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

1.1. Product identifier

Product form : Mixture
Trade name : Cage-Klenz® 150 Alkaline Cage Wash Detergent
Product code : 1K15

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

Use of the substance/mixture : Alkaline Cage Wash Detergent
Use of the substance/mixture : For industrial and institutional use only. Not for home use.

1.3. Details of the supplier of the safety data sheet

STERIS Corporation
P. O. Box 147, St. Louis, MO 63166, US
Telephone Number for Information: 1-800-444-9009 (Customer Service-Scientific Products)

1.4. Emergency telephone number

Emergency number : US Emergency Telephone No.1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute Tox. 4 (Oral) : H302
Skin Corr. 1A : H314
Eye Dam. 1 : H318

2.2. Label elements

GHS-US labelling

Signal word (GHS-US) : Danger
Hazard pictograms (GHS-US) : GHS05 GHS07

Hazard statements (GHS-US)

H302 – Harmful if swallowed.
H314 – Causes severe skin burns and eye damage.
H318 – Causes serious eye damage.

Precautionary statements (GHS-US)

P260 – Do not breathe mist, spray, vapors.
P264 – Wash hands thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P280 – Wear eye protection, protective clothing, protective gloves.
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/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 CENTER/doctor.
P363 – Wash contaminated clothing before reuse.

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS-US)

No data 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>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide</td>
<td>(CAS No) 1310-58-3</td>
<td>10 - 15</td>
<td>H302 Skin Corr. 1A, H314</td>
</tr>
<tr>
<td>Sodium hypochlorite</td>
<td>(CAS No) 7681-52-9</td>
<td>1 - 5</td>
<td>Skin Corr. 1B, H314</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. Remove/Take off immediately all contaminated clothing. Obtain medical 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 medical attention immediately.

First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Give water to drink if victim completely conscious/alert.

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

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : Inhalation of mists is extremely irritating to mucous membranes and upper respiratory tract.

Symptoms/injuries after skin contact : Caustic burns/corrosion of the skin.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Although ingestion is an unlikely route of entry, ingestion will cause corrosion of the mouth and the upper gastrointestinal tract. Swelling of the tissues in the throat and mouth may result in extreme difficulty in swallowing. Significant swelling may restrict air passages. In all cases of ingestion, the risk of aspiration into the lungs exists. Entry into the lungs can cause permanent damage to the lungs resulting in pulmonary edema. This condition may lead to death.

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

No additional information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media


5.2. Special hazards arising from the substance or mixture

No additional information available.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protective equipment for firefighters : Use self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

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. Use personal protective equipment as required. Stop leak if safe to do so.

6.1.1. For non-emergency personnel

Protective equipment: Wear suitable protective clothing. 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.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Ensure all national/local regulations are observed. Neutralize spill carefully with any weak acid and flush remainder with plenty of water. Consult hazardous waste contractor for disposal of large amounts. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect in closed containers for disposal. Store away from other materials. Wash contaminated areas with large quantities of water to a sanitary sewer, 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. Avoid contact with skin, eyes and clothing. Avoid breathing mist or vapor. Provide good ventilation in process area to prevent formation of vapor. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene measures: Wash hands thoroughly after handling. Take care for general good hygiene and housekeeping. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

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

Storage conditions: Keep only in the original container in a cool, well ventilated place. Keep out of reach of children. Keep away from incompatible materials. Keep container closed when not in use.

Incompatible materials: Acids, soft metals, oxidizers, organic halogen compounds. Contact with some metals such as magnesium, aluminum, zinc (galvanized), tin, chromium, brass and bronze may generate hydrogen. Reacts violently with acids liberating irritating gas. May evolve flammable hydrogen gas on contact with soft metals.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Potassium hydroxide (1310-58-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH ACGIH Ceiling (mg/m³)</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Cage-Klenz® 150
Alkaline Cage Wash Detergent
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Personal protective equipment: Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Protective clothing. Gloves. Protective goggles. For certain operations, additional Personal Protection Equipment (PPE) may be required.

Hand protection: Wear rubber gloves.
Eye protection: Wear chemical goggles or face shield.
Skin and body protection: Wear suitable protective clothing. Rubber apron, boots.
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.
Other information: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Color</td>
<td>Light yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Chlorine odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>pH solution</td>
<td>11.8 - 12.2 (1% solution)</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 1.16 g/ml Specific Gravity</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: Completely soluble</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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**

Keep away from incompatible materials. Heat. Direct sunlight.

10.5. **Incompatible materials**


10.6. **Hazardous decomposition products**

CO₂, HCl, Cl₂, HOCl, hydrogen gas. Fumes.

