# 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

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

### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name</td>
<td>CIP 100™ - Alkaline Process and Research Cleaner</td>
</tr>
<tr>
<td>Product code</td>
<td>1D10</td>
</tr>
</tbody>
</table>

### 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)

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## 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)

- 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 - IF SWALLOWED: Rinse with water for several minutes. If on skin, remove contaminated clothing and wash skin with water and soap.

### 2.3. Other hazards

No additional information available.

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## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable.

Full text of H-phrases: See Section 16.
SECTION 3: Personal precautions, protective equipment and emergency procedures

3.1. General precautionary statements

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 (REACH no) 01-2119487136-33-0057</td>
<td>10 - 30</td>
<td>Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314</td>
</tr>
<tr>
<td>Tetrasodium EDTA</td>
<td>(CAS No) 64-02-8 (REACH no) 01-2119486762-27-0018</td>
<td>1 - 5</td>
<td>Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

<table>
<thead>
<tr>
<th>First-aid measures general</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-aid measures after inhalation</td>
<td>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.</td>
</tr>
<tr>
<td>First-aid measures after skin contact</td>
<td>Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention.</td>
</tr>
<tr>
<td>First-aid measures after eye contact</td>
<td>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.</td>
</tr>
<tr>
<td>First-aid measures after ingestion</td>
<td>Rinse mouth. Give water to drink if victim completely conscious/alert. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.</td>
</tr>
</tbody>
</table>

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


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

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.
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.


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

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

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
CIP 100™
Alkaline Process and Research Cleaner
Safety Data Sheet
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>&gt; 13 (concentrate)</td>
</tr>
<tr>
<td>pH solution</td>
<td>12.3 – 12.8 (1% solution)</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=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>&gt;206°F (96.7°C)</td>
</tr>
<tr>
<td>Self 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>No data available</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. 1.27 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>Oxidising 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 polymerisation does not occur.

10.4. Conditions to avoid
Incompatible materials. Keep away from heat. Direct sunlight.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Harmful if swallowed.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Route of exposure</th>
<th>LD50 or ATE (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIP 100™ - Alkaline Process and Research Cleaner</td>
<td>Oral rat</td>
<td>860</td>
</tr>
<tr>
<td>Tetrasodium EDTA (64-02-8)</td>
<td>Oral</td>
<td>500,000</td>
</tr>
<tr>
<td>Potassium hydroxide (1310-58-3)</td>
<td>Oral rat</td>
<td>214</td>
</tr>
<tr>
<td></td>
<td>ATE (oral)</td>
<td>500,000</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Causes severe skin burns
pH: > 13 (concentrate)
SECTION 12: Ecological information

12.1. Toxicity

CIP 100™ - Alkaline Process and Research Cleaner

<table>
<thead>
<tr>
<th>LC50 fishes 1</th>
<th>&gt; 750 mg/l (10% Solution)</th>
</tr>
</thead>
</table>

Tetrasodium EDTA (64-02-8)

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

Potassium hydroxide (1310-58-3)

| LC50 fishes 1 | 80 mg/l (Exposure time: 96 h - Species: Gambusia affinis [Static]) |

12.2. Persistence and degradability

CIP 100™ - Alkaline Process and Research Cleaner

Persistence and degradability: The surfactant(s) contained in this preparation 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

CIP 100™ - Alkaline Process and Research Cleaner

Bioaccumulative potential: Not established.

Potassium hydroxide (1310-58-3)

Log Pow: 0.65

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
### 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**: 80 1814

**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
### SECTION 1: Identification

**Product Name:** CIP 100™

**Description:** Alkaline Process and Research Cleaner

**Safety Data Sheet:** According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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### SECTION 16: Other information

**Revision Date:** 09/25/2018

**Full text of H-phrases:**

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 3 (Oral)</td>
<td>Acute toxicity (oral), Category 3</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral), Category 4</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation Category 1B</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed</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:** 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

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**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.*