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**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.  
1 Ecolab Place  
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 : 03/21/2024

**SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification**

**Product AS SOLD**

Skin irritation : Category 2  
 Eye irritation : Category 2B  
 Specific target organ toxicity - repeated exposure (Oral) : Category 2

**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.  
May cause damage to organs through prolonged or repeated exposure if swallowed.

Precautionary Statements : Prevention:  
Do not breathe dust. 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. Get medical advice/ attention if you feel unwell. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take



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## SOLITAIRE

off contaminated clothing and wash before reuse.

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

: 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
Amides, coco, N-[3-(dimethylamino)propyl], N-oxides	68155-09-9	5 - 10
Sodium poly(oxyethylene) dodecyl ether sulfate	68585-34-2	5 - 10
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.

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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 : Not flammable or combustible.

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

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



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### Product AS SOLD

Advice on safe handling : Avoid contact with skin and eyes. Wash hands thoroughly after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE).

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

Storage temperature : 0 °C to 50 °C

### Product AT USE DILUTION

Advice on safe handling : Wash hands after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE). 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

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

#### 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. 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.

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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	Product AT USE DILUTION
Appearance	: Cast Solid	liquid
Color	: opaque, light pink	colorless
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)	: Not applicable	
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  
Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.



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- 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

## SECTION 11. TOXICOLOGICAL INFORMATION

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

### 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 : May cause damage to organs through prolonged or repeated exposure.

#### 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.

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### Toxicity

#### Product AS SOLD

##### Product

- Acute oral toxicity : Acute toxicity estimate : 2,313 mg/kg
- Acute inhalation toxicity : 4 h Acute toxicity estimate : 101.04 mg/l  
Test atmosphere: dust/mist
- Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg
- Skin corrosion/irritation : No data available
- Serious eye damage/eye irritation : No data available
- 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

### Ecotoxicity

#### Product AS SOLD

- Environmental Effects : Toxic to aquatic life.

#### Product AT USE DILUTION

- Environmental Effects : This product has no known ecotoxicological effects.

#### Product AS SOLD

##### Product

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

### Components

- Toxicity to fish : sodium dodecylbenzene sulfonate  
96 h LC50 Fish: 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
- Amides, coco, N-[3-(dimethylamino)propyl], N-oxides  
96 h LC50 Leuciscus idus (Golden orfe): 5.9 mg/l
- Sodium poly(oxyethylene) dodecyl ether sulfate



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96 h LC50 Fish: 28 mg/l

ethanol  
96 h LC50 Pimephales promelas: > 100 mg/l

### Components

Toxicity to daphnia and other aquatic invertebrates : Amides, coco, N-[3-(dimethylamino)propyl], N-oxides  
48 h EC50 Daphnia magna (Water flea): 46 mg/l

ethanol  
48 h EC50 Aquatic Invertebrate: 857 mg/l

### Components

Toxicity to algae : Amides, coco, N-[3-(dimethylamino)propyl], N-oxides  
72 h EC50: > 500 mg/l

### Persistence and degradability

Product AT USE DILUTION  
Biodegradable

### 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 : Do not contaminate ponds, waterways or ditches with chemical or used container. 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



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Sea transport (IMDG/IMO)

Not dangerous goods

## SECTION 15. REGULATORY INFORMATION

Product AS SOLD

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium dodecylbenzene sulfonate	25155-30-0	1000	2941

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Specific target organ toxicity (single or repeated exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

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.

California Cleaning Product Right to Know Act of 2017 (SB 258)

This regulation applies to this product.

Hazardous ingredients	CAS-No.	Function	List(s)
sodium dodecylbenzene sulfonate	25155-30-0	Cleaning Agent	Not Applicable
Polyethylene Glycol	25322-68-3	Cleaning Agent	Not Applicable
dodecanamide, n-(2-hydroxyethyl)-	142-78-9	Cleaning Agent	Not Applicable
Amides, coco, N-[3-(dimethylamino)propyl], N-oxides	68155-09-9	Cleaning Agent	Not Applicable
water	7732-18-5	Cleaning Agent	Not Applicable
acetic acid, sodium salt	127-09-3	Cleaning Agent	Not Applicable
Sodium poly(oxyethylene) dodecyl ether sulfate	68585-34-2	Cleaning Agent	Not Applicable
ethanol	64-17-5	Biocide	Not Applicable
Polyol	Withheld	Processing Aid	Not Applicable
Substituted alkylamine	Withheld	Processing Aid	Not Applicable
Sodium hydroxide	1310-73-2	Stabilizer	20
nonionic surfactant	Withheld	Processing Aid	Not Applicable
Fatty acid ester	Withheld	Processing Aid	Not Applicable
Peroxides	Withheld	Biocide	Not Applicable
Diamine	Withheld	Cleaning Agent	Not Applicable



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sodium sulfate	7757-82-6	Cleaning Agent	20
Silicone	Withheld	Processing Aid	Not Applicable
Colorant	Withheld	Processing Aid	Not Applicable
Silicon-containing polymer	Withheld	Processing Aid	Not Applicable
Silicone	Withheld	Processing Aid	Not Applicable
Substituted phenol	Withheld	Processing Aid	Not Applicable
2-methylpropan-2-ol	75-65-0	Fragrance	16

\*refer to [ecolab.com/sds](http://ecolab.com/sds) for electronic links to designated lists

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

United States TSCA Inventory :

All substances listed as active on the TSCA inventory

Canadian Domestic Substances List (DSL) :

All components of this product are on the Canadian DSL

Australia. Australian Industrial Chemicals Introduction Scheme (AICIS) :

not determined

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

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

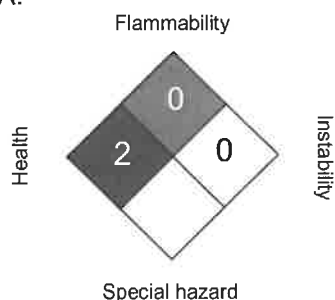
Taiwan Chemical Substance Inventory (TCSI) :

not determined

## SECTION 16. OTHER INFORMATION

Product AS SOLD

NFPA:



HMIS III:

HEALTH	2*
FLAMMABILITY	0
PHYSICAL HAZARD	0

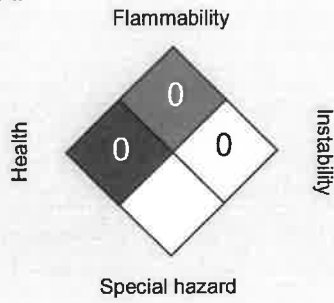
0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Product AT USE DILUTION

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SOLITAIRE

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

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

Issuing date : 03/21/2024  
Version : 3.0  
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 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.

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