



# Safety Data Sheet

## ULTIMATE CL

Revision: 2023-03-04

Version: 01.0

### SECTION 1: Identification of the substance/mixture and supplier

#### 1.1 Product identifier

Product name: ULTIMATE CL

#### 1.2 Recommended use and restrictions on use

##### Identified uses:

Automatic machine dishwashing detergent

##### Restrictions of use:

Uses other than those identified are not recommended

#### 1.3 Details of the supplier

Diversey Australia Pty. Limited

Unit 8, 55 Newton Road, Wetherill Park, NSW, 2164

1-7 Bell Grove, Braeside, VIC 3195

Telephone: 1800 647 779 (toll free)

Email: aucustserv@diversey.com

Website: diversey.com.au

#### 1.4 Emergency telephone number

Seek medical advice (show the label or safety data sheet where possible)

Call 1800 033 111 (24hrs)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Skin corrosion, Category 1A

Serious eye damage, Category 1

Acute toxicity, oral, Category 4

Corrosive to metals, Category 1

#### 2.2 Label elements



Signal word: Danger

#### Hazard statements:

H290 - May be corrosive to metals.

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

#### Prevention statement(s):

P233 - Keep container tightly closed.

P234 - Keep only in original packaging.

P260 - Do not breathe vapours.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves, protective clothing and eye or face protection.

#### Response statement(s):

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P301 + P312 - IF SWALLOWED: Call a POISON CENTRE, doctor or physician if you feel unwell.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

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Continue rinsing.

P310 - Immediately call a POISON CENTRE, doctor or physician.

P321 - Specific treatment (see supplemental first aid instructions on this label).

P330 - Rinse mouth.

P363 - Wash contaminated clothing before reuse.

P390 - Absorb spillage to prevent material damage.

**Storage statement(s):**

P405 - Store locked up.

P406 - Store in corrosive-resistant container with a resistant inner liner.

**Disposal statement(s):**

P501 - Dispose of unused content as chemical waste.

**2.3 Other hazards**

No other hazards known.

**2.4 Classification diluted product:**

Recommended maximum concentration (% w/w): 2

Not classified as hazardous

**SECTION 3: Composition/information on ingredients****3.1 Substances / Mixtures**

| Ingredient(s)                         | CAS#      | EC number | Weight percent |
|---------------------------------------|-----------|-----------|----------------|
| potassium hydroxide                   | 1310-58-3 | 215-181-3 | 10-30          |
| tetrapotassium pyrophosphate          | 7320-34-5 | 230-785-7 | 3-10           |
| sodium hypochlorite (active chlorine) | 7681-52-9 | 231-668-3 | 1-3            |

Non-hazardous ingredients are the remainder and add up to 100%.

[4] Polymer.

Workplace exposure limit(s), if available, are listed in subsection 8.1.

**SECTION 4: First aid measures****4.1 Description of first aid measures****General Information:**

Symptoms of intoxication may even occur after several hours. It is recommended to continue medical observation for at least 48 hours after the incident. If unconscious place in recovery position and seek medical advice. Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

**Inhalation:**

Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE, doctor or physician.

**Skin contact:**

Wash skin with plenty of lukewarm, gently flowing water for at least 30 minutes. Take off immediately all contaminated clothing and wash it before reuse. Immediately call a POISON CENTRE, doctor or physician.

**Eye contact:**

Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.

**Ingestion:**

Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Keep at rest. Immediately call a POISON CENTRE, doctor or physician. Get medical attention or advice if you feel unwell.

**Self-protection of first aider:**

Consider personal protective equipment as indicated in subsection 8.2.

**First aid facilities:**

Shower and eyewash facilities should be considered in a workplace where necessary. Eyewash facilities should be considered in a workplace where necessary.

**4.2 Most important symptoms and effects, both acute and delayed****Inhalation:**

Corrosive to the respiratory tract. May cause bronchospasm in chlorine sensitive individuals.

**Skin contact:**

Causes severe burns.

**Eye contact:**

Causes severe or permanent damage.

**Ingestion:**

Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

**4.3 Indication of any immediate medical attention and special treatment needed**

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

**Poison Information Center:**

Call 13 11 26 (Australia Wide).

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

### 5.2 Special hazards arising from the substance or mixture

No special hazards known.

