eSSENTIALS CONCENTRATE™ Alkaline Detergent

Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 11/11/2014 Version: 1.0

SECTION 1: Identification

1.1. Product Identifier

Product Form: Mixture
Product Name: eSSENTIALS CONCENTRATE™ Alkaline Detergent
Product Code: 1C56

1.2. Intended Use of the Product

Use of the substance/mixture: Alkaline Detergent for Manual and Automated Applications. 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_msds@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 Corr. 1A H314
Eye Dam. 1 H318

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS05

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.

Precautionary Statements (GHS-US) : P260 - Do not breathe mist/vapors/spray.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection.
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 at rest in a position 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.
P363 - Wash contaminated clothing before reuse.

2.3. Other Hazards

Hazards Not Otherwise Classified (HNOC): Corrosive to the respiratory tract

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: Composition/information On Ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Tetrasodium EDTA	(CAS No) 64-02-8	5-10 %	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation: mist), H332 Eye Dam. 1, H318 Aquatic Acute 2, H401

Potassium hydroxide	(CAS No) 1310-58-3	5-10 %	Met. Corr. 1, H290 Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314 Eye Dam. 1, H318

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 and shoes. Immediately flush skin with plenty of water for at least 60 minutes. Immediately call a POISON CENTER or doctor.
First-aid Measures After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.
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: Corrosive to eyes, respiratory system and skin.
Symptoms/Injuries After Inhalation: May be corrosive to the respiratory tract.
Symptoms/Injuries After Skin Contact: Corrosive. Causes serious skin burns.
Symptoms/Injuries After Eye Contact: Causes serious eye damage.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. 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

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: Violent exothermic reaction with water (moisture): release of corrosive gases/vapours. Reacts exothermically with acids. This product was tested for metal corrosivity and was found to have a corrosion rate of less than 250 mpy for both Aluminum and Steel. Therefore, it is not considered corrosive to metal.

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. Do not get water inside containers. Do not apply water stream directly at source of leak.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Hazardous Combustion Products: Carbon oxides (CO, CO_2). Corrosive vapors. Sulfur compounds. Sodium oxides. Potassium oxides.

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. Do not breathe vapor, mist, spray. Do not allow contact with incompatible materials.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).
Emergency Procedures: Evacuate unnecessary personnel. Eliminate ignition sources.

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: Cautiously neutralize spilled liquid. Absorb and/or contain spill with inert material, then place in suitable container.
Methods for Cleaning Up: Clear 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

Additional Hazards When Processed: Corrosive vapors are released. May be corrosive to metals.
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. Storage areas should be periodically checked for corrosion and integrity.
Incompatible Products: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Use of the substance/mixture: Alkaline Detergent for Manual and Automated Applications. For professional use only.

SECTION 8: Exposure Controls/personal Protection

8.1. Control Parameters

Potassium hydroxide (1310-58-3)		
USA ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³
USA NIOSH	NIOSH REL (ceiling) (mg/m³)	2 mg/m³
Alberta	OEL Ceiling (mg/m³)	2 mg/m³
British Columbia	OEL Ceiling (mg/m³)	2 mg/m³
Manitoba	OEL Ceiling (mg/m³)	2 mg/m³
New Brunswick	OEL Ceiling (mg/m³)	2 mg/m³
Newfoundland & Labrador	OEL Ceiling (mg/m³)	2 mg/m³
Nova Scotia	OEL Ceiling (mg/m³)	2 mg/m³
Nunavut	OEL Ceiling (mg/m³)	2 mg/m³
Northwest Territories	OEL Ceiling (mg/m³)	2 mg/m³
Ontario	OEL Ceiling (mg/m³)	2 mg/m³
Prince Edward Island	OEL Ceiling (mg/m³)	2 mg/m³
Québec	PLAFOND (mg/m³)	2 mg/m³
Saskatchewan	OEL Ceiling (mg/m³)	2 mg/m³
Yukon	OEL Ceiling (mg/m³)	2 mg/m³

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.

