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

1.1. Product identifier

Product form: Mixture
Trade name: Cage-Klenz 250 - Acid-Based Cage Wash Detergent
Product code: 1K25

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

1.2.1. Relevant identified uses

Industrial/Professional use spec: For industrial and institutional use only. Not for home use.

Use of the substance/mixture: Acid Based Cage Wash Detergent

1.2.2. Uses advised against

No additional information available.

1.3. Details of the supplier of the safety data sheet

Manufacturer:
STERIS Corporation
P. O. Box 147, St. Louis, MO 63166, US
Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)
US Emergency Telephone No.1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)

Supplier:
Allied Scientific Products
102 Bakehouse Rd.
Kensington Vic. 3031
Australia
Telephone: 1300 244724

Level 4
17 Albert St.
Auckland CBD 1010
New Zealand
Tel: 0508 338 423, Fax: 649 9913 2009

1.4. Emergency telephone number

Emergency number: +44 (0) 1895 622 639
1-703-741-5970 (CHEMTREC International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to NOHSC:
Hazardous Substance. Dangerous Goods.

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

- Metals Corr, Cat 1: H290
- Skin Corr, Cat 2: H315
- Eye Irrit, Cat 2: H319

Full text of H-phrases: see Section 16.

Adverse physicochemical, human health and environmental effects
No additional information available.

2.2. Label elements

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

Hazard pictograms (CLP):

- GHS05
- GHS07

Signal word (CLP): Warning

Hazard statements (CLP):
- H290 - May be corrosive to metals.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
Cage-Klenz 250 Acid-Based Cage Wash Detergent

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Precautionary statements (CLP): P234 – Keep only in original container.
P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection, protective clothing, protective gloves.
P302+P352 – IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 – IF ON SKIN:
Wash with plenty of soap and water.
P337+P313 - If skin irritation persists: Get medical advice/attention.
P362 – Take off contaminated clothing and wash before use.

2.3. Other hazards

No additional information available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid</td>
<td>(CAS No) 77-92-9 (EC no) 201-069-1 (REACH No) 01-2119457026-42-0067</td>
<td>10 - 30</td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td>Other Non-Hazardous Ingredients</td>
<td>NA</td>
<td>Up to 100</td>
<td>NA</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Get medical attention.
First-aid measures after skin contact: Immediately flush skin with plenty of water for at least 15 minutes. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact: In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical advice.
First-aid measures after ingestion: If victim completely conscious/alert. Rinse mouth. Do NOT induce vomiting. Get medical advice/attention. Give water or milk if the person is fully conscious.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation: In fine dispersion/spraying/misting: Inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Symptoms/injuries after skin contact: Frequent or prolonged contact with skin may cause dermal irritation.
Symptoms/injuries after eye contact: Causes serious eye irritation.

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

No additional information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture


5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire.
Protective equipment for firefighters: Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Do not breathe fumes, vapors. Avoid contact with skin, eyes and clothes. If spilled, may cause the floor to be slippery.

6.1.1. For non-emergency personnel

Protective equipment: Use personal protective equipment as required. For further information refer to Section 8: "Exposure controls/personal protection".
Emergency procedures: Stop leak if safe to do so. Evacuate unnecessary personnel.
6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Comply with applicable local, national and international regulation. Spills may be picked up with a mop and followed by a water rinse. Residue may be washed down with water. Small spills may be flushed to a sanitary sewer with copious amounts of water, if in accordance with local, state or national legislation.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Product for industrial use only. Read label before use. Keep containers closed. Avoid all eye and skin contact and do not breathe vapour and mist. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene measures: Take care for general good hygiene and housekeeping. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Provide adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

Storage conditions: Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.


7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available.

8.2. Exposure controls

Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use ventilation to keep exposure to airborne contaminants below the exposure limits.

Personal protective equipment: Avoid all unnecessary exposure. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Protective clothing. Gloves. Protective goggles.

Hand protection: Wear rubber gloves.

Eye protection: Wear chemical goggles or safety glasses.

Skin and body protection: Wear suitable protective clothing.