### 5.3 Advice for firefighters

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

### 5.4 Hazchem code

2X

2 - Fine water spray.

X - Liquid-tight chemical protective clothing and breathing apparatus. Contain.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Do not breathe dust or vapour. Wear suitable protective clothing. Wear eye/face protection. Wear suitable gloves.

### 6.2 Environmental precautions

Dilute with plenty of water. Do not allow to enter drainage system, surface or ground water.

### 6.3 Methods and material for containment and cleaning up

Ensure adequate ventilation. Dyke to collect large liquid spills. Absorb with liquid-binding material (sand, diatomite, universal binders). Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

### 6.4 Reference to other sections

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Measures to prevent fire and explosions:

No special precautions required.

#### Measures required to protect the environment:

For environmental exposure controls see subsection 8.2.

#### Advices on general occupational hygiene:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Do not breathe vapours. Do not breathe spray. Do not eat, drink or smoke when using this product. Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging.

For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

### 7.3 Specific end use(s)

No specific advice for end use available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Workplace exposure limits

Air limit values, if available:

| Ingredient(s)       | Long term value(s)<br>(TWA) | Short term value(s)<br>(STEL) | Peak value(s)       |
|---------------------|-----------------------------|-------------------------------|---------------------|
| potassium hydroxide |                             |                               | 2 mg/m <sup>3</sup> |

Biological limit values, if available:

### 8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet.

If available, please refer to the product information sheet for application and handling instructions.

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Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Covering activities such as filling and transfer of product to application equipment, flasks or buckets

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Appropriate engineering controls:</b>    | If the product is diluted by using specific dosing systems with no risk of splashes or direct skin contact, the personal protection equipment as described in this section is not required. Where possible: use in automated/closed system and cover open containers. Transport over pipes. Filling with automatic systems. Use tools for manual handling of product.                                                                                                                                                                                                                                                                                                          |
| <b>Appropriate organisational controls:</b> | Avoid direct contact and/or splashes where possible. Train personnel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Personal protective equipment</b>        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Eye / face protection:</b>               | Safety glasses or goggles (AS/NZS 1337.1). The use of a full-face shield or other full-face protection is strongly recommended when handling open containers or if splashes may occur.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Hand protection:</b>                     | Chemical-resistant protective gloves (AS/NZS 2161.10). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.<br>Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: $\geq 480$ min Material thickness: $\geq 0.7$ mm<br>Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: $\geq 30$ min Material thickness: $\geq 0.4$ mm<br>In consultation with the supplier of protective gloves a different type providing similar protection may be chosen. |
| <b>Body protection:</b>                     | Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur (EN 14605).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Respiratory protection:</b>              | If exposure to liquid particles or splashes cannot be avoided use: half mask (EN 140) with particle filter P2 (EN 143) or full-face mask (EN 136) with particle filter P1 (EN 143) Consider specific local use conditions. In consultation with the supplier of respiratory protection equipment a different type providing similar protection may be chosen. Specific applications tools may be available to limit exposure. Please refer to the product information sheet for the possibilities. Apply technical measures to comply with the occupational exposure limits, if available.                                                                                     |
| <b>Environmental exposure controls:</b>     | Should not reach sewage water or drainage ditch undiluted or unneutralised.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Recommended safety measures for handling the diluted product:

