SECTION 1: Identification

1.1. Product Identifier
Product Form: Mixture
Product Name: Kart-Klenz III Concentrated Liquid Detergent
Product Code: 1139

1.2. Intended Use of the Product
Use of the substance/mixture: Highly concentrated liquid detergent. For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party
Company
STERIS Corporation
Official Mailing Address:
P.O. Box 147
St. Louis, MO 63166 USA

Street Address:
7501 Page Avenue
St. Louis, MO 63133 USA

Telephone Number for Information: 1-800-548-4873 (Customer Service-Healthcare Products)
web: www.steris.com
email: asksteris_mds@steris.com

1.4. Emergency Telephone Number
Emergency Number : 1-314-535-1395 or CHEMTREC: 1-800-424-9300

SECTION 2: Hazards Identification

2.1. Classification of the Substance or Mixture
Classification (GHS-US)
Skin Irrit. 2 H315
Eye Irrit. 2A H319

2.2. Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US) :

Signal Word (GHS-US) : Warning
Hazard Statements (GHS-US) : H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

Precautionary Statements (GHS-US) :
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection.
P302+P352 - If on skin: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other Hazards
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>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanenoc acid, sodium salt, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfoic acid monosodium salt</td>
<td>(CAS No) 37350-42-8</td>
<td>3 - 6</td>
<td>Aquatic Chronic 3, H412</td>
</tr>
<tr>
<td>1-Hydroxyethane-1,1-diphosphonic acid</td>
<td>(CAS No) 2809-21-4</td>
<td>4.8 - 5.2</td>
<td>Met. Corr. 1, H290, Acute Tox. 4 (Oral), H302, Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>
Kart-Klenz III
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<table>
<thead>
<tr>
<th>Sodium hydroxide</th>
<th>(CAS No) 1310-73-2</th>
<th>3.9</th>
<th>Met. Corr. 1, H290</th>
<th>Acute Tox. 4 (Dermal), H312</th>
<th>Skin Corr. 1A, H314</th>
<th>Eye Dam. 1, H318</th>
</tr>
</thead>
</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 if possible).
First-aid Measures After Inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
First-aid Measures After Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.
First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.
First-aid Measures After Ingestion: Rinse mouth. 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: Irritation to eyes, skin and respiratory tract.
Symptoms/Injuries After Inhalation: May cause respiratory irritation.
Symptoms/Injuries After Skin Contact: Causes skin irritation.
Symptoms/Injuries After Eye Contact: Causes serious eye irritation.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
If medical advice is needed, have product container or label at hand.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media
Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.
Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture
Fire Hazard: Not flammable.
Explosion Hazard: Product is not explosive.
Reactivity: None known.

5.3. Advice for Firefighters
Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Do not allow run-off from fire fighting to enter drains or water courses.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen compounds.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Do not get in eyes, on skin, or on clothing.
6.1.1. For Non-emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).

6.1.2. For Emergency Responders
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area. Stop leak if safe to do so.

6.2. Environmental Precautions
Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up
For Containment: Absorb and/or contain spill with inert material, then place in suitable container.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely.

6.4. Reference to Other Sections
See Section 8: Exposure Controls and Personal Protection.

SECTION 7: Handling And Storage

7.1. Precautions for Safe Handling
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store away from incompatible materials.
Incompatible Products: Strong acids, strong bases, strong oxidizers.
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7.3. Specific End Use(s)

Use of the substance/mixture: Highly concentrated liquid detergent. For professional use only.

SECTION 8: Exposure Controls/personal Protection

8.1. Control Parameters

<table>
<thead>
<tr>
<th>Sodium hydroxide (1310-73-2)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td>ACGIH Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (ceiling) (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>USA IDLH</td>
<td>US IDLH (mg/m³)</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Alberta</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>British Columbia</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Manitoba</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Newfoundland &amp; Labrador</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Nunavut</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Ontario</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Quebec</td>
<td>PLAFOND (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Yukon</td>
<td>OEL Ceiling (mg/m³)</td>
<td>2 mg/m³</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. Provide sufficient ventilation to keep vapors below permissible exposure limit. Ensure all national/local regulations are observed.


Materials for Protective Clothing : Chemically resistant materials and fabrics.

Hand Protection : Wear chemically resistant protective gloves. Rubber gloves.

Eye Protection : Chemical goggles or safety glasses.

Skin and Body Protection : Wear suitable protective clothing.

Respiratory Protection : Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Other Information : When using, do not eat, drink or smoke.

SECTION 9: Physical And Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

| Physical State | Liquid |
| Appearance | Clear Blue Liquid. |
| Odor | Slight Detergent Odour |
| Odor Threshold | No data available |
| pH | 9.2 - 9.8 |
| Evaporation rate | 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 |
| Vapor Pressure | No data available |
| Relative Vapor Density at 20 °C | No data available |
| Relative Density/Specific gravity | ~ 1.09 g/mL |
| Solubility | Complete in water. |
| Partition coefficient: n-octanol/water | No data available |
| Viscosity | No data available |

Explosion Data – Sensitivity to Mechanical Impact : Not expected to present an explosion hazard due to mechanical impact.

