

Safety Data Sheet

SUMA ALU L10

Revision: 2022-12-22

Version: 01.1

SECTION 1: Identification of the substance/mixture and supplier

1.1 Product identifier Product name: SUMA ALU L10

1.2 Recommended use and restrictions on use

Identified uses: Warewashing 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 Corrosive to metals, Category 1 Serious eye damage, Category 1

2.2 Label elements



Signal word: Danger

Hazard statements:

- H314 Causes severe skin burns and eye damage.
- H290 May be corrosive to metals.

Prevention statement(s):

- P233 Keep container tightly closed.
- P234 Keep only in original packaging.
- P264 Wash face, hands and any exposed skin thoroughly after handling.
- 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.

- 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. Continue rinsing.

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

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

2.4 Classification diluted product:

Recommended maximum concentration (% w/w): 0.4

Not classified as hazardous

SECTION 3: Composition/information on ingredients

3.1 Substances / Mixtures

| Ingredient(s) | CAS# | EC number | Weight percent |
|--|-------------|-----------|-------------------|
| sodium hydroxide | 1310-73-2 | 215-185-5 | 3-10 |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | 164462-16-2 | 423-270-5 | 3-10 |
| sodium polyacrylate | 68479-09-4 | [4] | 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. For the full text of the H and AUH phrases mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

| 4.1 Description of mist and measures | |
|--------------------------------------|--|
| General Information: | If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice. Provide fresh air. 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. Get medical attention or advice if you feel unwell. |
| Skin contact: | 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. |
| 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. |
| 4.2 Most important symptoms and effe | ects, both acute and delayed |
| Inhalation: | No known effects or symptoms in normal use. |
| 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 |
| | |

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).

oesophagus and stomach.

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

- 2R
- 2 Fine water spray.
- R Liquid-tight chemical protective clothing and breathing apparatus. Dilute.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable protective clothing, gloves and eye/face protection.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Use neutralising agent. Absorb onto dry sand or similar inert material.

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 adviced by Diversey. Wash hands before breaks and at the end of workday. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Use personal protective equipment as required. Avoid contact with skin and eyes. Use only with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Keep only in original packaging. Store in a closed container. 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) (TWA) | Short term value(s) (STEL) | Peak value(s) |
|------------------|-----------------------------|-------------------------------|---------------------|
| sodium hydroxide | | | 2 mg/m ³ |

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. Normal use conditions are assumed for this section.

Recommended safety measures for handling the <u>undiluted</u> product: Covering activities such as filling and transfer of product to application equipment, flasks or buckets

| Appropriate engineering controls: | 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. |
| Appropriate organisational controls: | Avoid direct contact and/or splashes where possible. Train personnel. |