Recommended maximum concentration (% w/w): 2

|                                             |                                                                                                                                                                                |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Appropriate engineering controls:</b>    | Use only in well ventilated areas.                                                                                                                                             |
| <b>Appropriate organisational controls:</b> | No special requirements under normal use conditions.                                                                                                                           |
| <b>Personal protective equipment</b>        |                                                                                                                                                                                |
| <b>Eye / face protection:</b>               | No special requirements under normal use conditions.                                                                                                                           |
| <b>Hand protection:</b>                     | No special requirements under normal use conditions.                                                                                                                           |
| <b>Body protection:</b>                     | No special requirements under normal use conditions                                                                                                                            |
| <b>Respiratory protection:</b>              | Trigger spray bottle application: No special requirements under normal use conditions. Apply technical measures to comply with the occupational exposure limits, if available. |
| <b>Environmental exposure controls:</b>     | No special requirements under normal use conditions.                                                                                                                           |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                                                                               | Method / remark                                |
|-------------------------------------------------------------------------------|------------------------------------------------|
| <b>Physical state:</b> Liquid                                                 |                                                |
| <b>Colour:</b> Clear , Colourless                                             |                                                |
| <b>Odour:</b> Chlorine                                                        |                                                |
| <b>Odour threshold:</b> Not applicable                                        |                                                |
| <b>pH:</b> 13.5 (neat)                                                        | ISO 4316                                       |
| <b>Melting point/freezing point (°C):</b> Not determined                      | Not relevant to classification of this product |
| <b>Initial boiling point and boiling range (°C):</b> Not determined           |                                                |
| <b>Flammability (liquid):</b> Not flammable.                                  |                                                |
| <b>Flash point (°C):</b> Not applicable.                                      |                                                |
| <b>Sustained combustion:</b> Not applicable.                                  |                                                |
| ( UN Manual of Tests and Criteria, section 32, L.2 )                          |                                                |
| <b>Evaporation rate:</b> Not determined                                       | Not relevant to classification of this product |
| <b>Flammability (solid, gas):</b> Not applicable to liquids                   |                                                |
| <b>Lower and upper explosion limit/flammability limit (%):</b> Not determined |                                                |

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**Vapour pressure:** Not determined  
**Relative vapour density** No data available  
**Relative density:**  $\approx 1.20$  (20 °C)  
**Solubility in / Miscibility with water:** Fully miscible  
**Partition coefficient: n-octanol/water** No information available.

Not relevant to classification of this product  
 OECD 109 (EU A.3)

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

**Autoignition temperature:** Not determined  
**Decomposition temperature:** Not applicable.  
**Viscosity:** Not determined  
**Explosive properties:** Not explosive.  
**Oxidising properties:** Not oxidising.

## 9.2 Other information

**Surface tension (N/m):** Not determined  
**Corrosion to metals:** Corrosive

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

Stable under normal storage and use conditions.

### 10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

### 10.4 Conditions to avoid

None known under normal storage and use conditions.

### 10.5 Incompatible materials

May be corrosive to metals. Reacts with acids. Reacts with acids releasing toxic chlorine gas.

### 10.6 Hazardous decomposition products

Chlorine.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Mixture data:.

#### Relevant calculated ATE(s):

ATE - Oral (mg/kg): 2000

Substance data, where relevant and available, are listed below:.

#### Acute toxicity

Acute oral toxicity

| Ingredient(s)                         | Endpoint         | Value (mg/kg) | Species | Method            | Exposure time (h) |
|---------------------------------------|------------------|---------------|---------|-------------------|-------------------|
| potassium hydroxide                   | LD <sub>50</sub> | 333           | Rat     | OECD 425          |                   |
| tetrapotassium pyrophosphate          | LD <sub>50</sub> | > 2000        | Rat     | Method not given  |                   |
| sodium hypochlorite (active chlorine) | LD <sub>50</sub> | 1100          | Rat     | OECD 401 (EU B.1) | 90                |

Acute dermal toxicity

| Ingredient(s)                         | Endpoint         | Value (mg/kg)     | Species | Method            | Exposure time (h) |
|---------------------------------------|------------------|-------------------|---------|-------------------|-------------------|
| potassium hydroxide                   |                  | No data available |         |                   |                   |
| tetrapotassium pyrophosphate          | LD <sub>50</sub> | > 2000            | Rabbit  | Method not given  |                   |
| sodium hypochlorite (active chlorine) | LD <sub>50</sub> | > 20000           | Rabbit  | OECD 402 (EU B.3) |                   |

Acute inhalative toxicity

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| Ingredient(s)                         | Endpoint         | Value (mg/l)      | Species | Method            | Exposure time (h) |
|---------------------------------------|------------------|-------------------|---------|-------------------|-------------------|
| potassium hydroxide                   |                  | No data available |         |                   |                   |
| tetrapotassium pyrophosphate          | LC <sub>50</sub> | > 1.1             | Rat     | Method not given  | 4                 |
| sodium hypochlorite (active chlorine) | LC <sub>50</sub> | > 10.5 (vapour)   | Rat     | OECD 403 (EU B.2) | 1                 |

