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

1.1. Product identifier
Product form: Mixture
Trade name: CIP 150® - Alkaline Process & Research Cleaner
Product code: 1D15

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 hospital use.
Use of the substance/mixture: Alkaline Process & Research Cleaner

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:
STERIS Ireland Limited
IDA Business and Technology Park
Tullamore
County Offaly
R35 X865
Ireland
Product/Technical Information Phone No: +44 (0) 116 276 8636
Email: asksteris_msdss@steris.com

1.4. Emergency telephone number
Emergency number: +44 (0) 1895 622 639

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acute Tox. 4 (Oral) H302
Skin Corr. 1A H314
Eye Dam. 1 H318
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):

Signal word (CLP): Danger
Hazard statements (CLP):
- H302 – Harmful if swallowed.
- H314 – Causes severe skin burns and eye damage.
- H318 – Causes serious eye damage.

Precautionary statements (CLP):
- P260 – Do not breathe mist, spray, vapours.
- P264 – Wash hands thoroughly after handling.
- P270 – Do not eat, drink or smoke when using this product.
- 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...
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Alkaline Process & Research Cleaner
Safety Data Sheet
according to Regulation (EC) No. 453/2010


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></td>
<td>(EC index no) 019-002-00-8 (REACH No) 01-2119487136-33-0057</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium hypochlorite</td>
<td>(CAS No) 7681-52-9 (EC no) 231-668-3</td>
<td>1 - 5</td>
<td>Skin Corr. 1B, H314</td>
</tr>
<tr>
<td></td>
<td>(EC index no) 017-011-00-1</td>
<td></td>
<td></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 : If not breathing, give artificial respiration. Remove to fresh air and keep at rest in a position comfortable for breathing. 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 mist 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

5.3. Advice for firefighters
Firefighting instructions : Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
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. Neutralise 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 vapour. 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></th>
<th>United Kingdom</th>
<th>USA - ACGIH</th>
<th>USA - NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide (1310-58-3)</td>
<td>WEL STEL (mg/m³)</td>
<td>ACGIH Ceiling (mg/m³)</td>
<td>NIOSH REL (ceiling) (mg/m³)</td>
</tr>
<tr>
<td></td>
<td>2 mg/m³</td>
<td>2 mg/m³</td>
<td>2 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.
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Alkaline Process & Research Cleaner
Safety Data Sheet
according to Regulation (EC) No. 453/2010

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Colour</td>
<td>Light yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>Chlorine odour</td>
</tr>
<tr>
<td>Odour 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>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour 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>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>
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</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

Thermal decomposition generates: Corrosive vapours.

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.

Potassium hydroxide (1310-58-3)
- LD50 oral rat: 214 mg/kg
- ATE (oral): 500,000 mg/kg bodyweight

Sodium hypochlorite (7681-52-9)
- LD50 oral rat: 8200 mg/kg
- LD50 dermal rabbit: > 10000 mg/kg
- ATE (oral): 8200,000 mg/kg bodyweight

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
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

CIP 150® - Alkaline Process & Research Cleaner
- LC50 fishes 1: > 750 mg/l (Fish (Pimephales promelas) (10% Solution))

Sodium hypochlorite (7681-52-9)
- LC50 fishes 1: 0.06 - 0.11 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
- EC50 Daphnia 1: 0.033 - 0.044 mg/l (Exposure time: 48 h - Species: Daphnia magna [static])
- LC50 fish 2: 4.5 - 7.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

12.2. Persistence and degradability

CIP 150® - Alkaline Process & 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.

12.3. Bioaccumulative potential

CIP 150® - Alkaline Process & 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. 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 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 ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. : 3266
UN-No.(IATA) : 3266
UN-No. (IMDG) : 3266
UN-No.(ADN) : 3266

14.2. UN proper shipping name

Proper Shipping Name : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Transport document description : UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Potassium Hydroxide and Sodium Hypochlorite Solution), 8, III

14.3. Transport hazard class(es)

Class (UN) : 8
Classification code (UN) : C5
Class (IATA) : 8
Class (IMDG) : 8
Class (ADN) : 8
Hazard labels (UN) : 8

14.4. Packing group

Packing group (UN) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : NOT approved for air shipment.

14.6.1. Overland transport

Hazard identification number (Kemler No.) : 80
Classification code (UN) : C5
Orange plates : 

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

14.6.2. Transport by sea
No additional information available.

14.6.3. Air transport
NOT approved for air shipment.

14.6.4. Inland waterway transport
No additional information available.

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. EU-Regulations
No REACH Annex XVII restrictions
Contains no REACH candidate substance.

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision date : 10/29/2018

Other information : None.

Full text of H- and EUH-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>

SDS EU (REACH Annex II)
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.