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| Personal protective equipment | | | | | | |
|--|---|--|--|--|--|--|
| Eye / face protection: Hand protection: | 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. 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. | | | | | |
| | | : Material: butyl rubber Penetration time: ≥ 480 min Material | | | | |
| | | splashes: Material: nitrile rubber Penetration time: ≥ 30 min | | | | |
| | •••••• | ctive gloves a different type providing similar protection may | | | | |
| Body protection: | | ots in case direct dermal exposure and/or splashes may | | | | |
| Respiratory protection: | No special requirements under normal u | ise conditions. | | | | |
| Environmental exposure controls: | Should not reach sewage water or drain | age ditch undiluted or unneutralised. | | | | |
| Recommended safety measures for han | dling the <u>diluted</u> product: | | | | | |
| Recommended maximum concentrati | on (% w/w): 0.4 | | | | | |
| Appropriate engineering controls: Appropriate organisational controls: | No special requirements under normal u No special requirements under normal u | | | | | |
| Personal protective equipment Eye / face protection: | No special requirements under normal u | ise conditions | | | | |
| Hand protection: | No special requirements under normal u | ise conditions. | | | | |
| Body protection: Respiratory protection: | No special requirements under normal u No special requirements under normal u | | | | | |
| Environmental exposure controls: | No special requirements under normal u | ise conditions. | | | | |
| SECTION 9: Physical and c | hemical properties | | | | | |
| 9.1 Information on basic physical and | chemical properties | | | | | |
| | | Method / remark | | | | |
| Physical state: Liquid Colour: Clear, Yellow | | | | | | |
| Odour: Product specific | | | | | | |
| Odour threshold: Not applicable pH: ≈ 14 (neat) | | | | | | |
| Dilution pH: ≈ 12 (1%) Melting point/freezing point (°C): Not | determined | Not relevant to classification of this product | | | | |
| Initial boiling point and boiling range | | | | | | |
| Flammability (liquid): Not determined | | | | | | |
| Flash point (°C): > 93.4 °C Sustained combustion: Not applicable | е. | closed cup | | | | |
| (UN Manual of Tests and Criteria, section 32, | | | | | | |
| Evaporation rate: Not determined Flammability (solid, gas): Not determ | | | | | | |
| I ower and unner explosion limit/flam | | | | | | |
| Lower and upper explosion limit/flam Vapour pressure: Not determined | mability limit (%): Not determined | Not as been state along "from the south the second sect | | | | |
| Vapour pressure: Not determined Relative vapour density Not determin Relative density: 1.23 | mability limit (%): Not determined | Not relevant to classification of this product | | | | |
| Vapour pressure: Not determined Relative vapour density Not determin | mability limit (%): Not determined ed Fully miscible | Not relevant to classification of this product | | | | |
| Vapour pressure: Not determined Relative vapour density Not determin Relative density: 1.23 Solubility in / Miscibility with water: | mability limit (%): Not determined ed Fully miscible No information available. | Not relevant to classification of this product | | | | |
| Vapour pressure: Not determined Relative vapour density Not determin Relative density: 1.23 Solubility in / Miscibility with water: Partition coefficient: n-octanol/water | mability limit (%): Not determined ed Fully miscible No information available. /water (log Kow): see subsection 12.3 hined | Not relevant to classification of this product | | | | |

9.2 Other information

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

Weight of evidence

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

Reacts with acids.

10.6 Hazardous decomposition products

None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture data:.

Relevant calculated ATE(s):

ATE - Oral (mg/kg): >5000

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

Acute toxicity

| Ingredient(s) | Endpoint | Value (mg/kg) | Species | Method | Exposure time (h) |
|--|----------|----------------------|---------|-------------------|----------------------|
| sodium hydroxide | | No data available | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | LD 50 | > 2000 | Rat | OECD 401 (EU B.1) | |
| sodium polyacrylate | | No data available | | | |

Acute dermal toxicity

| Ingredient(s) | Endpoint | Value (mg/kg) | Species | Method | Exposure time (h) |
|--|----------|----------------------|---------|-------------------|----------------------|
| sodium hydroxide | LD 50 | 1350 | Rabbit | Method not given | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | LD 50 | > 2000 | Rat | OECD 402 (EU B.3) | |
| sodium polyacrylate | | No data available | | | |

Acute inhalative toxicity

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|--|----------|----------------------|---------|------------------|----------------------|
| sodium hydroxide | | No data available | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | LC 50 | > 5 | Rat | Method not given | 4 |
| sodium polyacrylate | | No data available | | | |

Irritation and corrosivity Skin irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|--|--------------|---------|-------------------|---------------|
| sodium hydroxide | Corrosive | Rabbit | Method not given | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | Not irritant | Rabbit | OECD 404 (EU B.4) | |

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| sodium polyacrylate | No data available | | |
|---------------------|-------------------|--|--|

Eye irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|--|------------------------------|---------|-------------------|---------------|
| sodium hydroxide | Corrosive | Rabbit | Method not given | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | Not corrosive or irritant | Rabbit | OECD 405 (EU B.5) | |
| sodium polyacrylate | No data available | | | |

Respiratory tract irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|--|-------------------|---------|--------|---------------|
| sodium hydroxide | No data available | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | No data available | | | |
| sodium polyacrylate | No data available | | | |

Sensitisation Sensitisation by skin contact

| Ingredient(s) | Result | Species | Method | Exposure time (h) |
|--|-------------------|------------|----------------------|-------------------|
| sodium hydroxide | Not sensitising | | Human repeated patch | |
| | | | test | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | Not sensitising | Guinea pig | OECD 406 (EU B.6) / | |
| | | | GPMT | |
| sodium polyacrylate | No data available | | | |