**Irritation and corrosivity**

Skin irritation and corrosivity

| Ingredient(s)                         | Result       | Species | Method            | Exposure time |
|---------------------------------------|--------------|---------|-------------------|---------------|
| potassium hydroxide                   | Corrosive    | Rabbit  | Draize test       |               |
| tetrapotassium pyrophosphate          | Not irritant |         | Method not given  |               |
| sodium hypochlorite (active chlorine) | Corrosive    | Rabbit  | OECD 404 (EU B.4) |               |

Eye irritation and corrosivity

| Ingredient(s)                         | Result        | Species | Method            | Exposure time |
|---------------------------------------|---------------|---------|-------------------|---------------|
| potassium hydroxide                   | Corrosive     | Rabbit  | Method not given  |               |
| tetrapotassium pyrophosphate          | Irritant      |         | Method not given  |               |
| sodium hypochlorite (active chlorine) | Severe damage | Rabbit  | OECD 405 (EU B.5) |               |

Respiratory tract irritation and corrosivity

| Ingredient(s)                         | Result                          | Species | Method | Exposure time |
|---------------------------------------|---------------------------------|---------|--------|---------------|
| potassium hydroxide                   | No data available               |         |        |               |
| tetrapotassium pyrophosphate          | No data available               |         |        |               |
| sodium hypochlorite (active chlorine) | Irritating to respiratory tract |         |        |               |

**Sensitisation**

Sensitisation by skin contact

| Ingredient(s)                         | Result          | Species    | Method                           | Exposure time (h) |
|---------------------------------------|-----------------|------------|----------------------------------|-------------------|
| potassium hydroxide                   | Not sensitising | Guinea pig | Method not given                 |                   |
| tetrapotassium pyrophosphate          | Not sensitising |            | Method not given                 |                   |
| sodium hypochlorite (active chlorine) | Not sensitising | Guinea pig | OECD 406 (EU B.6) / Buehler test |                   |

Sensitisation by inhalation

| Ingredient(s)                         | Result            | Species | Method | Exposure time |
|---------------------------------------|-------------------|---------|--------|---------------|
| potassium hydroxide                   | No data available |         |        |               |
| tetrapotassium pyrophosphate          | No data available |         |        |               |
| sodium hypochlorite (active chlorine) | Not sensitising   |         |        |               |

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Mutagenicity

| Ingredient(s)                         | Result (in-vitro)                                   | Method (in-vitro)     | Result (in-vivo)                                    | Method (in-vivo)   |
|---------------------------------------|-----------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------|
| potassium hydroxide                   | No evidence for mutagenicity, negative test results | Method not given      | No data available                                   |                    |
| tetrapotassium pyrophosphate          | No data available                                   |                       | No data available                                   |                    |
| sodium hypochlorite (active chlorine) | No evidence for mutagenicity                        | OECD 471 (EU B.12/13) | No evidence for mutagenicity, negative test results | OECD 474 (EU B.12) |

Carcinogenicity

| Ingredient(s)                         | Effect                                                 |
|---------------------------------------|--------------------------------------------------------|
| potassium hydroxide                   | No evidence for carcinogenicity, negative test results |
| tetrapotassium pyrophosphate          | No data available                                      |
| sodium hypochlorite (active chlorine) | No evidence for carcinogenicity, negative test results |

Toxicity for reproduction

| Ingredient(s)                         | Endpoint | Specific effect                           | Value (mg/kg bw/d) | Species | Method                                            | Exposure time | Remarks and other effects reported    |
|---------------------------------------|----------|-------------------------------------------|--------------------|---------|---------------------------------------------------|---------------|---------------------------------------|
| potassium hydroxide                   |          |                                           | No data available  |         |                                                   |               | No evidence for reproductive toxicity |
| tetrapotassium pyrophosphate          |          |                                           | No data available  |         |                                                   |               |                                       |
| sodium hypochlorite (active chlorine) | NOAEL    | Developmental toxicity Impaired fertility | 5 (Cl)             | Rat     | OECD 414 (EU B.31), oral OECD 415 (EU B.34), oral |               | No evidence for reproductive toxicity |