Explosion Data – Sensitivity to Static Discharge : Not expected to present an explosion hazard due to static discharge.
### 9.2. Other Information

No additional information available

### SECTION 10: Stability And Reactivity

#### 10.1 Reactivity:

None known.

#### 10.2 Chemical Stability:

Stable under recommended handling and storage conditions (see section 7).

#### 10.3 Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

#### 10.4 Conditions to Avoid:

Direct sunlight. Extremely high or low temperatures.

#### 10.5 Incompatible Materials:

Strong acids, strong bases, strong oxidizers.

#### 10.6 Hazardous Decomposition Products:

Carbon oxides (CO, CO₂). Nitrogen compounds. Chlorine.

### SECTION 11: Toxicological Information

#### 11.1. Information On Toxicological Effects

**Acute Toxicity:** Not classified

**Sodium hydroxide (1310-73-2)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Dermal Rabbit</td>
<td>1350 mg/kg</td>
</tr>
</tbody>
</table>

**1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Oral Rat</td>
<td>1878 mg/kg</td>
</tr>
<tr>
<td>LD50 Dermal Rabbit</td>
<td>&gt; 7940 mg/kg</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: Causes skin irritation. (pH: 9.2 - 9.8)

Serious Eye Damage/Irritation: Causes serious eye irritation. (pH: 9.2 - 9.8)

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: No data available

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

Symptoms/Injuries After Inhalation: May cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Causes skin irritation.

Symptoms/Injuries After Eye Contact: Causes serious eye irritation.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

#### 11.2. Information On Ecological Effects

**Sodium hydroxide (1310-73-2)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Fish 1</td>
<td>45.4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>40 mg/l</td>
</tr>
</tbody>
</table>

**1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Fish 1</td>
<td>868 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>527 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
<tr>
<td>LC 50 Fish 2</td>
<td>360 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])</td>
</tr>
</tbody>
</table>

NOEC (acute): 1000 mg/kg (Exposure time: 14 Days - Species: Eisenia fetida [soil dry weight])

#### 12.2. Persistence and Degradability

**Kart-Klenz III Concentrated Liquid Detergent**

Biodegradation: 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

**1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>&lt; 50</td>
</tr>
<tr>
<td>Log Pow</td>
<td>3.49</td>
</tr>
</tbody>
</table>

#### 12.4. Mobility in Soil

No additional information available

#### 12.5. Other Adverse Effects

No additional information available
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Other Information : Avoid release to the environment.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods
Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: Transport Information

14.1 In Accordance with DOT
Not regulated for transport

14.2 In Accordance with IMDG
Not regulated for transport

14.3 In Accordance with IATA
Not regulated for transport

14.4 In Accordance with TDG
Not regulated for transport

SECTION 15: Regulatory Information

15.1 US Federal Regulations
Kart-Klenz III Concentrated Liquid Detergent
SARA Section 311/312 Hazard Classes
Immediate (acute) health hazard

Sodium hydroxide (1310-73-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

2-Propenoic acid, sodium salt, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid monosodium salt (37350-42-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations

Sodium hydroxide (1310-73-2)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

15.3 Canadian Regulations

Kart-Klenz III Concentrated Liquid Detergent
WHMIS Classification
Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Sodium hydroxide (1310-73-2)
Listed on the Canadian DSL (Domestic Substances List)
Listed on the Canadian IDL (Ingredient Disclosure List)
IDL Concentration 1%
WHMIS Classification
Class E - Corrosive Material

1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)
Listed on the Canadian DSL (Domestic Substances List)
WHMIS Classification
Class E - Corrosive Material
Class D Division 2 Subdivision B - Toxic material causing other toxic effects

2-Propenoic acid, sodium salt, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid monosodium salt (37350-42-8)
Listed on the Canadian DSL (Domestic Substances List)
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: Other Information, Including Date Of Preparation Or Last Revision

Revision date : 11/04/2014
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 4 (Dermal) : Acute toxicity (dermal) Category 4
Acute Tox. 4 (Oral) : Acute toxicity (oral) Category 4
Aquatic Acute 1 : Hazardous to the aquatic environment - Acute Hazard Category 1
# Kart-Klenz III
## Concentrated Liquid Detergent
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<table>
<thead>
<tr>
<th>Aquatic Acute 3</th>
<th>Hazardous to the aquatic environment - Acute Hazard Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Chronic 3</td>
<td>Hazardous to the aquatic environment - Chronic Hazard Category 3</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Met. Corr. 1</td>
<td>Corrosive to metals 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>Skin Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>H280</td>
<td>May be corrosive to metals</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

**NFPA health hazard**: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is 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.

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*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.*

STERIS SDS NA, WHMIS, Mex GHS