



**STERIS**

**CIP 100™**

**Alkaline Process and Research Cleaner**

**Safety Data Sheet**

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

Date of issue: 09/25/2018

Version: 1.0

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

**1.1. Product identifier**

Product form : Mixture  
Trade name : CIP 100™ - Alkaline Process and Research Cleaner  
Product code : 1D10

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

Use of the substance/mixture : Alkaline Process and Research Cleaner

**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. 1B H314  
Eye Dam. 1 H318

**2.2. Label elements**

**GHS-US labelling**

Hazard pictograms (GHS-US) :



GHS05

GHS07

Signal word (GHS-US) :

Danger

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 protective gloves/protective clothing and eye/face protection  
P301+P312 - If swallowed, call a doctor if you feel unwell  
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 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  
P330 - IF SWALLOWED If swallowed, rinse mouth  
P363 - Wash contaminated clothing before reuse  
P405 - Store locked up  
P501 - Dispose of contents/container to comply with local regulations for container disposal.

**2.3. Other hazards**

No additional information available.

**SECTION 3: Composition/information on ingredients**

**3.1. Substance**

Not applicable.

Full text of H-phrases: See Section 16.

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#### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Potassium hydroxide	(CAS No) 1310-58-3 (REACH no) 01-2119487136-33-0057	10 - 30	Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314
Tetrasodium EDTA	(CAS No) 64-02-8 (REACH no) 01-2119486762-27-0018	1 - 5	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 you feel unwell, seek medical advice (show the label where possible).
- 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.
- 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.
- 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.
- First-aid measures after ingestion : Rinse mouth. Give water 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 : Causes severe skin burns and eye damage.
- Symptoms/injuries after skin contact : Severe skin irritant. Effects of skin contact may include: Irritation and burn feeling.
- Symptoms/injuries after eye contact : Causes serious eye damage. Direct contact may cause severe irritation, pain and burns, possibly severe, and permanent damage including blindness.
- 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.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 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 : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus.
- Other information : Do not mix with: Chlorinated products as this could liberate toxic corrosive chlorine gas.

## SECTION 6: Accidental release measures

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

- General measures : Do not breathe fumes, vapors. Stop leak if safe to do so. 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 : 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. Neutralize spill carefully with any weak acid and flush remainder with plenty of water. Collect spillage. Store away from other materials. Local authorities should be advised if significant spillages cannot be contained.

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#### 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. Provide good ventilation in process area to prevent formation of vapor. Keep container tightly closed to avoid moisture absorption and contamination. Do not breathe gas, fumes, vapor 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. Separate working clothes from town clothes. Launder separately.

#### 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. Oxidizing agents. Organic compounds. Halogenated compounds. Chromium. Magnesium. Zinc. On contact with ordinary metals (steel, galvanized, aluminium) corrosion may occur and generate highly flammable hydrogen gas.
- Heat and ignition sources : Store away from excessive heat. Remove all sources of ignition.
- 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 <sup>3</sup> )	2 mg/m <sup>3</sup>
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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 protective gloves, rubber or plastic gloves.
- Eye protection : Wear chemical goggles or face shield.
- Skin and body protection : Wear suitable protective clothing. Rubber apron, boots.
- Respiratory protection : Work in well-ventilated zones or use proper respiratory protection. Wear appropriate mask.
- 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 pale straw
- Odor : Slight chemical odor
- Odor threshold : No data available

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pH	: > 13 (concentrate)
pH solution	: 12.3 – 12.8 (1% solution)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: >206°F (96.7°C)
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: ca. 1.27 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.

#### 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

Incompatible materials. Keep away from heat. Direct sunlight.

#### 10.5. Incompatible materials

On contact with ordinary metals (steel, galvanized, aluminium) corrosion may occur and generate highly flammable hydrogen gas. Acids. Oxidizing agent. Organic materials. Halogenated compounds. Magnesium. Zinc. Chromium.

#### 10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

CIP 100™ - Alkaline Process and Research Cleaner	
LD50 oral rat	860 mg/kg
Tetrasodium EDTA (64-02-8)	
ATE (oral)	500,000 mg/kg bodyweight
Potassium hydroxide (1310-58-3)	
LD50 oral rat	214 mg/kg
ATE (oral)	500,000 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns  
pH: > 13 (concentrate)

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Serious eye damage/irritation	: Causes severe eye damage pH: > 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.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### CIP 100™ - Alkaline Process and Research Cleaner

LC50 fishes 1	> 750 mg/l ( 10% Solution )
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#### Tetrasodium EDTA (64-02-8)

LC50 fishes 1	41 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [Static])
EC50 Daphnia 1	610 mg/l (Exposure time: 24 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	1.01 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)
LC50 fish 2	59.8 mg/l (Exposure time: 96 h - Species: Pimephales promelas [Static])

#### Potassium hydroxide (1310-58-3)

LC50 fishes 1	80 mg/l (Exposure time: 96 h - Species: Gambusia affinis [Static])
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### 12.2. Persistence and degradability

#### CIP 100™ - Alkaline Process and Research Cleaner

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.
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### 12.3. Bioaccumulative potential

#### CIP 100™ - Alkaline Process and Research Cleaner

Bioaccumulative potential	Not established.
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#### Potassium hydroxide (1310-58-3)

Log Pow	0.65
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### 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.
Additional information	: Dispose of empty containers and wastes safely. Hazardous waste (corrosive) based on pH.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT

### 14.1. UN number

UN-No.(DOT)	: 1814
DOT NA no.	: UN1814

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#### 14.2. UN proper shipping name

DOT Proper Shipping Name : Potassium Hydroxide, Solution  
Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136  
Hazard labels (DOT) : 8 - Corrosive substances



Packing group (DOT) : II - Medium Danger

#### 14.3. Additional information

Other information : No supplementary information available.  
Special transport precautions : 4 x 1 gal package not approved for air shipment. Road/Rail: ADR/RID Class: UN1814, Potassium Hydroxide Solution, 8, 42(b) ADR

#### Overland transport

Packing group (ADR) : II  
Class (ADR) : 8 - Corrosive substances  
Hazard identification number (Kemler No.) : 80  
Classification code (ADR) : C5  
Danger labels (ADR) : 8 - Corrosive substances



Orange plates : 

Tunnel restriction code : E  
Excepted quantities (ADR) : E2

#### Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.  
DOT Vessel Stowage Other : 52 - Stow "separated from" acids

#### Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 30 L

## SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Tetrasodium EDTA (64-02-8)

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

##### Potassium hydroxide (1310-58-3)

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

#### 15.2. International regulations

Not applicable

#### 15.3. US State regulations

Not applicable

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#### SECTION 16: Other information

Revision Date : 09/25/2018

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
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

NFPA health hazard

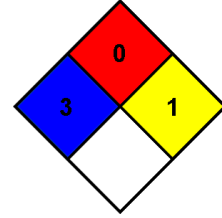
: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given

NFPA fire hazard

: 0 - Materials that will not burn

NFPA reactivity

: 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 (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*