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**Repeated dose toxicity**

Sub-acute or sub-chronic oral toxicity

| Ingredient(s)                         | Endpoint | Value (mg/kg bw/d) | Species | Method             | Exposure time (days) | Specific effects and organs affected |
|---------------------------------------|----------|--------------------|---------|--------------------|----------------------|--------------------------------------|
| potassium hydroxide                   |          | No data available  |         |                    |                      |                                      |
| tetrapotassium pyrophosphate          | NOAEL    | No data available  | Rat     | OECD 408 (EU B.26) | 90 days              |                                      |
| sodium hypochlorite (active chlorine) | NOAEL    | 50                 | Rat     | OECD 408 (EU B.26) | 90                   |                                      |

Sub-chronic dermal toxicity

| Ingredient(s)                         | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|---------------------------------------|----------|--------------------|---------|--------|----------------------|--------------------------------------|
| potassium hydroxide                   |          | No data available  |         |        |                      |                                      |
| tetrapotassium pyrophosphate          |          | No data available  |         |        |                      |                                      |
| sodium hypochlorite (active chlorine) |          | No data available  |         |        |                      |                                      |

Sub-chronic inhalation toxicity

| Ingredient(s)                         | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|---------------------------------------|----------|--------------------|---------|--------|----------------------|--------------------------------------|
| potassium hydroxide                   |          | No data available  |         |        |                      |                                      |
| tetrapotassium pyrophosphate          |          | No data available  |         |        |                      |                                      |
| sodium hypochlorite (active chlorine) |          | No data available  |         |        |                      |                                      |

Chronic toxicity

| Ingredient(s)                         | Exposure route | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time | Specific effects and organs affected | Remark |
|---------------------------------------|----------------|----------|--------------------|---------|--------|---------------|--------------------------------------|--------|
| potassium hydroxide                   |                |          | No data available  |         |        |               |                                      |        |
| tetrapotassium pyrophosphate          |                |          | No data available  |         |        |               |                                      |        |
| sodium hypochlorite (active chlorine) |                |          | No data available  |         |        |               |                                      |        |

STOT-single exposure

| Ingredient(s)                         | Affected organ(s) |
|---------------------------------------|-------------------|
| potassium hydroxide                   | No data available |
| tetrapotassium pyrophosphate          | No data available |
| sodium hypochlorite (active chlorine) | Not applicable    |

STOT-repeated exposure

| Ingredient(s)                         | Affected organ(s) |
|---------------------------------------|-------------------|
| potassium hydroxide                   | No data available |
| tetrapotassium pyrophosphate          | No data available |
| sodium hypochlorite (active chlorine) | Not applicable    |

**Aspiration hazard**

Substances with an aspiration hazard (H304), if any, are listed in section 3.

**Potential adverse health effects and symptoms**

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

**SECTION 12: Ecological information****12.1 Toxicity**

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

**Aquatic short-term toxicity**

Aquatic short-term toxicity - fish

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|---------------|----------|--------------|---------|--------|-------------------|
|---------------|----------|--------------|---------|--------|-------------------|

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|                                       |                  |       |                            |                    |    |
|---------------------------------------|------------------|-------|----------------------------|--------------------|----|
| potassium hydroxide                   | LC <sub>50</sub> | 80    | <i>Various species</i>     | Weight of evidence | 24 |
| tetrapotassium pyrophosphate          | LC <sub>50</sub> | > 100 | <i>Oncorhynchus mykiss</i> | OECD 203 (EU C.1)  | 96 |
| sodium hypochlorite (active chlorine) | LC <sub>50</sub> | 0.06  | <i>Oncorhynchus mykiss</i> | Method not given   | 96 |

## Aquatic short-term toxicity - crustacea

| Ingredient(s)                         | Endpoint         | Value (mg/l) | Species                     | Method             | Exposure time (h) |
|---------------------------------------|------------------|--------------|-----------------------------|--------------------|-------------------|
| potassium hydroxide                   | EC <sub>50</sub> | 30 - 1000    | <i>Daphnia magna Straus</i> | Weight of evidence |                   |
| tetrapotassium pyrophosphate          | EC <sub>50</sub> | > 100        | <i>Daphnia magna Straus</i> | OECD 202 (EU C.2)  | 48                |
| sodium hypochlorite (active chlorine) | EC <sub>50</sub> | 0.035        | <i>Ceriodaphnia dubia</i>   | OECD 202 (EU C.2)  | 48                |

