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

1.1. Product identifier
Product form: Mixture
Trade name: Prolystica® 2X Concentrate Alkaline Detergent
Product code: 1C34

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Alkaline Detergent
Use of the substance/mixture: For hospital and professional use only. Not for home use.

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: 1-800-548-4873 (Customer Service - Healthcare 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): 

Signal word (GHS-US): Danger
Hazard statements (GHS-US): H314 - Causes severe skin burns and eye damage.

Precautionary statements (GHS-US): P260 - Do not breathe mist, spray, vapors
P264 - Wash hands thoroughly after handling.
P380 - 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): 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 doctor, a POISON CENTER.
P321 - Specific treatment (see on this label).
P363 - Wash contaminated clothing before reuse.

2.3. 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.
Full text of H-phrases: see Section 16.
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>Sodium hydroxide</td>
<td>(CAS No) 1310-73-2 (REACH No.) 01-2119457892-27-0229</td>
<td>1 - 3</td>
<td>Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Eye Dam. 1, H318</td>
</tr>
<tr>
<td>Sodium octyl sulfate</td>
<td>(CAS No) 142-31-4</td>
<td>1 - 2</td>
<td>Skin Irr. 2, H315 Eye Dam. 1, H318</td>
</tr>
<tr>
<td>1-Octanamine, N,N-dimethyl-, N-oxide</td>
<td>(CAS No) 2605-78-9 (REACH No.) 01-2119409076-45-0002</td>
<td>1 - 2</td>
<td>Skin Irr. 2, H315 Eye Irr. 2A, H319 STOT SE 3, H335</td>
</tr>
<tr>
<td>1,2,4-Butanetricarboxylic acid, 2-phosphono-</td>
<td>(CAS No) 37971-36-1</td>
<td>0.5 – 1.5</td>
<td>Met. Corr. 1, H290 Eye Irr. 2A, H319</td>
</tr>
<tr>
<td>Methyl-oxirane polymer with oxirane</td>
<td>(CAS No) 9003-11-6</td>
<td>0.5 – 1.5</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

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 to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. If not breathing, give artificial respiration. Seek medical attention immediately.

First-aid measures after skin contact: Remove/Take off immediately all contaminated clothing. Immediately flush skin with plenty of water for at least 15 minutes. Obtain medical attention.

First-aid measures after eye contact: Remove contact lenses, if present and easy to do. Continue rinsing. Immediately flush eyes thoroughly with water for at least 15 minutes. Seek medical attention immediately.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Give water to drink if victim completely conscious/alert. 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 inhalation: Fine dispersion/spraying/misting: Irritation of the respiratory tract and the other mucous membranes.

Symptoms/injuries after skin contact: Causes chemical burns.

Symptoms/injuries after eye contact: Causes serious eye damage.

Symptoms/injuries after ingestion: Corrosive to mouth, throat and stomach.

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

Fire hazard: May react with soft metals to evolve flammable hydrogen gas.

5.3. Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Stop leak if safe to do so. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapor and spray mist. Spilled material may present a slipping hazard. Ensure adequate air ventilation. Work in a well-ventilated area.

6.1.1. For non-emergency personnel

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. Collect spillage. Neutralise slowly product with a weak acid. 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: Avoid all eye and skin contact and do not breathe vapors and mist. Wear recommended PPE.
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, smoking, and before 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. Storage areas should be periodically checked for corrosion and integrity.

Incompatible materials: strong acids, strong bases, and strong oxidizers.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Sodium hydroxide (1310-73-2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA - ACGIH</td>
</tr>
<tr>
<td>USA - IDLH</td>
</tr>
<tr>
<td>USA - NIOSH</td>
</tr>
<tr>
<td>USA - OSHA</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 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. Wear protective clothing.

Hand protection: Wear rubber or neoprene gloves.
Eye protection: Wear chemical splash goggle or safety goggles.
Skin and body protection: Wear suitable protective clothing: rubber apron, boots, and face shield if necessary.
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.
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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Light yellow to peach</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight chemical odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>12.7 - Approximately</td>
</tr>
<tr>
<td>pH solution</td>
<td>11.2 - Approximately (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>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>1.117 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>Oxidizing 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.

