SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: APEX MANUAL DETERGENT
Other means of identification: not applicable
Recommended use: Manual Warewashing Detergent
Restrictions on use: Reserved for industrial and professional use.
Product dilution information: 0.0376 % - 0.0376 %

Company: Ecolab Inc.
370 N. Wabasha Street
St. Paul, Minnesota USA 55102
1-800-352-5326

Emergency telephone: 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)
Issuing date: 08/07/2014

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Product AS SOLD
Skin irritation: Category 2
Eye irritation: Category 2A

Product AT USE DILUTION
Not a hazardous substance or mixture.

GHS Label element
Product AS SOLD
Hazard pictograms: ![Exclamation Mark]

Signal Word: Warning
Hazard Statements: Causes skin irritation.
Causes serious eye irritation.

Precautionary Statements: Prevention:
Wash skin thoroughly after handling.
Response:
IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

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.

Other hazards: None known.

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>sodium dodecylbenzene sulfonate</td>
<td>25155-30-0</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Ethoxylated alkyl sulfate</td>
<td>68585-34-2</td>
<td>10 - 30</td>
</tr>
<tr>
<td>dodecanamide, n-(2-hydroxyethyl)-amides, coco, n-(hydroxyethyl)</td>
<td>142-78-9</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Polyethylene Glycol</td>
<td>68140-00-1</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Sodium silicate</td>
<td>25322-68-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Alkylpolyglycosides</td>
<td>1344-09-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Polyethylene Glycol</td>
<td>110615-47-9</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.

In case of skin contact: Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. 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.

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: Rinse with plenty of water.

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
SAFETY DATA SHEET
APEX MANUAL DETERGENT

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 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 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.

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 : Avoid contact with skin and eyes. Wash hands thoroughly after handling.

Conditions for safe storage : Keep out of reach of children. Store in suitable labeled containers.
SAFETY DATA SHEET
APEX MANUAL DETERGENT

Storage temperature: 0 °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>Polyethylene Glycol</td>
<td>25322-68-3</td>
<td>TWA</td>
<td>10 mg/m3</td>
<td>WEEL</td>
</tr>
</tbody>
</table>

Engineering measures: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection: Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.
Hand protection: Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.
Skin protection: No special protective equipment required.
Respiratory protection: No personal respiratory protective equipment normally required.
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling.

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>Extruded solid.</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Opaque, purple</td>
<td>Purple</td>
</tr>
</tbody>
</table>
**SAFETY DATA SHEET**

**APEX MANUAL DETERGENT**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>citrus</td>
</tr>
<tr>
<td>pH</td>
<td>7.5 - 8.5, 1 %</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>no data available</td>
</tr>
<tr>
<td>Initial boiling point and</td>
<td>no data available</td>
</tr>
<tr>
<td>boiling range</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>no data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.15 - 1.37</td>
</tr>
<tr>
<td>Water solubility</td>
<td>partly soluble</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>no data available</td>
</tr>
<tr>
<td>Partition coefficient: n-</td>
<td>no data available</td>
</tr>
<tr>
<td>octanol/water</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>no data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>no data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>no data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>The substance or mixture is not classified as oxidizing.</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>no data available</td>
</tr>
<tr>
<td>VOC</td>
<td>no data available</td>
</tr>
</tbody>
</table>

**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**: None known.
- **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**: Eye contact, Skin contact
Potential Health Effects

**Product AS SOLD**

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Causes serious eye irritation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
<tr>
<td>Chronic Exposure</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
</tbody>
</table>

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

**Experience with human exposure**

**Product AS SOLD**

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Redness, Pain, Irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin contact</td>
<td>Redness, Irritation</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No symptoms known or expected.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No symptoms known or expected.</td>
</tr>
</tbody>
</table>

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

**Toxicity**

**Product AS SOLD**

| Acute oral toxicity          | Acute toxicity estimate : 2,398 mg/kg |
| Acute inhalation toxicity    | no data available                  |
| Acute dermal toxicity        | Acute toxicity estimate : > 5,000 mg/kg |
| Skin corrosion/irritation    | Skin irritation                    |
SAFETY DATA SHEET
APEX MANUAL DETERGENT

Serious eye damage/eye irritation: Eye irritation
Respiratory or skin sensitization: no data available
Carcinogenicity: no data available
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: sodium dodecylbenzene sulfonate
96 h LC50: 3.2 mg/l
Ethoxylated alkyl sulfate
96 h LC50 Fish: 28 mg/l
dodecanamide, n-(2-hydroxyethyl)-
96 h LC50 Fish: > 100 mg/l
Polyethylene Glycol
96 h LC50 Fish: > 1,000 mg/l
Sodium silicate
96 h LC50: 210 mg/l
Alkylpolyglycosides
96 h LC50 Fish: 5 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.

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.

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)
Not dangerous goods

Sea transport (IMDG/IMO)
Not dangerous goods

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>sodium dodecylbenzene sulfonate</td>
<td>25155-30-0</td>
<td>1000</td>
<td>2417</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: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 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:

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: 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  
APEX MANUAL DETERGENT

NFPA:  

<table>
<thead>
<tr>
<th>Flammability</th>
<th>Health</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

HMIS III:  

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>PHYSICAL HAZARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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

Product AT USE DILUTION

NFPA:  

<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>

HMIS III:  

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

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

Issuing date : 08/07/2014  
Version : 1.1  
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.