## Aquatic short-term toxicity - algae

| Ingredient(s)                         | Endpoint | Value (mg/l)      | Species              | Method           | Exposure time (h) |
|---------------------------------------|----------|-------------------|----------------------|------------------|-------------------|
| potassium hydroxide                   |          | No data available |                      |                  |                   |
| tetrapotassium pyrophosphate          |          | No data available |                      |                  |                   |
| sodium hypochlorite (active chlorine) | NOEC     | 0.0021            | <i>Not specified</i> | Method not given | 168               |

## Aquatic short-term toxicity - marine species

| Ingredient(s)                         | Endpoint         | Value (mg/l)      | Species                      | Method           | Exposure time (days) |
|---------------------------------------|------------------|-------------------|------------------------------|------------------|----------------------|
| potassium hydroxide                   |                  | No data available |                              |                  |                      |
| tetrapotassium pyrophosphate          |                  | No data available |                              |                  |                      |
| sodium hypochlorite (active chlorine) | EC <sub>50</sub> | 0.026             | <i>Crassostrea virginica</i> | Method not given | 2                    |

## Impact on sewage plants - toxicity to bacteria

| Ingredient(s)                         | Endpoint         | Value (mg/l)      | Inoculum                          | Method           | Exposure time |
|---------------------------------------|------------------|-------------------|-----------------------------------|------------------|---------------|
| potassium hydroxide                   | EC <sub>50</sub> | 22                | <i>Photobacterium phosphoreum</i> | Method not given | 15 minute(s)  |
| tetrapotassium pyrophosphate          |                  | No data available |                                   |                  |               |
| sodium hypochlorite (active chlorine) |                  | 0.375             | <i>Activated sludge</i>           | Method not given |               |

## Aquatic long-term toxicity

## Aquatic long-term toxicity - fish

| Ingredient(s)                         | Endpoint | Value (mg/l)      | Species                   | Method           | Exposure time | Effects observed |
|---------------------------------------|----------|-------------------|---------------------------|------------------|---------------|------------------|
| potassium hydroxide                   |          | No data available |                           |                  |               |                  |
| tetrapotassium pyrophosphate          |          | No data available |                           |                  |               |                  |
| sodium hypochlorite (active chlorine) | NOEC     | 0.04              | <i>Menidia pelinsulae</i> | Method not given | 96 hour(s)    |                  |

## Aquatic long-term toxicity - crustacea

| Ingredient(s)                         | Endpoint | Value (mg/l)      | Species                      | Method           | Exposure time | Effects observed |
|---------------------------------------|----------|-------------------|------------------------------|------------------|---------------|------------------|
| potassium hydroxide                   |          | No data available |                              |                  |               |                  |
| tetrapotassium pyrophosphate          |          | No data available |                              |                  |               |                  |
| sodium hypochlorite (active chlorine) | NOEC     | 0.007             | <i>Crassostrea virginica</i> | Method not given | 15 day(s)     |                  |

## Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

| Ingredient(s)                | Endpoint | Value (mg/kg dw sediment) | Species | Method | Exposure time (days) | Effects observed |
|------------------------------|----------|---------------------------|---------|--------|----------------------|------------------|
| potassium hydroxide          |          | No data available         |         |        |                      |                  |
| tetrapotassium pyrophosphate |          | No data available         |         |        |                      |                  |



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|                                       |  |                   |  |  |  |  |
|---------------------------------------|--|-------------------|--|--|--|--|
| sodium hypochlorite (active chlorine) |  | No data available |  |  |  |  |
|---------------------------------------|--|-------------------|--|--|--|--|

**Terrestrial toxicity**

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

| Ingredient(s)                         | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---------------------------------------|----------|-----------------------|---------|--------|----------------------|------------------|
| potassium hydroxide                   |          | No data available     |         |        |                      |                  |
| tetrapotassium pyrophosphate          |          | No data available     |         |        |                      |                  |
| sodium hypochlorite (active chlorine) |          | No data available     |         |        |                      |                  |

Terrestrial toxicity - plants, if available:

| Ingredient(s)                         | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---------------------------------------|----------|-----------------------|---------|--------|----------------------|------------------|
| potassium hydroxide                   |          | No data available     |         |        |                      |                  |
| tetrapotassium pyrophosphate          |          | No data available     |         |        |                      |                  |
| sodium hypochlorite (active chlorine) |          | No data available     |         |        |                      |                  |

