

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

1.1. Product identifier

Product form : Mixture
 Product name : **Lemon Green Detergent/Disinfectant**
 Product code : 9534

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

Use of the substance/mixture : Disinfectant

1.3. Details of the supplier of the safety data sheet

Flo-Kem
 19402 Susana Rd.
 Rancho Dominguez, CA 90221 - USA
 T 310-632-7124 - F 310-631-7496
<http://www.flo-kem.com>

1.4. Emergency telephone number

Emergency number : CHEMTEL: 800-255-3924

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Skin Corr. 1C H314
 Eye Dam. 1 H318
 Skin Sens. 1 H317

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms :



Signal word :

Danger

Hazard statements :

Causes severe skin burns and eye damage.
 May cause an allergic skin reaction.
 Causes serious eye damage.

Precautionary statements :

Do not breathe mist, vapors.
 Wash hands and forearms thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear eye protection, face protection, protective clothing, protective gloves.
 If swallowed: rinse mouth. Do NOT induce vomiting.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 Wash with plenty of soap and water.
 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a POISON CENTER or doctor/physician.
 If skin irritation or rash occurs: Get medical advice/attention.
 Take off contaminated clothing and wash before reuse.
 Store locked up.
 Dispose of contents/container in accordance with Local, State, and Federal regulations.

2.3. Hazard not otherwise classified (HNOC)

No additional information available

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2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

(NOTE: If component displays the * (asterisk) symbol, the following statement applies.)

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
4-nonylphenol, branched, ethoxylated	(CAS No) 127087-87-0	1 - 5	Skin Irrit. 2, H315 Eye Dam. 1, H318
sodium carbonate	(CAS No) 497-19-8	1 - 5	Eye Irrit. 2A, H319
alkyl dimethyl benzyl ammonium chloride (C12-18)	(CAS No) 68391-01-5	1 - 5	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318
C12-C14-alkyl(ethylbenzyl)dimethylammonium chloride	(CAS No) 85409-23-0/68956-79-6	1 - 5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
(+)-limonene	(CAS No) 5989-27-5	0.1 - 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

(NOTE: If component displays the * (asterisk) symbol, the following statement applies.)

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

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.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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	: Not expected to present a significant hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.
Symptoms/injuries after skin contact	: Causes burns/corrosion of the skin.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Burns to the gastric/intestinal mucosa. Nausea. Gastrointestinal complaints.

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	: Alcohol-resistant foam. BC powder. Carbon dioxide. Dry chemical powder. Sand/earth.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity	: Reacts with (strong) oxidizers. Reacts with (strong) reducers.
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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.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

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Other information : No additional information available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel

Protective equipment : Protective goggles.
Protective gloves.
Protective clothing.
Respiratory protection.

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

For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Wash down leftovers with plenty of water. Wash clothing and equipment after handling.

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 : Do not get in eyes, on skin, or on clothing. Do not breathe mist, vapors. Ensure good ventilation of the work station. Observe normal hygiene standards. Provide good ventilation in process area to prevent formation of vapor. Use only outdoors or in a well-ventilated area. Use personal protective equipment as required.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and forearms thoroughly after handling. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation. Comply with applicable regulations.

Incompatible products : Oxidizing agent. Reducing agents.

Storage area : Store in a cool, dry well-ventilated area. Keep container tightly closed when not in use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or face shield.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. In case of insufficient ventilation, wear suitable respiratory equipment.

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

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Clear yellow
Odor	: Lemon
Odor threshold	: No data available
pH	: 11.3 - 12.3
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 200 °F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Vapor pressure	: No data available
Vapor density	: No data available
Specific Gravity @ 77° F	: 1.029 - 1.049
Solubility	: Soluble in water.
Partition Coefficient n-Octanol-Water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available

9.2. Other information

VOC content : < 5 g/l CARB VOC

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with (strong) oxidizers. Reacts with (strong) reducers.

10.2. Chemical stability

Stable under recommended conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

Oxidizers. Reducing agents.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Nitrogen oxides. Thermal decomposition generates : Toxic vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

sodium carbonate (497-19-8)	
LD50 oral rat	2800 mg/kg (Rat; Experimental value)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit; Experimental value)
ATE US (oral)	2800.000 mg/kg body weight
alkyl dimethyl benzyl ammonium chloride (C12-18) (68391-01-5)	
ATE US (oral)	500.000 mg/kg body weight
C12-C14-alkyl(ethylbenzyl)dimethylammonium chloride (85409-23-0/68956-79-6)	
ATE US (oral)	500.000 mg/kg body weight
ATE US (dermal)	1100.000 mg/kg body weight

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(+)-limonene (5989-27-5)	
LD50 oral rat	4400 mg/kg body weight (Rat; OECD 423: Acute Oral Toxicity – Acute Toxic Class Method; Literature study; > 2000 mg/kg bodyweight; Rat; Read-across)
LD50 dermal rabbit	> 5000 mg/kg body weight (Rabbit; Weight of evidence; Equivalent or similar to OECD 402)
ATE US (oral)	4400.000 mg/kg body weight

