SAFETY DATA SHEET

OXY-SEPT 333

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: OXY-SEPT 333
Other means of identification: Not applicable
Recommended use: Disinfectant
Restrictions on use: Reserved for industrial and professional use.
Product dilution information: 0.2 % - 2.3 %
Company: Ecolab Inc.
370 N. Wabasha Street
St. Paul, Minnesota USA 55102
1-800-352-5326
Emergency health information: 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)
Issuing date: 08/21/2015

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Product AS SOLD
Oxidizing liquids: Category 3
Organic peroxides: Type F
Acute toxicity (Oral): Category 4
Acute toxicity (Inhalation): Category 3
Skin corrosion: Category 1A
Serious eye damage: Category 1

Product AT USE DILUTION
Acute toxicity (Oral): Category 4

GHS Label element

Product AS SOLD
Hazard pictograms:

Signal Word: Danger

Hazard Statements: Heating may cause a fire. May intensify fire; oxidizer. Harmful if swallowed. Causes severe skin burns and eye damage. Toxic if inhaled.

Precautionary Statements: Prevention:
Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep/Store away from clothing/ combustible materials. Take any precaution to avoid mixing with combustibles. Keep only in original container. Keep cool. Avoid breathing dust/ fume/ gas/ mist/ vapors/
spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. 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. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:
Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Store away from other materials.

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>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>27.5</td>
</tr>
<tr>
<td>Peroxyacetic acid</td>
<td>79-21-0</td>
<td>5.8</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>5 - 10</td>
</tr>
<tr>
<td>dodecylbenzene sulfonic acid and its salt</td>
<td>27176-87-0</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

Product AS SOLD

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>0.63</td>
</tr>
<tr>
<td>Peroxyacetic acid</td>
<td>79-21-0</td>
<td>0.13</td>
</tr>
</tbody>
</table>

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product AS SOLD

Pure substance/mixture : Mixture

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 immediately.

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

Notes to physician: Treat symptomatically.

Most important symptoms and effects, both acute and delayed: See Section 11 for more detailed information on health effects and symptoms.

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

In case of skin contact: Rinse with plenty of water.

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

If inhaled: Get medical attention if symptoms occur.

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: Oxidizer. Contact with other material may cause fire.

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 methods: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire
and/or explosion do not breathe fumes.

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.

Product AT USE DILUTION
Personal precautions, protective equipment and emergency procedures : 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. Do not mix with bleach or other chlorinated products – will cause chlorine gas.


Storage temperature : 0 °C to 40 °C

Product AT USE DILUTION
Advice on safe handling : Do not ingest. Wash hands thoroughly after handling.

Conditions for safe storage : Keep out of reach of children. Store in suitable labeled containers.
## Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Form of exposure</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>TWA</td>
<td>1 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 ppm 1.4 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 ppm 1.4 mg/m³</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>Peroxyacetic acid</td>
<td>79-21-0</td>
<td>STEL</td>
<td>0.4 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>TWA</td>
<td>10 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>15 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>15 ppm 37 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>10 ppm 25 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>10 ppm 25 mg/m³</td>
<td>OSHA Z1</td>
</tr>
</tbody>
</table>

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

### Personal protective equipment

**Eye protection**: Wear eye protection/face protection.

**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>Property</th>
<th>Product AS SOLD</th>
<th>Product AT USE DILUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>clear, colorless</td>
<td>colorless</td>
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<tr>
<td>Odor</td>
<td>pungent</td>
<td>pungent</td>
</tr>
<tr>
<td>pH</td>
<td>2.0, 100 %</td>
<td>2.0 - 3.0</td>
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<tr>
<td>Flash point</td>
<td>Not applicable, Does not sustain combustion.</td>
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</tr>
<tr>
<td>Odor Threshold</td>
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<tr>
<td>Melting point/freezing point</td>
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</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>&gt; 100 °C</td>
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<td>Evaporation rate</td>
<td>No data available</td>
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<td>Flammability (solid, gas)</td>
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<tr>
<td>Upper explosion limit</td>
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</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
<td></td>
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<tr>
<td>Vapor pressure</td>
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</tr>
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<td>Relative vapor density</td>
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<tr>
<td>Relative density</td>
<td>1.08 - 1.16</td>
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<tr>
<td>Water solubility</td>
<td>soluble</td>
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<td>Solubility in other solvents</td>
<td>No data available</td>
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</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td></td>
</tr>
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<td>Autoignition temperature</td>
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<tr>
<td>Thermal decomposition</td>
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<td>Viscosity, kinematic</td>
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<tr>
<td>Explosive properties</td>
<td>No data available</td>
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<tr>
<td>Oxidizing properties</td>
<td>yes</td>
<td></td>
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<tr>
<td>Molecular weight</td>
<td>No data available</td>
<td></td>
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<tr>
<td>VOC</td>
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</tr>
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<td><strong>SECTION 10. STABILITY AND REACTIVITY</strong></td>
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<tr>
<td><strong>Product AS SOLD</strong></td>
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<td></td>
</tr>
<tr>
<td>Chemical stability</td>
<td>pressure build-up</td>
<td></td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Do not mix with bleach or other chlorinated products – will cause chlorine gas.</td>
<td></td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>None known.</td>
<td></td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Bases</td>
<td>Metals</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>Decomposition products may include the following materials: Carbon oxides Nitrogen oxides (NOx)</td>
<td></td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