Terrestrial toxicity - birds, if available:

| Ingredient(s)                         | Endpoint | Value             | Species | Method | Exposure time (days) | Effects observed |
|---------------------------------------|----------|-------------------|---------|--------|----------------------|------------------|
| tetrapotassium pyrophosphate          |          | No data available |         |        |                      |                  |
| sodium hypochlorite (active chlorine) |          | No data available |         |        |                      |                  |

Terrestrial toxicity - beneficial insects, if available:

| Ingredient(s)                         | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---------------------------------------|----------|-----------------------|---------|--------|----------------------|------------------|
| potassium hydroxide                   |          | No data available     |         |        |                      |                  |
| tetrapotassium pyrophosphate          |          | No data available     |         |        |                      |                  |
| sodium hypochlorite (active chlorine) |          | No data available     |         |        |                      |                  |

Terrestrial toxicity - soil bacteria, if available:

| Ingredient(s)                         | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---------------------------------------|----------|-----------------------|---------|--------|----------------------|------------------|
| potassium hydroxide                   |          | No data available     |         |        |                      |                  |
| tetrapotassium pyrophosphate          |          | No data available     |         |        |                      |                  |
| sodium hypochlorite (active chlorine) |          | No data available     |         |        |                      |                  |

**12.2 Persistence and degradability****Abiotic degradation**

Abiotic degradation - photodegradation in air, if available:

| Ingredient(s)                         | Half-life time    | Method                   | Evaluation | Remark |
|---------------------------------------|-------------------|--------------------------|------------|--------|
| potassium hydroxide                   | No data available |                          |            |        |
| tetrapotassium pyrophosphate          | No data available |                          |            |        |
| sodium hypochlorite (active chlorine) | 115 day(s)        | Indirect photo-oxidation |            |        |

Abiotic degradation - hydrolysis, if available:

| Ingredient(s)                         | Half-life time in fresh water | Method | Evaluation | Remark |
|---------------------------------------|-------------------------------|--------|------------|--------|
| potassium hydroxide                   | No data available             |        |            |        |
| tetrapotassium pyrophosphate          | No data available             |        |            |        |
| sodium hypochlorite (active chlorine) | No data available             |        |            |        |

Abiotic degradation - other processes, if available:

| Ingredient(s)       | Type | Half-life time    | Method | Evaluation | Remark |
|---------------------|------|-------------------|--------|------------|--------|
| potassium hydroxide |      | No data available |        |            |        |

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|                                       |  |                   |  |  |  |
|---------------------------------------|--|-------------------|--|--|--|
| tetrapotassium pyrophosphate          |  | No data available |  |  |  |
| sodium hypochlorite (active chlorine) |  | No data available |  |  |  |

**Biodegradation**

Ready biodegradability - aerobic conditions

| Ingredient(s)                         | Inoculum | Analytical method | DT <sub>50</sub> | Method | Evaluation                           |
|---------------------------------------|----------|-------------------|------------------|--------|--------------------------------------|
| potassium hydroxide                   |          |                   |                  |        | Not applicable (inorganic substance) |
| tetrapotassium pyrophosphate          |          |                   |                  |        | Not applicable (inorganic substance) |
| sodium hypochlorite (active chlorine) |          |                   |                  |        | Not applicable (inorganic substance) |

Ready biodegradability - anaerobic and marine conditions, if available:

| Ingredient(s)                         | Medium & Type | Analytical method | DT <sub>50</sub> | Method | Evaluation        |
|---------------------------------------|---------------|-------------------|------------------|--------|-------------------|
| tetrapotassium pyrophosphate          |               |                   |                  |        | No data available |
| sodium hypochlorite (active chlorine) |               |                   |                  |        | No data available |

Degradation in relevant environmental compartments, if available:

| Ingredient(s)                         | Medium & Type | Analytical method | DT <sub>50</sub> | Method | Evaluation        |
|---------------------------------------|---------------|-------------------|------------------|--------|-------------------|
| potassium hydroxide                   |               |                   |                  |        | No data available |
| tetrapotassium pyrophosphate          |               |                   |                  |        | No data available |
| sodium hypochlorite (active chlorine) |               |                   |                  |        | No data available |