Sensitisation by inhalation

| Ingredient(s) | Result | Species | Method | Exposure time |
|--|-------------------|---------|--------|---------------|
| sodium hydroxide | No data available | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | No data available | | | |
| sodium polyacrylate | No data available | | | |

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

| Ingredient(s) | Result (in-vitro) | | Result (in-vivo) | Method |
|---|--|-----------------|--|---------------------------------------|
| | | (in-vitro) | | (in-vivo) |
| sodium hydroxide | No evidence for mutagenicity, negative | DNA repair test | No evidence for mutagenicity, negative | OECD 474 (EU |
| | test results | on rat | test results | B.12) OECD |
| | | hepatocytes | | 475 (EU B.11) |
| | | OECD 473 | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, | No evidence for mutagenicity, negative | OECD 471 (EU | No evidence of genotoxicity, negative | OECD 474 (EU |
| trisodium salt | test results | B.12/13) OECD | test results | B.12) |
| | | 476 (HGPRT) | | , , , , , , , , , , , , , , , , , , , |
| sodium polyacrylate | No data available | | No data available | |

Carcinogenicity

| Ingredient(s) | Effect |
|--|--|
| sodium hydroxide | No evidence for carcinogenicity, weight-of-evidence |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | No evidence for carcinogenicity, negative test results |
| sodium polyacrylate | No data available |

Toxicity for reproduction

| Ingredient(s) | Endpoint | Specific effect | Value (mg/kg bw/d) | Species | Method | Exposure time | Remarks and other effects reported |
|---|----------|------------------------|-----------------------|---------|-----------------|------------------|--|
| sodium hydroxide | | | No data available | | | | No evidence for developmental toxicity No evidence for reproductive toxicity |
| alpha-alanine, N,N-bis(carboxymethyl) -, trisodium salt | NOAEL | Developmental toxicity | ≥ 2000 | Rat | OECD 421/422 | | No evidence for reproductive toxicity |
| sodium polyacrylate | | | No data available | | | | |

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 |
|--|----------|-----------------------|---------|--------|-------------------------|---|
| sodium hydroxide | | No data available | | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | | No data available | | | | |
| sodium polyacrylate | | No data available | | | | |

Sub-chronic dermal toxicity

| Ingredient(s) | Endpoint | Value | Species | Method | | Specific effects and organs |
|--|----------|--------------|---------|--------|-------------|-----------------------------|
| | | (mg/kg bw/d) | | | time (days) | affected |
| sodium hydroxide | | No data | | | | |
| | | available | | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | | No data | | | | |
| | | available | | | | |
| sodium polyacrylate | | No data | | | | |
| | | available | | | | |

Sub-chronic inhalation toxicity

| Ingredient(s) | Endpoint | Value | Species | Method | | Specific effects and organs |
|--|----------|--------------|---------|--------|-------------|-----------------------------|
| | | (mg/kg bw/d) | | | time (days) | affected |
| sodium hydroxide | | No data | | | | |
| | | available | | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | | No data | | | | |
| | | available | | | | |
| sodium polyacrylate | | 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 |
|---|-------------------|----------|-----------------------|---------|-----------------------|------------------|---|------------------------|
| sodium hydroxide | | | No data available | | | | | |
| alpha-alanine, N,N-bis(carboxymethyl) -, trisodium salt | Oral | NOAEL | 530 | Rat | OECD 453 (EU B.33) | | | May cause liver damage |
| sodium polyacrylate | | | No data available | | | | | |

STOT-single exposure

| Ingredient(s) | Affected organ(s) |
|--|-------------------|
| sodium hydroxide | No data available |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | No data available |
| sodium polyacrylate | No data available |

STOT-repeated exposure

| Ingredient(s) | Affected organ(s) |
|--|-------------------|
| sodium hydroxide | No data available |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | No data available |
| sodium polyacrylate | No data available |

Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3. If relevant, see section 9 for dynamic viscosity and relative density of the product.