Respiratory protection: The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Appearance: Clear

Colour: Clear to light straw

Odour: Mild chemical odour

Odour threshold: No data available

pH: No data available

pH solution: 2.4 - 2.8 (1% solution)

Relative evaporation rate (butyl acetate=1): No data available

Melting point: No data available

Freezing point: No data available

Boiling point: No data available

Flash point: No data available
Cage-Klenz 250
Acid-Based Cage Wash Detergent
Safety Data Sheet
according to Regulation (EC) No. 453/2010

Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available
Density : 1.14 g/ml Specific Gravity
Solubility : Water: Completely soluble
Log Pow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available

9.2. Other information
No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available.

10.2. Chemical stability
Stable under normal conditions of use.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Will corrode copper, zinc, aluminum, or their alloys in high concentrations.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified.

<table>
<thead>
<tr>
<th>Cage-Klenz 250 - Acid-Based Cage Wash Detergent</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Causes skin irritation
pH: < 2.4

Serious eye damage/irritation : Causes serious eye irritation
pH: < 2.4

Respiratory or skin sensitisation : Not classified
Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met

Carcinogenicity : Not classified
Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (repeated exposure) : Not classified
Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Harmful if swallowed.
SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Cage-Klenz 250 - Acid-Based Cage Wash Detergent</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
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<table>
<thead>
<tr>
<th>Citric acid (77-92-9)</th>
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</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
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12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Cage-Klenz 250 - Acid-Based Cage Wash Detergent</th>
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</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Cage-Klenz 250 - Acid-Based Cage Wash Detergent</th>
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</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
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<tr>
<th>Citric acid (77-92-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Other adverse effects

Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Do not re-use empty containers. Small spills may be flushed to a sanitary sewer with copious amounts of water, if in accordance with local, state or national legislation. Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Ensure all national/local regulations are observed.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

<table>
<thead>
<tr>
<th>UN-No. (IATA)</th>
<th>3265</th>
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<tbody>
<tr>
<td>UN-No. (IMDG)</td>
<td>3265</td>
</tr>
<tr>
<td>UN-No. (ADN)</td>
<td>3265</td>
</tr>
</tbody>
</table>

14.2. UN proper shipping name

<table>
<thead>
<tr>
<th>Proper Shipping Name</th>
<th>CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.</th>
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<tbody>
<tr>
<td>Transport document description</td>
<td>UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CITRIC ACID Solution), 8, III</td>
</tr>
</tbody>
</table>

14.3. Transport hazard class(es)

| Class (UN) | 8 |
| Classification code (UN) | C3 |
| Class (IATA) | 8 |
| Class (IMDG) | 8 |
| Class (ADN)  | 8 |
| Hazard labels (UN) | 8 |

14.4. Packing group

| Packing group (UN) | III |

10/24/2018
14.5. Environmental hazards

Dangerous for the environment: No
Marine pollutant: No
Other information: No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

Hazard identification number (Kemler No.): 80
Classification code (UN): C3
Orange plates: 80

Special provision (ADR): 274
Transport category (ADR): 3
Tunnel restriction code: E
Limited quantities (ADR): 5L
Excepted quantities (ADR): E1
EAC code: 2X
APP code: B

14.6.2. Transport by sea

4 x 1 gal package not approved for air shipment.

14.6.3. Air transport

No additional information available.

14.6.4. Inland waterway transport

No additional information available.

14.6.5. Australia

ADG/HazChem Code: 2X
Special Provision: TP1; TP28

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: Regulatory information

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

15.1.1. Australia

AICS Listed. Classification: 6.1E (acute toxicant), 8.1A (metal corrosive), 6.3A (skin irritant), 6.4A (eye irritant)

15.1.2. EU-Regulations

No REACH Annex XVII restrictions
Contains no REACH candidate substance.

15.1.3. National regulations

No additional information available.

15.2. Chemical safety assessment

No additional information available.

SECTION 16: Other information

Revision Date: 10/24/2018

Other information: None.

Full text of H-phrases:

Eye Irrit. 2: Serious eye damage/eye irritation, Category 2
Metals Corr. 1: Corrosive to metals, Category 1
Skin Corr. 2: Skin corrosion/irritation, Category 2
H290: May be corrosive to metals
H315: Causes skin irritation
H319: Causes serious eye irritation