SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TRI-STAR AQUA SOFT
Other means of identification : Not applicable
Recommended use : Laundry softener
Restrictions on use : Reserved for industrial and professional use.

Product dilution information : 0.03 % - 0.06 %

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 : 11/09/2015

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Product AS SOLD
Skin corrosion : Category 1A
Serious eye damage : Category 1

Product AT USE DILUTION
Not a hazardous substance or mixture.

GHS Label element
Product AS SOLD
Hazard pictograms : 

Signal Word : Danger
Hazard Statements : Causes severe skin burns and eye damage.
Precautionary Statements : Prevention:
Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN
(or hair): Take off immediately all contaminated clothing. Rinse skin
with water/shower. IF INHALED: Remove person to fresh air and keep
comfortable for breathing. Immediately call a POISON CENTER or
doctor/ physician. 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:
SAFETY DATA SHEET

TRI-STAR AQUA SOFT

Store locked up.

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

Product AT USE DILUTION
Precautionary Statements
Prevention:
Wash hands thoroughly after handling.
Response:
Get medical advice/ attention if you feel unwell.
Storage:
Store in accordance with local regulations.

Product AS SOLD
Other hazards:
Do not mix with bleach or other chlorinated products – will cause chlorine gas.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product AS SOLD
Pure substance/mixture:
Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>formic acid</td>
<td>64-18-6</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Amines (incl. ethanolamines)</td>
<td>68410-69-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

Product AT USE DILUTION
No hazardous ingredients

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.

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

900224-01
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 firefighting: 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 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: Refer to protective measures listed in sections 7 and 8.
Environmental precautions: No special environmental precautions required.
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TRI-STAR AQUA SOFT

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:
Warning! Do not use together with other products. May release dangerous gases (chlorine). Do not ingest. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.

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.

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

Storage temperature:
5 °C to 50 °C

Product AT USE DILUTION
Advice on safe handling:
Wash hands after handling. For personal protection see section 8.

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Product AS SOLD
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>formic acid</td>
<td>64-18-6</td>
<td>TWA</td>
<td>5 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>10 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 ppm 9 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 ppm 9 mg/m3</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>400 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>400 ppm 980 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>500 ppm 1,225 mg/m3</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>400 ppm 980 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 : Good general ventilation should be sufficient to control worker
     exposure to airborne contaminants.

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></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>opaque, light blue</td>
<td>colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Perfumes, fragrances</td>
<td>Perfumes, fragrances</td>
</tr>
<tr>
<td>pH</td>
<td>1.3 - 1.7, 100 %</td>
<td>5.0 - 7.0</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable, Does not sustain combustion.</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>&gt; 100 °C</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

TRI-STAR AQUA SOFT

Relative vapor density : No data available
Relative density : 1.018 - 1.033
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 : 29.307 mm²/s (40 °C)

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 : Warning! Do not use together with other products. May release dangerous gases (chlorine).
Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions to avoid : None known.
Incompatible materials : Bases
Metals
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
Eyes : Causes serious eye damage.
Skin : Causes severe skin burns.
Ingestion : Causes digestive tract burns.
Inhalation : May cause nose, throat, and lung irritation.
**SAFETY DATA SHEET**

**TRI-STAR AQUA SOFT**

<table>
<thead>
<tr>
<th>Chronic Exposure</th>
<th>Health injuries are not known or expected under normal use.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Product AT USE DILUTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eyes</strong></td>
</tr>
<tr>
<td><strong>Skin</strong></td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
</tr>
<tr>
<td><strong>Chronic Exposure</strong></td>
</tr>
</tbody>
</table>

**Experience with human exposure**

<table>
<thead>
<tr>
<th><strong>Product AS SOLD</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Product AT USE DILUTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye contact</strong></td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
</tr>
</tbody>
</table>

**Toxicity**

<table>
<thead>
<tr>
<th><strong>Product AS SOLD</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute oral toxicity</strong></td>
</tr>
<tr>
<td><strong>Acute inhalation toxicity</strong></td>
</tr>
<tr>
<td><strong>Acute dermal toxicity</strong></td>
</tr>
<tr>
<td><strong>Skin corrosion/irritation</strong></td>
</tr>
<tr>
<td><strong>Serious eye damage/eye irritation</strong></td>
</tr>
<tr>
<td><strong>Respiratory or skin sensitization</strong></td>
</tr>
<tr>
<td><strong>Carcinogenicity</strong></td>
</tr>
<tr>
<td><strong>Reproductive effects</strong></td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
</tr>
<tr>
<td><strong>Teratogenicity</strong></td>
</tr>
<tr>
<td><strong>STOT-single exposure</strong></td>
</tr>
<tr>
<td><strong>STOT-repeated exposure</strong></td>
</tr>
<tr>
<td><strong>Aspiration toxicity</strong></td>
</tr>
</tbody>
</table>

**Ingredients**
SAFETY DATA SHEET
TRI-STAR AQUA SOFT

Acute oral toxicity : Amines (incl. ethanolamines)
LD50 Rat: > 15,000 mg/kg
propan-2-ol
LD50 Rat: 5,840 mg/kg

Ingredients
Acute inhalation toxicity : propan-2-ol
4 h LC50 Rat: > 30 mg/l

Ingredients
Acute dermal toxicity : propan-2-ol
LD50 Rabbit: 12,870 mg/kg

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 : formic acid
96 h LC50: > 100 mg/l
Amines (incl. ethanolamines)
96 h LC50 Fish: 55 mg/l
propan-2-ol
96 h LC50 Pimephales promelas (fathead minnow): 9,640 mg/l

Ingredients
Toxicity to daphnia and other aquatic invertebrates : propan-2-ol
LC50 Daphnia magna (Water flea): > 10,000 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: 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. Dispose of in accordance with local, state, and federal regulations.


Product AT USE DILUTION
Disposal methods: Diluted product can be flushed to sanitary sewer.

Disposal considerations: 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: 3412
Description of the goods: Formic acid
Class: 8
Packing group: III
Environmentally hazardous: no

Sea transport (IMDG/IMO)
UN number: 3412
Description of the goods: FORMIC ACID
Class: 8
Packing group: III
Marine pollutant: no

Product AT USE DILUTION
Not intended for transport.

SECTION 15. REGULATORY INFORMATION

Product AS SOLD
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>formic acid</td>
<td>64-18-6</td>
<td>5000</td>
<td>55556</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**
- Acute Health Hazard

**SARA 302**
- No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313**
- The following components are subject to reporting levels established by SARA Title III, Section 313:
  - formic acid 64-18-6 9%

**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**
- not determined

**United States TSCA Inventory**
- On TSCA Inventory

**Canadian Domestic Substances List (DSL)**
- This product contains one or several components listed in the Canadian NDSL.

**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**
SAFETY DATA SHEET

TRI-STAR AQUA SOFT

**Product AT USE DILUTION**

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

**Health**

**Flammability**

**Physical Hazard**

Issuing date : 11/09/2015
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.