Personal Protective Equipment : Protective clothing. Safety glasses. Gloves. Insufficient ventilation: wear respiratory protection.

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, colorless to light straw homogeneous liquid
Odor	:	Mild Chemical
Odor Threshold	:	No data available
pH	:	13.6 (Neat); 11.2 - 12.2 (1% w/w solution)
Evaporation rate	:	No data available
Melting/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	:	~ 1.13 g/mL (water = 1)
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:

Violent exothermic reaction with water (moisture): release of corrosive gases/vapours. Reacts exothermically with acids. This product was tested for metal corrosivity and was found to have a corrosion rate of less than 250 mpy for both Aluminum and Steel. Therefore, it is not considered corrosive to metal.

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:

Thermal decomposition generates corrosive vapors. Carbon oxides (CO, CO_2). Sulfur compounds. Potassium oxides. Sodium.

SECTION 11: Toxicological Information

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

eSSENTIALS CONCENTRATE™ Alkaline Detergent	
LD50 Oral Rat	2000 - 5000
LD50 Dermal Rat	2000 - 5000

Potassium hydroxide (1310-58-3)	
LD50 Oral Rat	214 mg/kg

Tetrasodium EDTA (64-02-8)	
LD50 Oral Rat	1780 mg/kg
ATE (Dust/Mist)	1.50 mg/l/4h

Skin Corrosion/Irritation: Causes severe skin burns and eye damage. [pH: 13.6 (Neat); 11.2 - 12.2 (1% w/w solution)]
Serious Eye Damage/Irritation: Causes serious eye damage. [pH: 13.6 (Neat); 11.2 - 12.2 (1% w/w solution)]
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 be corrosive to the respiratory tract.
Symptoms/Injuries After Skin Contact: Causes skin irritation.
Symptoms/Injuries After Eye Contact: Causes serious eye damage.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

SECTION 12: Ecological Information

12.1. Toxicity

Ecology - General : Harmful to aquatic life.

Tetrasodium EDTA (64-02-8)	
LC50 Fish 1	41 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC 50 Fish 2	59.8 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
ErC50 (algae)	2.77 mg/l (72hr species: Desmodesmus subspicatus)

12.2. Persistence and Degradability

No additional information available

12.3. Bioaccumulative Potential

Potassium hydroxide (1310-58-3)	
Log Pow	0.65

Tetrasodium EDTA (64-02-8)	
Log Pow	5.01 (calculated)

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 of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.
Additional Information: RCRA Waste Code: D002 (Corrosive Material).

SECTION 14: Transport Information

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

Packing Group (DOT) : II - Medium Danger
DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242

14.3. Additional Information

Emergency Response Guide (ERG) Number : 154

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

Not approved for air shipment

14.4 In Accordance with TDG

Proper Shipping Name : POTASSIUM HYDROXIDE, SOLUTION
Packing Group : II
Hazard Class : 8

SECTION 15: Regulatory Information

15.1 US Federal Regulations

eSSENTIALS CONCENTRATE™ Alkaline Detergent	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Potassium hydroxide (1310-58-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Tetrasodium EDTA (64-02-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations

Potassium hydroxide (1310-58-3)
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

eSSENTIALS CONCENTRATE™ Alkaline Detergent	
WHMIS Classification	Class E - Corrosive Material

Potassium hydroxide (1310-58-3)
Listed on the Canadian DSL (Domestic Sustances List)
Listed on the Canadian IDL (Ingredient Disclosure List)

IDL Concentration 1 %

WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class E - Corrosive Material

Tetrasodium EDTA (64-02-8)

Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material

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

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

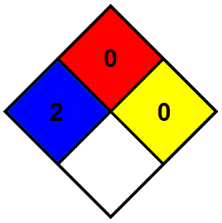
GHS Full Text Phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Inhalation: mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H290	May be corrosive to metals
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H401	Toxic to aquatic life
H402	Harmful to aquatic life

NFPA Health Hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention 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.



Party Responsible for the Preparation of This Document
STERIS Corporation

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