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

· 1.1 Product identifier

· Trade name: Ultra-Kleen Solution 2

· Article number: 63761-3 B

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

No further relevant information available.

· Application of the substance / the mixture Adjuvant

· 1.3 Details of the supplier of the Safety Data Sheet

· Manufacturer/Supplier:

Sterilex Corporation 111 Lake Front Drive Hunt Valley MD 21030 Phone: (443)541-8800

· 1.4 Emergency telephone number:

ChemTel Inc.

Phone: (800)255-3924, + 1 (813)248-0585

2 Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



R34: Causes burns.

Xn; Harmful

R22: Harmful if swallowed.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Contact with skin and inhalation of aerosols/ vapours of the preparation should be avoided.

· Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

Additional information:

Concentrated product is corrosive as shown in this document. When diluted at least 1:1 (50% or less solution) with water, product is non-hazardous.

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- · 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



· Signal word Danger

· Hazard-determining components of labelling:

Alvkl dimethyl ethyl benzyl ammonium chloride

Alkyl (C12,C14,C16) Dimethyl Benzyl Ammonium Chloride

Hazard statements

H314 Causes severe skin burns and eye damage.

· Precautionary statements

P280 Wear protective clothing / eye protection.

P260 Do not breathe mist/vapours/spray.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse

skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

- · Hazard description:
- WHMIS-symbols:

D2B - Toxic material causing other toxic effects

E - Corrosive material



· NFPA ratings (scale 0 - 4)



Health = 3 Fire = 0

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 3Fire = 0

· HMIS Long Term Health Hazard Substances

None of the ingredients is listed.

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- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- PBT: Not applicable.vPvB: Not applicable.

3 Composition/information on ingredients

- · 3.2 Mixtures
- · **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 7722-84-1 EINECS: 231-765-0 Index number: 008-003-00-9	Hydrogen Peroxide C R35; ★ Xn R20/22; ♠ O R8 Solution 1, H271 Skin Corr. 1A, H314 Acute Tox. 4, H302; Acute Tox. 4, H332	5,5-7,2%
CAS: 85409-23-0 EINECS: 287-090-7	Alykl dimethyl ethyl benzyl ammonium chloride C R34; Xn R21/22; Xi R41; N R50 Skin Corr. 1B, H314; Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, H302	2,5-3,5%
CAS: 68391-01-5	Alkyl (C12,C14,C16) Dimethyl Benzyl Ammonium Chloride C R35; Xn R22; Xi R41 Skin Corr. 1A, H314; Eye Dam. 1, H318 Acute Tox. 4, H302	2,5-3,5%

· Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- · 4.1 Description of first aid measures
- General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Immediately remove any clothing soiled by the product.

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· After eye contact:

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

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Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Strong caustic effect on skin and mucous membranes.

Coughing

Breathing difficulty

Nausea

Cramp

Hazards

Danger of gastric perforation.

Danger of impaired breathing.

Danger of severe eye injury.

Danger of disturbed cardiac rhythm.

4.3 Indication of any immediate medical attention and special treatment needed

If necessary oxygen respiration treatment.

Monitor circulation, possible shock treatment.

Medical supervision for at least 48 hours.

5 Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- · For safety reasons unsuitable extinguishing agents: None.
- · 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

- 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information No further relevant information available.

6 Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.

- 6.2 Environmental precautions: Do not allow product to reach sewage system or any water course.
- 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Pick up mechanically.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

7 Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Avoid splashes or spray in enclosed areas.

- Information about fire and explosion protection: Keep respiratory protective device available.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Requirements to be met by storerooms and receptacles:

Avoid storage near extreme heat, ignition sources or open flame.

Unsuitable material for receptacle: aluminium.

Unsuitable material for receptacle: steel.

· Information about storage in one common storage facility:

Store away from oxidizing agents.

Do not store together with acids.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Storage Temperatures : <140 ° F / <60 °C.

· 7.3 Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters

Ingredients with limit values that require monitoring at the	he workplace:	ng at th	monitoring	require	that	values	with limit	 Ingredients
--	---------------	----------	------------	---------	------	--------	------------	---------------------------------

7722-84-1 hydrogen peroxide

-	<u> </u>
PEL (USA)	Long-term value: 1,4 mg/m³, 1 ppm
REL (USA)	Long-term value: 1,4 mg/m³, 1 ppm
TLV (USA)	Long-term value: 1,4 mg/m³, 1 ppm Long-term value: 1,4 mg/m³, 1 ppm Long-term value: 1,4 mg/m³, 1 ppm
EL (Canada)	Long-term value: 1 ppm

EV (Canada) Long-term value: 1,4 mg/m³, 1 ppm

- **DNELs** No further relevant information available.
- · PNECs No further relevant information available.
- · Additional information: The lists valid during the making were used as basis.
- · 8.2 Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

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Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

· Respiratory protection:

Not required under normal conditions of use.

Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.

For spills, respiratory protection may be advisable.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eve protection:

Contact lenses should not be worn.



Safety glasses

- · **Body protection:** Protective work clothing
- Limitation and supervision of exposure into the environment

No further relevant information available.

Risk management measures

See Section 7 for additional information.

No further relevant information available.

9 Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid Colourless
Odour: Odourless
Odour threshold: Not determined.

• **pH-value:** 3,01 - 5,86

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· Change in condition

Melting point/Melting range:
Boiling point/Boiling range:

Flash point:

Not applicable.

Not applicable.

Not applicable.

Not determined.

Not determined.

Not determined.

· **Self-igniting:** Product is not self-igniting.

• **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined. **Upper:** Not determined.

