

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

1.1. Product identifier

Product form : Mixture
 Trade name : LabKlenz™ 110 Alkaline Detergent
 Product code : 1L11

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Alkaline Detergent

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)

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

Precautionary statements (GHS-US) :

P260 - Do not breathe mist, spray, vapours
 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 - Store locked up
 P501 - Dispose of contents/container to comply with local regulations for container disposal

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

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according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Potassium hydroxide	(CAS No) 1310-58-3	10 - 30	Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314
Tetrasodium EDTA	(CAS No) 64-02-8	1 - 5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318

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 get medical attention. If not breathing, give artificial respiration
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/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. In all cases of doubt, or when symptoms persist, seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing
- First-aid measures after ingestion : Rinse mouth. Give water to drink if victim completely conscious/alert. 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 : 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

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Foam. Dry powder. Carbon dioxide. Water spray. Sand
- 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

- General measures : Do not breathe fumes, vapors. Stop leak if safe to do so. Avoid contact with skin, eyes and clothes

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. Neutralise 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

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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 vapour. Keep container tightly closed to avoid moisture absorption and contamination. Do not breathe gas, fumes, vapour 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
- Incompatible materials : Acids. Oxidizing agents. Organic compounds. Halogenated compounds. Chromium. Magnesium. Zinc. On contact with ordinary metals (steel, galvanized, aluminium) corrosion may occur and generate highly flammable hydrogen gas
- Storage temperature : < 24 °C (< 75°F)
- 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

Potassium hydroxide (1310-58-3)

USA ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³
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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 : 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
- Colour : Clear to pale straw
- Odour : Slight chemical odor
- Odour threshold : No data available

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pH	: > 13 (concentrate)
pH solution	: 12.3 – 12.8 (1% solution)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: ca. 1.27 Specific Gravity
Solubility	: Water: completely soluble
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

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

On contact with ordinary metals (steel, galvanized, aluminium) corrosion may occur and generate highly flammable hydrogen gas. Acids. Oxidizing agent. Organic materials. Halogenated compounds. Magnesium. Zinc. Chromium

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed

LabKlenz™ 110 Alkaline Detergent	
LD50 oral rat	860 mg/kg
ATE (oral)	500,000 mg/kg bodyweight
Tetrasodium EDTA (64-02-8)	
ATE (oral)	500,000 mg/kg bodyweight
Potassium hydroxide (1310-58-3)	
LD50 oral rat	214 mg/kg
ATE (oral)	500,000 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns and eye damage
pH: > 13 (concentrate)

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Serious eye damage/irritation	: Causes serious eye damage pH: > 13 (concentrate)
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

SECTION 12: Ecological information

12.1. Toxicity

LabKlenz™ 110 Alkaline Detergent	
LC50 fishes 1	> 750 mg/l (10% Solution)
Tetrasodium EDTA (64-02-8)	
LC50 fishes 1	41 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [Static])
EC50 Daphnia 1	610 mg/l (Exposure time: 24 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	1.01 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)
LC50 fish 2	59.8 mg/l (Exposure time: 96 h - Species: Pimephales promelas [Static])
Potassium hydroxide (1310-58-3)	
LC50 fishes 1	80 mg/l (Exposure time: 96 h - Species: Gambusia affinis [Static])

12.2. Persistence and degradability

LabKlenz™ 110 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

12.3. Bioaccumulative potential

LabKlenz™ 110 Alkaline Detergent	
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

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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
DOT Special Provisions (49 CFR 172.102) : B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized
IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.
T7 - 4 178.274(d)(2) Normal. 178.275(d)(3)
TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $95 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: $a = (d15 - d50) / 35 * d50$ Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively
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

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 : 

Tunnel restriction code : E
Excepted quantities (ADR) : E2

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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 : 1 L
(49 CFR 173.27)

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 16: Other information

Revision date : 04/02/2015

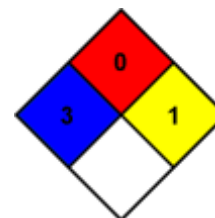
Full text of H-phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

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



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