

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : SOLITAIRE  
 Other means of identification : Not applicable  
 Recommended use : Manual Warewashing Detergent  
 Restrictions on use : Reserved for industrial and professional use.

Product dilution information : 0.03 % - 0.08 %

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 : 02/15/2016

**SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification**

**Product AS SOLD**

Skin irritation : Category 2  
 Eye irritation : Category 2B

**Product AT USE DILUTION**

Not a hazardous substance or mixture.

**GHS label elements**

**Product AS SOLD**

Hazard pictograms :



Signal Word : Warning

Hazard Statements : Causes skin and eye irritation.

Precautionary Statements : **Prevention:**  
 Wash skin thoroughly after handling. Wear protective gloves.  
**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:**

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## SOLITAIRE

Get medical advice/ attention if you feel unwell.

**Storage:**

Store in accordance with local regulations.

**Product AS SOLD**

**Other hazards** : None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Product AS SOLD**

Pure substance/mixture : Mixture

Chemical name	CAS-No.	Concentration (%)
sodium dodecylbenzene sulfonate	25155-30-0	30 - 60
Polyethylene Glycol	25322-68-3	10 - 30
dodecanamide, n-(2-hydroxyethyl)-	142-78-9	10 - 30
Sodium poly(oxyethylene) dodecyl ether sulfate	68585-34-2	5 - 10
Alkylamineoxides	68155-09-9	5 - 10
acetic acid, sodium salt	127-09-3	1 - 5
ethanol	64-17-5	1 - 5

**Product AT USE DILUTION**

No hazardous ingredients

### SECTION 4. FIRST AID MEASURES

**Product AS SOLD**

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. 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 : No special precautions are necessary for first aid responders.

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

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### SOLITAIRE

#### 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 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 : Sweep up and shovel into suitable containers for disposal.

#### 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). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Do not flush into surface water or sanitary sewer system.

### 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.
- Storage temperature : 0 °C to 50 °C

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## SOLITAIRE

### 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

Ingredients	CAS-No.	Form of exposure	Permissible concentration	Basis
Polyethylene Glycol	25322-68-3	TWA (Aerosol.)	10 mg/m <sup>3</sup>	AIHA WEEL
ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA Z1

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 : 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.

### 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

**Product AS SOLD**  
Appearance : Cast Solid  
Color : opaque, light pink

**Product AT USE DILUTION**  
liquid  
colorless

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Odor	: citrus	citrus
pH	: 7.0 - 9.0, 1 %	7.0 - 8.0
Flash point	: Not applicable	
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	: No data available	
Water solubility	: insoluble	
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	: None known.
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides Nitrogen oxides (NO <sub>x</sub> ) Sulfur oxides Oxides of phosphorus

## SECTION 11. TOXICOLOGICAL INFORMATION

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

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### Potential Health Effects

#### Product AS SOLD

- Eyes : Causes eye irritation.
- Skin : Causes skin irritation.
- 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.

#### 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 : 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, Irritation
- Skin contact : Redness, Irritation
- Ingestion : No symptoms known or expected.
- Inhalation : No symptoms known or expected.

#### Product AT USE DILUTION

- Eye contact : No symptoms known or expected.
- Skin contact : No symptoms known or expected.
- Ingestion : No symptoms known or expected.
- Inhalation : No symptoms known or expected.

### Toxicity

#### Product AS SOLD

- Acute oral toxicity : Acute toxicity estimate : 2,567 mg/kg
- Acute inhalation toxicity : No data available
- Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg
- Skin corrosion/irritation : No data available

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Serious eye damage/eye irritation : Mild 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

#### Ingredients

Acute inhalation toxicity : acetic acid, sodium salt  
4 h LC50 Rat: > 5.6 mg/l

ethanol  
4 h LC50 Rat: 117 mg/l

### 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

Polyethylene Glycol  
96 h LC50 Fish: > 1,000 mg/l

dodecanamide, n-(2-hydroxyethyl)-  
96 h LC50 Fish: > 100 mg/l

Sodium poly(oxyethylene) dodecyl ether sulfate  
96 h LC50 Fish: 28 mg/l

acetic acid, sodium salt  
96 h LC50 Fish: > 100 mg/l

ethanol  
96 h LC50 Pimephales promelas (fathead minnow): > 100 mg/l

#### Persistence and degradability

No data available

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### 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. 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)

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

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium dodecylbenzene sulfonate	25155-30-0	1000	3247

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### SOLITAIRE

#### 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** : 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 :

On the inventory, or in compliance with the inventory

#### Japan. ISHL - Inventory of Chemical Substances (METI) :

not determined

#### 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

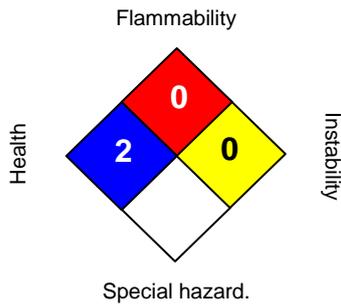
### SECTION 16. OTHER INFORMATION

**Product AS SOLD**

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## SOLITAIRE

### NFPA:



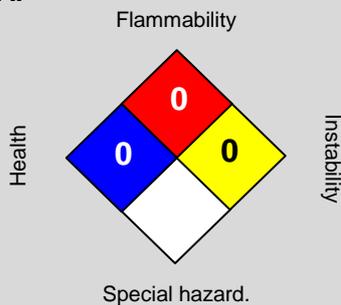
### HMIS III:

<b>HEALTH</b>	<b>2</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

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

### Product AT USE DILUTION

### NFPA:



### HMIS III:

<b>HEALTH</b>	<b>0</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

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

Issuing date : 02/15/2016  
Version : 1.2  
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.