OXY-SEPT 333

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

Eyes: Causes serious eye damage.

Skin: Causes severe skin burns.

Ingestion: Harmful if swallowed. Causes digestive tract burns.

Inhalation: Toxic if inhaled. May cause nose, throat, and lung irritation.

Chronic Exposure: Health injuries are not known or expected under normal use.

Product AT USE DILUTION

Eyes: Health injuries are not known or expected under normal use.

Skin: Health injuries are not known or expected under normal use.

Ingestion: Harmful if swallowed.

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: No symptoms known or expected.

Skin contact: No symptoms known or expected.

Ingestion: No information available.

Inhalation: No symptoms known or expected.

Toxicity

Product AS SOLD

Acute oral toxicity: Acute toxicity estimate: 1,659 mg/kg

Acute inhalation toxicity: 4 h LC50 Rat: 5 mg/l

Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg
SAFETY DATA SHEET

OXY-SEPT 333

Skin corrosion/irritation: No data available
Serious eye damage/eye 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

SECTION 12. ECOLOGICAL INFORMATION

Product AS SOLD
Ecotoxicity
Environmental Effects: Toxic to aquatic life.

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: Peroxyacetic acid
96 h LC50: 0.8 mg/l
Acetic acid
96 h LC50: 75 mg/l
dodecylbenzene sulfonic acid and its salt
96 h LC50 Fish: 4.3 mg/l

Ingredients
Toxicity to daphnia and other aquatic invertebrates: Peroxyacetic acid
48 h EC50: 0.73 mg/l
Toxicity to algae:
- Hydrogen peroxide: 72 h EC50: 1.38 mg/l
- Peroxyacetic acid: 72 h EC50: 0.7 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 reuse empty containers. Dispose of in accordance with local, state, and federal regulations.

RCRA - Resource Conservation and Recovery Authorization Act Hazardous waste:
- D001 (Ignitable)
- D002 (Corrosive)

Product AT USE DILUTION
Disposal methods:
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 reuse empty containers. Dispose of in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

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: 3109
SAFETY DATA SHEET

Description of the goods: Organic peroxide type F, liquid (Peroxyacetic acid)

Class: 5.2
Packing group: II
Environmentally hazardous: no

Sea transport (IMDG/IMO)
UN number: 3098
Description of the goods: OXIDIZING LIQUID, CORROSIVE, N.O.S. (Peroxyacetic acid)
Class: 5.1 (8)
Packing group: II
Marine pollutant: no

Product AT USE DILUTION
Not intended for transport.

SECTION 15. REGULATORY INFORMATION

Product AS SOLD

EPA Registration number: 1677-129

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>5000</td>
<td>85837</td>
</tr>
</tbody>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards:
- Fire Hazard
- Reactivity Hazard
- Acute Health Hazard

SARA 302

The following components are subject to reporting levels established by SARA Title III, Section 302:
- Peroxyacetic acid 79-21-0
  7.125 %

The following components are subject to reporting levels established by SARA Title III, Section 302:
- Hydrogen peroxide 7722-84-1
  26.3125 %
- Peroxyacetic acid 79-21-0
  7.125 %

SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:
- Peroxyacetic acid 79-21-0
  7.125 %

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:

Switzerland. New notified substances and declared preparations:
On the inventory, or in compliance with the inventory

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):
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemical Substances:
On the inventory, or in compliance with the inventory

Japan. ENCS - Existing and New Chemical Substances Inventory:
On the inventory, or in compliance with the inventory

Japan. ISHL - Inventory of Chemical Substances (METI):
On the inventory, or in compliance with the inventory

Korea. Korean Existing Chemicals Inventory (KECI):
On the inventory, or in compliance with the inventory

Philippines Inventory of Chemicals and Chemical Substances (PICCS):
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances in China (IECSC):
On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Product AS SOLD
NFPA:

Flammability

1

OX

Health

Special hazard.

HMIS III:

HEALTH

3

FLAMMABILITY

1

PHYSICAL HAZARD

1

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

Product AT USE DILUTION
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.