



STERIS

Cage-Klenz[®] 180

Alkaline Cage Wash Detergent

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 04/06/2015

Version: 1.0

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

1.1. Product identifier

Product form : Mixture
 Trade name : Cage-Klenz[®] 180 - Alkaline Cage Wash Detergent
 Product code : 1K18

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

Industrial/Professional use spec : For hospital and professional use only. Not for home use.
 Use of the substance/mixture : Alkaline Cage Wash Detergent

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

Skin Corr. 1A H314
 Eye Dam. 1 H318

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger
 Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 Precautionary statements (GHS-US) : P260 - Do not breathe mist, spray, vapours
 P264 - Wash hands thoroughly after handling
 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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position 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 or doctor/physician
 P363 - Wash contaminated clothing before reuse

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS-US)

No data available.

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

Full text of H-phrases: see section 16.

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Potassium hydroxide	(CAS No) 1310-58-3	1 - 5	Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314
Potassium silicate	(CAS No) 1312-76-1	1 - 5	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318
Sodium borate	(CAS No) 12179-04-3	1 - 5	H333
1-Hydroxyethane-1, 1-diphosphonic	(CAS No) 2809-21-4	1 - 5	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318

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 exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove patient to fresh air and keep at rest in a position comfortable for breathing. Immediately get medical attention. If not breathing, give artificial respiration. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Immediately call a POISON CENTER or doctor/physician.
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. In all cases of doubt, or when symptoms persist, seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Give water or milk to drink if victim completely conscious/alert. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries after skin contact	: Causes severe skin burns.
Symptoms/injuries after eye contact	: Direct contact may cause severe irritation, pain and burns, possibly severe, and permanent damage including blindness. Causes serious eye damage.
Symptoms/injuries after ingestion	: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
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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. Use water spray or fog for cooling exposed containers.
Protective equipment for firefighters	: Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus.
Other information	: May react with soft metals to evolve flammable hydrogen gas.

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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.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing. Wear protective gloves and eye/face protection. Boots.
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.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Neutralise spill carefully with any weak acid and flush remainder with plenty of water. Collect spillage. 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. Local authorities should be advised if significant spillages cannot be contained.

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 : Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not breathe gas, fumes, vapour or spray. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Never return unused material to original container.
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 prior to re-use.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations. A washing facility/water for eye and skin cleaning purposes should be present. Provide adequate ventilation.
Storage conditions : Keep only in the original container in a cool, well ventilated place. 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.
Storage area : Store in dry, cool, well-ventilated area.
Special rules on packaging : Correctly labelled.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium hydroxide (1310-58-3)

USA ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³
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Sodium borate (12179-04-3)

USA ACGIH	ACGIH (mg/m ³)	1 mg/m ³
USA OSHA	OSHA PEL (mg/m ³)	10 mg/m ³

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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. Local exhaust ventilation is recommended to maintain vapor level below the threshold limit value (TLV). Ensure adequate ventilation.
- 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 : Chemical splash goggles or face shield.
- Skin and body protection : Wear suitable protective clothing. Rubber apron and rubber boots.
- Environmental exposure controls : Avoid discharge to the environment.
- 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

- Physical state : Liquid
- Appearance : Clear
- Color : Clear to light straw
- odor : Slight odor
- Odor threshold : No data available
- pH : 11.8 – 13.0 (concentrate)
- pH solution : Approximately 10.3 - 11.6 (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
- 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 : ca. 1.11 g/ml Specific Gravity
- Solubility : Water: completely soluble
- Log Pow : No data available
- Log Kow : 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.

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10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

No additional information available.

10.5. 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.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Fume.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Causes severe skin burns and eye damage.

Potassium hydroxide (1310-58-3)	
LD50 oral rat	214 mg/kg
ATE (oral)	500.000 mg/kg bodyweight

Potassium silicate (1312-76-1)	
LD50 oral rat	1300 mg/kg
ATE (oral)	1300.000 mg/kg bodyweight

Sodium borate (12179-04-3)	
LD50 oral rat	3200 - 3400 mg/kg
LD50 dermal rabbit	2000 mg/kg

1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)	
LD50 oral rat	2400 mg/kg
LD50 dermal rabbit	> 7940 mg/kg
ATE (oral)	500.000 mg/kg bodyweight

Skin corrosion/irritation	: Causes severe skin burns pH: 11.8 - 13 (concentrate)
Serious eye damage/irritation	: Causes serious eye damage pH: 11.8 - 13 (concentrate)
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

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SECTION 12: Ecological information

12.1. Toxicity

Potassium silicate (1312-76-1)	
LC50 fishes 1	301 - 478 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)
EC50 Daphnia 1	216 mg/l (Exposure time: 96 h - Species: Daphnia magna)
LC50 fish 2	3185 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static])
Sodium borate (12179-04-3)	
LC50 fishes 1	40 mg/B/l (Exposure time: 96 h - Species: Onchorhynchus kisutch [static])
LC50 Daphnia 1	133 mg/B/l (Exposure time: 48 h - Species: Daphnids)
LC50 fish 2	150.0 mg/B/l (Exposure time: 24 d - Species: S. gairdneri [static])
LC50 fish 3	178 mg/B/l (Exposure time: 3 d - Species: Carassius auratus [static])
1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)	
LC50 fishes 1	868 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	527 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	360 mg/l (Exposure time: 96 h - Species: Onchorhynchus mykiss [static])
NOEC (acute)	1000 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])

12.2. Persistence and degradability

No additional information available.

12.3. Bioaccumulative potential

Cage-Klenz® 180 - 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)
Sodium borate (12179-04-3)	
	Care should be taken to minimize the amount of boron released to the environment. Sodium borate is naturally occurring and is commonly found in the environment. Sodium borate decomposes in the environment to natural Borate.
1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)	
BCF fish 1	< 50
Log Pow	3.49

12.4. Mobility in soil

No additional information available.

Sodium borate (12179-04-3)	
	Product is soluble in water and is leachable through normal soil.

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. Empty containers should be rinsed and discarded in a waste container or offered for recycling if possible. Small spills may be flushed to a sanitary sewer with copious amounts of water, if in accordance with local, state or national legislation. Do not re-use empty containers.
Additional information	: Dispose of empty containers and wastes safely. Hazardous waste (corrosive) based on pH.
Ecology - waste materials	: Avoid release to the environment.

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SECTION 14: Transport information

In accordance with DOT.

Additional information

Other information : No supplementary information available.

ADR

: Non-hazardous.

Transport by sea

IMDG Class : Non-hazardous.

Air transport

ICAO/IATA Class : Non-hazardous.

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

Sodium borate (12179-04-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Potassium silicate (1312-76-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US California State regulations

Not applicable.

SECTION 16: Other information

Revision Date : 04/06/2015

Other information : 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 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.

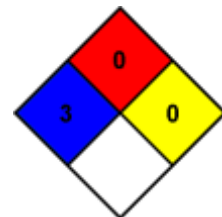
Full text of H-phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H290	May be corrosive to metals
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H333	May be harmful if swallowed

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

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US (GHS HazCom 2012)

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