**SECTION 11: Toxicological information**

11.1. **Information on toxicological effects**

- **Acute toxicity**
  - Corrosive to mouth, throat, and stomach.

<table>
<thead>
<tr>
<th>Compound</th>
<th>LD₅₀ oral rat</th>
<th>ATE CLP (oral)</th>
<th>LD₅₀ dermal rabbit</th>
<th>ATE CLP (oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide (1310-58-3)</td>
<td>214 mg/kg</td>
<td>500.000 mg/kg bodyweight</td>
<td>&gt; 10000 mg/kg</td>
<td>8200.000 mg/kg bodyweight</td>
</tr>
<tr>
<td>Sodium hypochlorite (7681-52-9)</td>
<td>8200 mg/kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium silicate (1312-76-1)</td>
<td>1300 mg/kg</td>
<td>1300.000 mg/kg bodyweight</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Skin corrosion/irritation**
  - Causes severe skin burns
  - pH: ca. 12

- **Serious eye damage/irritation**
  - Causes serious eye damage
  - pH: ca. 12

- **Respiratory or skin sensitisation**
  - Not classified

- **Germ cell mutagenicity**
  - Not classified

- **Carcinogenicity**
  - Not classified

- **Reproductive toxicity**
  - Not classified

- **Specific target organ toxicity (single exposure)**
  - Not classified

- **Specific target organ toxicity (repeated exposure)**
  - Not classified

- **Aspiration hazard**
  - Not classified

- **Potential adverse human health effects and symptoms**
  - Harmful if swallowed.

**SECTION 12: Ecological information**

12.1. **Toxicity**

- **Ecology - water**
  - Very toxic to aquatic life.

<table>
<thead>
<tr>
<th>Cage-Klenz® 150 Alkaline Cage Wash Detergent</th>
<th>LC₅₀ fishes 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt; 750 mg/l</td>
</tr>
</tbody>
</table>

Fish - Pimephales promelas (10% Solution)
Cage-Klenz® 150
Alkaline Cage Wash Detergent
Safety Data Sheet
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

<table>
<thead>
<tr>
<th>Sodium hypochlorite (7681-52-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>LC50 fish 2</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Cage-Klenz® 150 Alkaline Cage Wash Detergent

Persistence and degradability
The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.3. Bioaccumulative potential

Cage-Klenz® 150 Alkaline Cage Wash Detergent

Bioaccumulative potential
Not established.

Potassium hydroxide (1310-58-3)
Log Pow 0.65

Potassium silicate (1312-76-1)
BCF fish 1 (no bioaccumulation expected)

12.4. Mobility in soil
No additional information available.

12.5. Other adverse effects
Other information: 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 contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads.) High concentration in receiving water will injure aquatic life by pH effect. Do not re-use empty containers.

Additional information: Never return unused material to original container. Empty containers should be thoroughly rinsed with large quantities of clean water. Dispose of empty containers and wastes safely. Containers may be send for reconditioning, recycling. Dispose in a safe manner in accordance with local/national regulations. Small spills may be flushed to a sanitary sewer with copious amounts of water, if in accordance with local, state or national legislation.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description: UN3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium Hydroxide and Sodium Hypochlorite Solution) 8, III

UN-No.(DOT) 3266
DOT NA no. UN3266
DOT Proper Shipping Name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Department of Transportation (DOT) Hazard Classes 8 - Class 8 - Corrosive material 49 CFR 173.136
Hazard labels (DOT) 8 - Corrosive

Packing group (DOT) III - Minor Danger
**Cage-Klenz® 150**  
Alkaline Cage Wash Detergent  
Safety Data Sheet  
according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

### Additional information

**Special transport precautions**  
N OT approved for air shipment.

**ADR**  
No additional information available.

**Transport by sea**  
No additional information available.

**Air transport**  
NOT approved for air shipment.

### SECTION 15: Regulatory information

**15.1. US Federal regulations**

**Potassium hydroxide (1310-58-3)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory  
RQ (Reportable quantity, Section 304 of EPA's List of Lists) : 1000 lb

**Sodium hypochlorite (7681-52-9)**  
Listed on the United States TSCA (Toxic Substances Control Act) inventory

**15.2. US State regulations**  
No additional information available.

### SECTION 16: Other information

**Other information** : None.

**Full text of H-phrases:**

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation, Category 1A</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
</tbody>
</table>

**NFPA health hazard** : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

**NFPA fire hazard** : 1 - Must be preheated before ignition can occur.

**NFPA reactivity** : 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

**SDS US**  
The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed.