## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>QUATERNARY DISINFECTANT CLEANER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other means of identification</td>
<td>not applicable</td>
</tr>
<tr>
<td>Recommended use</td>
<td>Cleaner and disinfectant</td>
</tr>
<tr>
<td>Restrictions on use</td>
<td>Reserved for industrial and professional use.</td>
</tr>
<tr>
<td>Product dilution information</td>
<td>0.39 % - 1.56 %</td>
</tr>
<tr>
<td>Company</td>
<td>Ecolab Inc.</td>
</tr>
<tr>
<td>370 N. Wabasha Street</td>
<td></td>
</tr>
<tr>
<td>St. Paul, Minnesota USA 55102</td>
<td></td>
</tr>
<tr>
<td>1-800-352-5326</td>
<td></td>
</tr>
<tr>
<td>Emergency telephone</td>
<td>1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)</td>
</tr>
<tr>
<td>Issuing date</td>
<td>06/16/2014</td>
</tr>
</tbody>
</table>

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

<table>
<thead>
<tr>
<th>Product AS SOLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (Oral)</td>
</tr>
<tr>
<td>Acute toxicity (Dermal)</td>
</tr>
<tr>
<td>Skin corrosion</td>
</tr>
<tr>
<td>Serious eye damage</td>
</tr>
</tbody>
</table>

### Product AT USE DILUTION

| Acute toxicity (Dermal) | Category 4 |
| Eye irritation | Category 2B |

### GHS Label element

**Product AS SOLD**

**Hazard pictograms**

- **Signal Word**: Danger
- **Hazard Statements**: Harmful if swallowed or in contact with skin. Causes severe skin burns and eye damage.
- **Precautionary Statements**: Prevention: Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/ protective clothing/ eye protection/ face protection. Response: IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position 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. Wash contaminated clothing before reuse.

**Storage:**
Store locked up.

**Disposal:**
Dispose of contents/container to an approved waste disposal plant.

### Product AT USE DILUTION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octyl decyl dimethyl ammonium chloride</td>
<td>32426-11-2</td>
<td>6.51</td>
</tr>
<tr>
<td>Dioctyl dimethyl ammonium chloride</td>
<td>5538-94-3</td>
<td>2.604</td>
</tr>
<tr>
<td>Didecyl dimethyl ammonium chloride</td>
<td>7173-51-5</td>
<td>3.906</td>
</tr>
<tr>
<td>Alkyl (C14, 50%; C12, 40%; C16, 10%) dimethyl benzyl ammonium chloride</td>
<td>68424-85-1</td>
<td>8.68</td>
</tr>
<tr>
<td>alcohol ethoxylate</td>
<td>68439-46-3</td>
<td>5 - 10</td>
</tr>
<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>ethylenediamine tetraacetate</td>
<td>64-02-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>sodium metasilicate</td>
<td>6834-92-0</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

### Other hazards
None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Product AS SOLD

<table>
<thead>
<tr>
<th>Pure substance/mixture</th>
<th>Mixture</th>
</tr>
</thead>
</table>

#### Chemical Name

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octyl decyl dimethyl ammonium chloride</td>
<td>32426-11-2</td>
<td>0.1016</td>
</tr>
<tr>
<td>Dioctyl dimethyl ammonium chloride</td>
<td>5538-94-3</td>
<td>0.0406</td>
</tr>
<tr>
<td>Didecyl dimethyl ammonium chloride</td>
<td>7173-51-5</td>
<td>0.0609</td>
</tr>
<tr>
<td>Alkyl (C14, 50%; C12, 40%; C16, 10%) dimethyl benzyl ammonium chloride</td>
<td>68424-85-1</td>
<td>0.1354</td>
</tr>
<tr>
<td>alcohol ethoxylate</td>
<td>68439-46-3</td>
<td>0 - 0.1</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

Product AS SOLD
In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact: Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed: Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled: Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

Protection of first-aiders: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician: Treat symptomatically.

Product AT USE DILUTION
In case of eye contact: Rinse with plenty of water.

In case of skin contact: Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops and persists.

If swallowed: Rinse mouth. Get medical attention if symptoms occur.

If inhaled: Get medical attention if symptoms occur.

See toxicological information (Section 11)

SECTION 5. FIRE-FIGHTING MEASURES

Product AS SOLD
Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: None known.

Specific hazards during fire fighting: Not flammable or combustible.