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

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|--|----------|----------------------|----------------------|-------------------|----------------------|
| sodium hydroxide | LC 50 | 35 | Various species | Method not given | 96 |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | LC 50 | > 200 | Brachydanio rerio | OECD 203 (EU C.1) | 96 |
| sodium polyacrylate | | No data available | | | |

| Aquatic short-term toxicity - crustacea | | | | | |
|---|----------|-------|---------|--------|----------|
| Ingredient(s) | Endpoint | Value | Species | Method | Exposure |

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| | | (mg/l) | | | time (h) |
|--|-------|-----------|--------------|-------------------|----------|
| sodium hydroxide | EC 50 | 40.4 | Ceriodaphnia | Method not given | 48 |
| | | | sp. | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | EC 50 | > 200 | Daphnia | OECD 202 (EU C.2) | 48 |
| | | | magna Straus | | |
| sodium polyacrylate | | No data | | | |
| | | available | | | |

| Ac | uatic | short-term | toxicity | - algae | |
|----|-------|------------|----------|---------|--|
|----|-------|------------|----------|---------|--|

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|--|----------|----------------------|--|-------------------|----------------------|
| sodium hydroxide | EC 50 | 22 | Photobacteriu m phosphoreum | Method not given | 0.25 |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | EC 50 | > 200 | Pseudokirchner iella subcapitata | OECD 201 (EU C.3) | 72 |
| sodium polyacrylate | | No data available | | | |

Aquatic short-term toxicity - marine species

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (days) |
|--|----------|-----------------|---------|--------|-------------------------|
| sodium hydroxide | | No data | | | |
| | | available | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | | No data | | | |
| | | available | | | |
| sodium polyacrylate | | No data | | | |
| | | available | | | |

| Impact on sewage plants - toxicity to bacteria | | | | | |
|--|----------|----------------------|------------------|----------|------------------|
| Ingredient(s) | Endpoint | Value (mg/l) | Inoculum | Method | Exposure time |
| sodium hydroxide | | No data available | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | EC 20 | > 2000 | Activated sludge | OECD 209 | 30 minute(s) |
| sodium polyacrylate | | No data available | | | |

Aquatic long-term toxicity -

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time | Effects observed |
|--|----------|----------------------|------------------------|----------|------------------|------------------|
| sodium hydroxide | | No data available | | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | NOEC | ≥ 200 | Oncorhynchus mykiss | OECD 204 | 28 day(s) | |
| sodium polyacrylate | | No data available | | | | |

Aquatic long-term toxicity - crustacea

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time | Effects observed |
|--|----------|-----------------|---------|----------|------------------|------------------|
| sodium hydroxide | | No data | | | | |
| | | available | | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | NOEC | ≥ 200 | Daphnia | OECD 202 | 21 day(s) | |
| | | | magna | | | |
| sodium polyacrylate | | No data | | | | |
| | | available | | | | |

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 |
|------------------|----------|---------------------------------|---------|--------|-------------------------|------------------|
| sodium hydroxide | | 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 |
|--|----------|-----------------------------|----------------|----------|-------------------------|------------------|
| sodium hydroxide | | No data available | | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | LD 50 | 300 | Eisenia fetida | OECD 207 | 14 | |

Terrestrial toxicity - plants, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|--|----------|-----------------------------|--------------|----------|-------------------------|------------------|
| sodium hydroxide | | No data available | | | | |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | EC 50 | 1600 | Avena sativa | OECD 208 | 19 | |

Terrestrial toxicity - birds, if available:

| Ingredient(s) | Endpoint | Value | Species | Method | Exposure time (days) | Effects observed |
|------------------|----------|----------------------|---------|--------|-------------------------|------------------|
| sodium hydroxide | | No data available | | | | |

Terrestrial toxicity - beneficial insects, if available:

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

Terrestrial toxicity - soil bacteria, if available:

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

12.2 Persistence and degradability

Abiotic degradation Abiotic degradation - photodegradation in air, if available:

| photodogradation mail, na | valiable. | | | |
|---------------------------|----------------|------------------|-------------------------|--------|
| Ingredient(s) | Half-life time | Method | Evaluation | Remark |
| sodium hydroxide | 13 second(s) | Method not given | Rapidly photodegradable | |