4-nonylphenol, branched, ethoxylated (127087-87-0)	
LD50 oral rat	16000 mg/kg (Rat)
LD50 dermal rabbit	4490 mg/kg (Rabbit)
ATE US (oral)	16000.000 mg/kg body weight
ATE US (dermal)	4490.000 mg/kg body weight

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 11.3 - 12.3
Serious eye damage/irritation	: Causes serious eye damage. pH: 11.3 - 12.3
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified

(+)-limonene (5989-27-5)	
IARC group	3 - Not Classifiable

Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met
Symptoms/injuries after skin contact	: Causes burns/corrosion of the skin.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Burns to the gastric/intestinal mucosa. Nausea. Gastrointestinal complaints.

SECTION 12: Ecological information

12.1. Toxicity

sodium carbonate (497-19-8)	
LC50 fish 1	300 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 1	< 424 mg/l (48 h; Daphnia magna)
EC50 other aquatic organisms 1	14 mg/l (168 h; Plankton)
LC50 fish 2	740 mg/l (96 h; Gambusia affinis)
EC50 Daphnia 2	265 mg/l (48 h; Daphnia magna)
TLM fish 1	300 ppm (96 h; Lepomis macrochirus)
TLM other aquatic organisms 1	500 ppm (96 h; Daphnia magna)
Threshold limit algae 1	242 mg/l (5 days; Algae)

(+)-limonene (5989-27-5)	
LC50 fish 1	720 µg/l (96 h; Pimephales promelas; Lethal)
EC50 Daphnia 1	0.36 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	702 µg/l (96 h; Pimephales promelas)
Threshold limit algae 1	150 mg/l (72 h; Desmodesmus subspicatus; GLP)
Threshold limit algae 2	2.62 mg/l (72 h; Desmodesmus subspicatus)

12.2. Persistence and degradability

sodium carbonate (497-19-8)	
Persistence and degradability	Biodegradability: not applicable. Low potential for adsorption in soil.

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sodium carbonate (497-19-8)	
ThOD	Not applicable (inorganic)

(+) -limonene (5989-27-5)	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Adsorbs into the soil.
ThOD	3.29 g O ₂ /g substance

4-nonylphenol, branched, ethoxylated (127087-87-0)	
Persistence and degradability	Biodegradable in water. No (test) data on mobility of the substance available.

12.3. Bioaccumulative potential

sodium carbonate (497-19-8)	
Log Pow	-6.19 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

(+) -limonene (5989-27-5)	
BCF fish 1	864.8 - 1022 (Pisces; Fresh weight)
Log Pow	4.38 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

4-nonylphenol, branched, ethoxylated (127087-87-0)	
Bioaccumulative potential	Low potential for bioaccumulation (molecular mass ≥ 700 g/mol).

12.4. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with Local, State, and Federal regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN Number

UN-No.(DOT) : 1903
Other information : Under 49 CFR 173.154(c) and (b)(2): This product may be shipped as ORM-D or Limited Quantity if the inner packagings do not exceed 5 L (1.3 gallons) or 5.0 kg (11 lbs). This provision does not apply to transportation by vessel or aircraft, except where other means of transportation is impracticable.

14.2. UN proper shipping name

DOT Proper Shipping Name : UN1903, Disinfectants, Liquid, Corrosive, N.O.S. (Quaternary Ammonium Compounds), 8, PGIII
Hazard labels (DOT) : 8 - Corrosive



SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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sodium carbonate (497-19-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
alkyl dimethyl benzyl ammonium chloride (C12-18) (68391-01-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
C12-C14-alkyl(ethylbenzyl)dimethylammonium chloride (85409-23-0/68956-79-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
(+)-limonene (5989-27-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard
4-nonylphenol, branched, ethoxylated (127087-87-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

15.2. International regulations

CANADA

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

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

Not classified

15.2.2. National regulations

EPA Registration Number : 1839-94-10693

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EPA Comments

: This chemical is a pesticide registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use.

PRECAUTIONARY STATEMENTS — HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER. KEEP OUT OF REACH OF CHILDREN. CORROSIVE. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin or on clothing. Wear goggles or face shield, rubber gloves, and protective clothing. Harmful if swallowed. Remove contaminated clothing and wash before reuse. Wash thoroughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds estuaries, oceans or other waters and aquatic invertebrates. Unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control center or doctor for treatment advice.

If swallowed: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity

Prop 65 Comments

:Formaldehyde (CAS#50-00-0): < 25 ppm

SECTION 16: Other information

Abbreviations Legend:

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
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Asp. Tox. 1	Aspiration hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 3	Flammable liquids Category 3
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
H226	Flammable liquid and vapor
H302	Harmful if swallowed

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H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Disclaimer

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ALL NON-EMERGENCY QUESTIONS SHOULD BE DIRECTED TO CUSTOMER SERVICE (310) 632-7124

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