Hazardous combustion products: Decomposition products may include the following materials:
- Carbon oxides
- Nitrogen oxides (NOx)
- Sulfur oxides
- Oxides of phosphorus

Special protective equipment for fire-fighters: Use personal protective equipment.

Specific extinguishing: Fire residues and contaminated fire extinguishing water must be
SECTION 6. ACCIDENTAL RELEASE MEASURES

Product AS SOLD
Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up: Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

Product AS SOLD
Advice on safe handling: Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling.


Storage temperature: 0 °C to 50 °C

Product AT USE DILUTION
Advice on safe handling: Wash hands thoroughly after handling.

Conditions for safe storage: Keep out of reach of children. Store in suitable labeled containers.

SECTION 8. EXPOSURE CONTROLS/PERSOANL PROTECTION

Product AS SOLD
Ingredients with workplace control parameters
SAFETY DATA SHEET

QUATERNARY DISINFECTANT CLEANER

Ingredients | CAS-No. | Form of exposure | Permissible concentration | Basis |
--- | --- | --- | --- | --- |
ethanol | 64-17-5 | TWA | 1,000 ppm | ACGIH |
 |  | TWA | 1,000 ppm | NIOSH REL |
 |  | TWA | 1,000 ppm | OSHA Z1 |

Engineering measures: Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection: Safety goggles
Face-shield

Hand protection: Wear the following personal protective equipment:
Standard glove type.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection: Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Product AT USE DILUTION

Engineering measures: Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection: No special protective equipment required.

Hand protection: No special protective equipment required.

Skin protection: No special protective equipment required.

Respiratory protection: No personal respiratory protective equipment normally required.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Product AS SOLD</th>
<th>Product AT USE DILUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>clear, dark red</td>
</tr>
<tr>
<td>Odor</td>
<td>Floral</td>
</tr>
<tr>
<td>pH</td>
<td>12.0 - 13.5, 100 %</td>
</tr>
<tr>
<td>Flash point</td>
<td>101 °C</td>
</tr>
<tr>
<td></td>
<td>light red</td>
</tr>
<tr>
<td></td>
<td>Floral</td>
</tr>
<tr>
<td></td>
<td>10.54 - 10.93</td>
</tr>
</tbody>
</table>
Odor Threshold : no data available
Melting point/freezing point : no data available
Initial boiling point and boiling range : no data available
Evaporation rate : no data available
Flammability (solid, gas) : no data available
Upper explosion limit : no data available
Lower explosion limit : no data available
Vapor pressure : no data available
Relative vapor density : no data available
Relative density : 0.99 - 1.014
Water solubility : soluble
Solubility in other solvents : no data available
Partition coefficient: n-octanol/water : no data available
Autoignition temperature : no data available
Thermal decomposition : no data available
Viscosity, kinematic : no data available
Explosive properties : no data available
Oxidizing properties : no data available
Molecular weight : no data available
VOC : no data available

SECTION 10. STABILITY AND REACTIVITY

Product AS SOLD
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.
Conditions to avoid : None known.
Incompatible materials : Acids
Hazardous decomposition products : Decomposition products may include the following materials:
Carbon oxides
nitrogen oxides (NOx)
Sulfur oxides
Oxides of phosphorus

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

Potential Health Effects

Product AS SOLD
SAFETY DATA SHEET

QUATERNARY DISINFECTANT CLEANER

Eyes : Causes serious eye damage.
Skin : Causes severe skin burns.
Ingestion : Causes digestive tract burns.
Inhalation : May cause nose, throat, and lung irritation.
Chronic Exposure : Health injuries are not known or expected under normal use.

**Product AT USE DILUTION**

Eyes : Causes eye irritation.
Skin : Harmful in contact with skin.
Ingestion : Health injuries are not known or expected under normal use.
Inhalation : Health injuries are not known or expected under normal use.
Chronic Exposure : Health injuries are not known or expected under normal use.

**Experience with human exposure**

**Product AS SOLD**

Eye contact : Redness, Pain, Corrosion
Skin contact : Redness, Pain, Corrosion
Ingestion : Corrosion, Abdominal pain
Inhalation : Respiratory irritation, Cough

**Product AT USE DILUTION**

Eye contact : Redness, Irritation
Skin contact : No information available.
Ingestion : No symptoms known or expected.
Inhalation : No symptoms known or expected.