Abiotic degradation - hydrolysis, if available:

| Ingredient(s) | Half-life time in fresh water | Method | Evaluation | Remark |
|------------------|----------------------------------|--------|------------|--------|
| sodium hydroxide | No data available | | | |

Abiotic degradation - other processes, if available:

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

Biodegradation Ready biodegradability - aerobic conditions

| Ingredient(s) | Inoculum | Analytical method | DT 50 | Method | Evaluation |
|--|----------|----------------------|---------------------------|-----------|--------------------------------------|
| sodium hydroxide | | | | | Not applicable (inorganic substance) |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | | Oxygen depletion | 80 - 90 % in 28 day(s) | OECD 301F | Readily biodegradable |
| sodium polyacrylate | | | | | Not readily biodegradable. |

Ready biodegradability - anaerobic and marine conditions, if available:

| Ingredient(s) | Medium & Type | Analytical method | DT 50 | Method | Evaluation | |
|------------------|---------------|----------------------|-------|--------|-------------------|---|
| sodium hydroxide | | | | | No data available | Í |

| Degradation in relevant environmental compartments, if | available: | | | | |
|--|---------------|------------|-------|--------|-------------------|
| Ingredient(s) | Medium & Type | Analytical | DT 50 | Method | Evaluation |
| | | method | | | |
| sodium hydroxide | | | | | No data available |

12.3 Bioaccumulative potential Partition coefficient n-octanol/water (log Kow) Ingredient(s) Value Method Remark Evaluation No data available Not relevant, does not sodium hydroxide bioaccumulate alpha-alanine, N,N-bis(carboxymethyl)-No bioaccumulation expected -4.0 Method not given trisodium salt No data available sodium polyacrylate

Bioconcentration factor (BCF)

| Ingredient(s) | Value | Species | Method | Evaluation | Remark |
|---|-------------------|---------|--------|------------|--------|
| sodium hydroxide | No data available | | | | |
| alpha-alanine, N,N-bis(carboxymethyl) -, trisodium salt | No data available | | | | |
| sodium polyacrylate | No data available | | | | |

12.4 Mobility in soil

| Ingredient(s) | Adsorption coefficient Log Koc | Desorption coefficient Log Koc(des) | Method | Soil/sediment type | Evaluation |
|--|--------------------------------------|---|--------|-----------------------|---|
| sodium hydroxide | No data available | | | | Mobile in soil |
| alpha-alanine, N,N-bis(carboxymethyl)-, trisodium salt | No data available | | | | Adsorption to solid soil phase is not expected |
| sodium polyacrylate | No data available | | | | |

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: Suitable cleaning agents:

Dispose of observing national or local regulations. Water, if necessary with cleaning agent.

SECTION 14: Transport information



| ADG, IMO/IMDG, ICAO/IATA |
|--|
| 14.1 UN number: 1824 |
| 14.2 UN proper shipping name: |
| Sodium hydroxide solution |
| 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 Transport in bulk according to Annex II of MARPOL and the IBC Code: The product is not transported in bulk tankers.

Other relevant information: Hazchem code: 2R 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

| National regulations | Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia. |
|----------------------|--|
| Poison schedule | Classified as a Schedule 6 (S6) Poison using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP). |
| Classification | Globally Harmonised System of Classification and Labelling of Chemicals (GHS) as published by Safework Australia. |
| Inventory listing(s) | 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: MS31000728 | Version: 01.1 | Revision: 2022-12-22 |
|----------------------|---------------|----------------------|
| | | |

Full text of the H phrases mentioned in section 3:

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.

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, guantity 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:

- DNEL Derived No Effect Limit
- AUH Non GHS hazard statement
- PNEC Predicted No Effect Concentration
- ATE Acute Toxicity Estimate
 LC50 Lethal Concentration, 50% / Median Lethal Concentration
 LD50 Lethal Dose, 50% / Median Lethal dose
- · STOT-RE Specific target organ toxicity (repeated exposure)
- STOT-SE Specific target organ toxicity (single exposure)
- EC No. European Community Number

End of Safety Data Sheet