Vapour pressure at 20 °C: 23 hPaDensity at 20 °C: 1 g/cm³

Relative density
 Vapour density
 Evaporation rate
 Not determined.
 Not determined.

· Solubility in / Miscibility with

water: Fully miscible.

• Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined. **Kinematic:** Not determined.

• 9.2 Other information No further relevant information available.

10 Stability and reactivity

- · 10.1 Reactivity
- · 10.2 Chemical stability
- · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

To avoid thermal decomposition do not overheat.

· 10.3 Possibility of hazardous reactions

Toxic fumes may be released if heated above the decomposition point.

Reacts with strong oxidizing agents.

Reacts with certain metals.

· 10.4 Conditions to avoid

Store away from oxidizing agents.

Keep away from heat and direct sunlight.

Prevent from drying out.

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- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Chlorine compounds

11 Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity:

· LD/LC50 values relevant for classification:					
7722-84-1	7722-84-1 hydrogen peroxide				
Oral	LD50	376 mg/kg (rat)			
Inhalative	LC50/4h	2,0 mg/l (rat)			
68391-01-	68391-01-5 Alkyl (C12,C14,C16) Dimethyl Benzyl Ammonium Chloride				
Oral	LD50	650 mg/kg (rat)			

- · Primary irritant effect:
- · on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- · Sensitization: No sensitizing effects known.
- Subacute to chronic toxicity: Toxic and/or corrosive effects may be delayed up to 12 hours.
- Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: The product contains materials that are harmful to the environment.
- · 12.2 Persistence and degradability No further relevant information available.
- · 12.3 Bioaccumulative potential May be accumulated in organism
- · 12.4 Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- · Remark:

The product causes an alteration of the pH-value within the testing system. The result refers to the non-neutralised sample.

- Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system

Must not reach sewage water or drainage ditch undiluted or unneutralized.

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- · 12.5 Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · **vPvB:** Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

13 Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Do not allow undiluted product to reach sewage system.

Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Contact waste processors for recycling information.

- · Uncleaned packaging:
- Recommendation:

Disposal must be made according to official regulations.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

14 Transport information

· 14.1 UN-Number

· DOT, ADR, IMDG, IATA

· 14.2 UN proper shipping name

DOT

DOT 1760 Corrosive Liquid, n.o.s. (Alkyl (C12,C14,C16) Dimethyl Benzyl Ammonium Chloride, Alykl dimethyl

UN1760

ethyl benzyl ammonium chloride)

· ADR, IMDG, IATA 1760 CORROSIVE LIQUID, N.O.S. (Alkyl

(C12,C14,C16) Dimethyl Benzyl Ammonium Chloride, Alykl dimethyl ethyl benzyl ammonium chloride)

Alyki dimethyl ethyl benzyl ammonium chlonde,

· 14.3 Transport hazard class(es)

· DOT



· Class 8 Corrosive substances.

· Label 8

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· ADR



· Class 8 (C9) Corrosive substances.

·Label

· IMDG, IATA



· Class 8 Corrosive substances.

· Label 8

· 14.4 Packing group

· DOT, ADR, IMDG, IATA

· 14.5 Environmental hazards:

· Marine pollutant:

• 14.6 Special precautions for user Warning: Corrosive substances.

Danger code (Kemler):EMS Number:F-A,S-B

· 14.7 Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· ADR

Limited quantities (LQ)
 Transport category
 Tunnel restriction code
 E

· UN "Model Regulation": UN1760, CORROSIVE LIQUID, N.O.S. (Alkyl

(C12,C14,C16) Dimethyl Benzyl Ammonium Chloride, Alykl dimethyl ethyl benzyl ammonium chloride), 8, III

15 Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- ·SARA
- · Section 355 (extremely hazardous substances):

7722-84-1 hydrogen peroxide

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

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· Proposition 65 (California):

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- · Carcinogenic Categories
- · EPA (Environmental Protection Agency)

EPA Product Registration: 63761-8.

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as require don the pesticide label:

DANGER

CORROSIVE

Causes irreversible eye damage and skin burns.

Harmful if swallowed.

Harmful in contact with skin.

Harmful by inhalation.

This pesticide is toxic to fish

85409-23-0 Alykl dimethyl ethyl benzyl ammonium chloride	Registered.
· IARC (International Agency for Research on Cancer)	
7722-84-1 hydrogen peroxide	3
· TLV (Threshold Limit Value established by ACGIH)	
7722-84-1 hydrogen peroxide	A3
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
· Canada	
· Canadian Domestic Substances List (DSL)	
7722-84-1 Hydrogen Peroxide	
85409-23-0 Alykl dimethyl ethyl benzyl ammonium chloride	
68391-01-5 Alkyl (C12,C14,C16) Dimethyl Benzyl Ammonium Chloride	
7732-18-5 water, distilled, conductivity or of similar purity	
· Canadian Ingredient Disclosure list (limit 0.1%)	
None of the ingredients is listed	

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· Canadian Ingredient Disclosure list (limit 1%)

7722-84-1 hydrogen peroxide

· Other regulations, limitations and prohibitive regulations

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

- H271 May cause fire or explosion; strong oxidiser.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H400 Very toxic to aquatic life.
- R20/22 Harmful by inhalation and if swallowed.
- R21/22 Harmful in contact with skin and if swallowed.
- R22 Harmful if swallowed.
- R34 Causes burns.
- R35 Causes severe burns.
- R41 Risk of serious damage to eyes.
- R5 Heating may cause an explosion.
- R50 Very toxic to aquatic organisms.
- R8 Contact with combustible material may cause fire.

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Ox. Liq. 1: Oxidising Liquids, Hazard Category 1 Acute Tox. 4: Acute toxicity, Hazard Category 4

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Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

· Sources

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