**Toxicity**

**Product AS SOLD**

Acute oral toxicity : Acute toxicity estimate : 1,316 mg/kg
Acute inhalation toxicity : no data available
Acute dermal toxicity : Acute toxicity estimate : > 1,000 mg/kg
Skin corrosion/irritation : no data available
Respiratory or skin sensitization : no data available
Carcinogenicity

IARC : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA : No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive effects: no data available
Germ cell mutagenicity: no data available
Teratogenicity: no data available
STOT-single exposure: no data available
STOT-repeated exposure: no data available
Aspiration toxicity: no data available

Ingredients

Acute inhalation toxicity:
- Octyl decyl dimethyl ammonium chloride
  4 h LC50 rat: 0.07 mg/l
- Dioctyl dimethyl ammonium chloride
  4 h LC50 rat: 0.07 mg/l
- Didecyl dimethyl ammonium chloride
  4 h LC50 rat: 0.07 mg/l
- Alkyl (C14, 50%; C12, 40%; C16, 10%) dimethyl benzyl ammonium chloride
  4 h LC50 rat: > 0.054 mg/l
- Ethanol
  4 h LC50 rat: 117 mg/l

SECTION 12. ECOLOGICAL INFORMATION

Product AS SOLD

Ecotoxicity

Environmental Effects: This product has no known ecotoxicological effects.

Product

Toxicity to fish: no data available
Toxicity to daphnia and other aquatic invertebrates: no data available
Toxicity to algae: no data available

Ingredients

Toxicity to fish:
- Octyl decyl dimethyl ammonium chloride
  96 h LC50 Fish: 1 mg/l
- Didecyl dimethyl ammonium chloride
  96 h LC50 Fish: 1 mg/l
- Alkyl (C14, 50%; C12, 40%; C16, 10%) dimethyl benzyl ammonium chloride
  96 h LC50 Fish: 0.515 mg/l
- Alcohol ethoxylate
  96 h LC50 Fish: 8.5 mg/l
ethanol
96 h LC50 Fish: 11,000 mg/l

ethylenediamine tetraacetate
96 h LC50 Fish: 121 mg/l

sodium metasilicate
96 h LC50 Fish: 210 mg/l

**Ingredients**

Toxicity to daphnia and other aquatic invertebrates: Dioctyl dimethyl ammonium chloride 48 h EC50 Daphnia: 0.1 mg/l

**Persistence and degradability**
no data available

**Bioaccumulative potential**
no data available

**Mobility in soil**
no data available

**Other adverse effects**
no data available

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Product AS SOLD**

Disposal methods: The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations: Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.


**Product AT USE DILUTION**

Disposal methods: The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations: Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION**
SAFETY DATA SHEET

QUATERNARY DISINFECTANT CLEANER

Product AS SOLD

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)
UN number : 1903
Description of the goods : Disinfectants, liquid, corrosive n.o.s. (Quaternary ammonium compound)
Class : 8
Packing group : III
Environmentally hazardous : no

Sea transport (IMDG/IMO)
UN number : 1903
Description of the goods : DISINFECTANT, LIQUID, CORROSIVE, N.O.S. (Quaternary ammonium compound)
Class : 8
Packing group : III
Marine pollutant : no

Product AT USE DILUTION
Not intended for transport.

SECTION 15. REGULATORY INFORMATION

Product AS SOLD

EPA Registration number : 6836-78-1677

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards
SARA 302
SARA 313

California Prop 65
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

1907/2006 (EU) : not determined

Switzerland. New notified substances and declared preparations : not determined
SAFETY DATA SHEET
QUATERNARY DISINFECTANT CLEANER

United States TSCA Inventory:
On TSCA Inventory

Canadian Domestic Substances List (DSL):
All components of this product are on the Canadian DSL.

Australia Inventory of Chemical Substances (AICS):
not determined

New Zealand. Inventory of Chemical Substances:
not determined

Japan. ENCS - Existing and New Chemical Substances Inventory:
not determined

Japan. ISHL - Inventory of Chemical Substances (METI):
not determined

Korea. Korean Existing Chemicals Inventory (KECI):
not determined

Philippines Inventory of Chemicals and Chemical Substances (PICCS):
not determined

China. Inventory of Existing Chemical Substances in China (IECSC):
not determined

SECTION 16. OTHER INFORMATION

Product AS SOLD
NFPA:

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Special hazard.

HMIS III:

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Product AT USE DILUTION
SAFETY DATA SHEET
QUATERNARY DISINFECTANT CLEANER

Issuing date : 06/16/2014
Version : 1.0
Prepared by : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.