**12.3 Bioaccumulative potential**Partition coefficient n-octanol/water (log K<sub>ow</sub>)

| Ingredient(s)                         | Value             | Method           | Evaluation                           | Remark |
|---------------------------------------|-------------------|------------------|--------------------------------------|--------|
| potassium hydroxide                   | No data available |                  | Not relevant, does not bioaccumulate |        |
| tetrapotassium pyrophosphate          | -2                | Method not given | No bioaccumulation expected          |        |
| sodium hypochlorite (active chlorine) | -3.42             | Method not given | No bioaccumulation expected          |        |

Bioconcentration factor (BCF)

| Ingredient(s)                         | Value             | Species | Method | Evaluation | Remark |
|---------------------------------------|-------------------|---------|--------|------------|--------|
| potassium hydroxide                   | No data available |         |        |            |        |
| tetrapotassium pyrophosphate          | No data available |         |        |            |        |
| sodium hypochlorite (active chlorine) | No data available |         |        |            |        |

**12.4 Mobility in soil**

Adsorption/Desorption to soil or sediment

| Ingredient(s)                         | Adsorption coefficient Log K <sub>oc</sub> | Desorption coefficient Log K <sub>oc</sub> (des) | Method | Soil/sediment type | Evaluation                           |
|---------------------------------------|--------------------------------------------|--------------------------------------------------|--------|--------------------|--------------------------------------|
| potassium hydroxide                   | No data available                          |                                                  |        |                    | Low potential for adsorption to soil |
| tetrapotassium pyrophosphate          | No data available                          |                                                  |        |                    |                                      |
| sodium hypochlorite (active chlorine) | 1.12                                       |                                                  |        |                    | High potential for mobility in soil  |

**12.5 Other adverse effects**

No other adverse effects known.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Waste from residues / unused products:

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

Empty packaging

Recommendation:

Dispose of observing national or local regulations.

Suitable cleaning agents:

Water, if necessary with cleaning agent.

**SECTION 14: Transport information**

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**ADG, IMO/IMDG, ICAO/IATA****14.1 UN number or ID number:** 1760**14.2 UN proper shipping name:**

Caustic alkali liquid, n.o.s. ( potassium hydroxide , sodium hypochlorite )

**14.3 Transport hazard class(es):****Transport hazard class (and subsidiary risks):** 8**14.4 Packing group:** II**14.5 Environmental hazards:****Environmentally hazardous:** No**Marine pollutant:** No**14.6 Special precautions for user:** None known.**14.7 Maritime transport in bulk according to IMO instruments:** The product is not transported in bulk tankers.**Other relevant information:****Hazchem code:** 2X**IMO/IMDG****EmS:** F-A, S-B

The product has been classified, labelled and packaged in accordance with the requirements of ADG7.7 Code and the provisions of the IMDG Code.

Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

## SECTION 15: Regulatory information

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

|                             |                                                                                                                                        |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>National regulations</b> | Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia.                      |
| <b>Poison schedule</b>      | Classified as a Schedule 6 (S6) Poison using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP). |
| <b>Classification</b>       | Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia.                      |
| <b>Inventory listing(s)</b> | Australian Inventory of Industrial Chemicals: All components are listed on the inventory, or are exempt.                               |

## SECTION 16: Other information

*The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract*

**SDS code:** MS31001244**Version:** 01.0**Revision:** 2023-03-04

• AUH031 - Contact with acids liberates toxic gas.

**Additional information:**

**Respirators:** In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

**Work practices - solvents:** Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS 1020 (The control of undesirable static electricity) and AS 1940 (The storage and handling of flammable and combustible liquids) for control procedures.

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**Exposure standards - Time Weighted Average (TWA) or Workplace Exposure Standard (WES) (NZ):** Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

**Personal protective equipment guidelines:** The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**Health effects from exposure:** It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Safety Data Sheet which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Abbreviations and acronyms:**

- ATE - Acute Toxicity Estimate
- AUH - Non GHS hazard statement
- DNEL - Derived No Effect Limit
- EC No. - European Community Number
- EC50 - effective concentration, 50%
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PNEC - Predicted No Effect Concentration
- STOT-RE - Specific target organ toxicity (repeated exposure)
- STOT-SE - Specific target organ toxicity (single exposure)

**End of Safety Data Sheet**