classification | Justification |
|---|---|
| **Sodium Hydroxide Solution 0.1N for HPCE** | |
| CORROSIVE TO METALS - Category 1 | Expert judgment |
| SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2B | Expert judgment |
| **Sodium Hydroxide Solution 1.0N for HPCE** | |
| CORROSIVE TO METALS - Category 1 | Expert judgment |
| SKIN CORROSION/IRRITATION - Category 1B | Expert judgment |
| SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 | On basis of test data |

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

## Notice to reader

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