10.3. Possibility of hazardous reactions

Hazardous polymerization will 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


SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Corrosive to eyes and skin.
1,2,4-Butanetricarboxylic acid, 2-phosphono- (37971-36-1)

LD50 oral rat > 4000 mg/kg
LD50 dermal rat > 4000 mg/kg
LC50 inhalation rat (mg/l) > 1979 mg/m³ (Exposure time: 4 h)

Sodium hydroxide (1310-73-2)

LD50 dermal rabbit 1350 mg/kg
ATE CLP (dermal) 1350.000 mg/kg bodyweight

Skin corrosion/irritation: Causes severe skin burns
pH: 12.7 Approximately

Serious eye damage/irritation: Causes serious eye damage
pH: 12.7 Approximately

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: Not classified
Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: 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.

1,2,4-Butanetricarboxylic acid, 2-phosphono- (37971-36-1)

EC50 other aquatic organisms 1 140 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)

Sodium hydroxide (1310-73-2)

LC50 fishes 1 45.4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. Persistence and degradability

Prolystica® 2X Concentrate Alkaline Detergent

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.

Bioaccumulative potential: Not established.

1,2,4-Butanetricarboxylic acid, 2-phosphono- (37971-36-1)

BCF fish 1 (No bioaccumulation expected)

12.3. Bioaccumulative potential

Prolystica® 2X Concentrate Alkaline Detergent

Bioaccumulative potential: Not established.

1,2,4-Butanetricarboxylic acid, 2-phosphono- (37971-36-1)

BCF fish 1 (No bioaccumulation expected)

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Avoid release to the environment.
### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations: Product may be flushed to a sanitary sewer with copious amounts of water, if in accordance with local, state, or national legislation. Dispose in a safe manner in accordance with local/national regulations. Do not allow to enter into surface water or drains. Ensure all national/local regulations are observed.

### SECTION 14: Transport information

In accordance with DOT

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport document description</td>
<td>UN1824 SODIUM HYDROXIDE SOLUTION, 8, CORROSIVE, PG III</td>
</tr>
<tr>
<td>UN-No.(DOT)</td>
<td>1824</td>
</tr>
<tr>
<td>DOT NA no.</td>
<td>UN1824</td>
</tr>
<tr>
<td>DOT Proper Shipping Name</td>
<td>Sodium hydroxide solution</td>
</tr>
<tr>
<td>Department of Transportation (DOT)</td>
<td>8 - Class 8 - Corrosive material 49 CFR 173.136</td>
</tr>
<tr>
<td>Hazard Classes</td>
<td>8 - Corrosive</td>
</tr>
<tr>
<td>Packing group (DOT)</td>
<td>III - Minor Danger</td>
</tr>
<tr>
<td>DOT Vessel Stowage Other</td>
<td>52 - Stow “separated from” acids</td>
</tr>
</tbody>
</table>

**Additional information**

Other information: No supplementary information available.

**ADR**

Transport document description: No additional information available

**Transport by sea**

IMDG Class: UN1824 SODIUM HYDROXIDE SOLUTION, 8, CORROSIVE, PG III

**Air transport**

ICAO/IATA: UN1824 SODIUM HYDROXIDE SOLUTION, 8, CORROSIVE, PG III
Only 5 Gallon and 20 Liter pails are approved for air shipment.

### SECTION 15: Regulatory information

**15.1. US Federal regulations**

- **Prolystica® 2X Concentrate Alkaline Detergent**
  - RQ (Reportable quantity, section 304 of EPA's List of Lists): 34782 lb

- **1,2,4-Butanetricarboxylic acid, 2-phosphono- (37971-36-1)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory

- **Sodium hydroxide (1310-73-2)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory
  - RQ (Reportable quantity, section 304 of EPA's List of Lists): 1000 lb

**15.2. International regulations**

Not applicable.

**15.3. US State regulations**

Not applicable.
SECTION 16: Other information

Revision Date: 10/08/2018
Other information: None.

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
<td>Acute toxicity (dermal) Category 4</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 Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H290</td>
<td>May be corrosive to metals</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>H335</td>
<td>May cause respiratory irritation</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 or pressures or may react with water with some release of energy, but not violently.

SDS US (GHS HazCom 2012)
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.