

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 Co.
5105 Tomken Road
Mississauga, Ontario Canada L4W 2X5
1-800-352-5326

Emergency health information : 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)

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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 element
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/fume/gas/mist/vapours/spray. Wash skin thoroughly after handling. Wear protective gloves.
Response:
IF ON SKIN: Wash with plenty of 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 off contaminated

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clothing and wash it 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: (%)
Organic sulfonic acid salt	25155-30-0	10 - 30
dodecanamide, n-(2-hydroxyethyl)-	142-78-9	10 - 30
Sodium poly(oxyethylene) dodecyl ether sulfate	68585-34-2	5 - 10
Amides, coco, N-[3-(dimethylamino)propyl], N-oxide	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.

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

Section: 5. FIREFIGHTING 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)
Sulphur oxides

Special protective equipment and precautions for firefighters : 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.

Risk of explosion. : Not available.

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.

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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

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

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
ethanol	64-17-5	TWA	1,000 ppm 1,880 mg/m ³	CAD AB OEL
		STEL	1,000 ppm	CAD BC OEL
		VME	1,000 ppm 1,880 mg/m ³	OEL (QUE)
ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m ³	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m ³	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.

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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
Colour	: opaque, light pink	colourless
Odour	: citrus	citrus
pH	: 7.0 - 9.0, (1 %)	7.0 - 8.0
Flash point	: Not applicable.	
Odour 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	
Vapour pressure	: no data available	
Relative vapour 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	
Auto-ignition 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) Sulphur 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	: 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

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Product AS SOLD Product

Acute oral toxicity	: Acute toxicity estimate : 2,534 mg/kg
Acute inhalation toxicity	: 4 h Acute toxicity estimate : > 10 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	: 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

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

Components

Toxicity to fish	: Organic sulfonic acid salt 96 h LC50 Fish: 3.2 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
	Amides, coco, N-[3-(dimethylamino)propyl], N-oxide 96 h LC50 Leuciscus idus (Golden orfe): 5.9 mg/l
	acetic acid, sodium salt 96 h LC50 Fish: > 100 mg/l
	ethanol 96 h LC50 Pimephales promelas (fathead minnow): > 100 mg/l

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Components

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

Components

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

Persistence and degradability

Product AS SOLD

Biodegradable

Product AT USE DILUTION

Readily 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 : 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.

Sea transport (IMDG/IMO)

Not dangerous goods

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Section: 15. REGULATORY INFORMATION

This product has been classified according to the hazard criteria of the HPR and the SDS contains all of the information required by the HPR.

The components 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. Industrial Chemical (Notification and Assessment) Act :

On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand :

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 :

On the inventory, or in compliance with the inventory

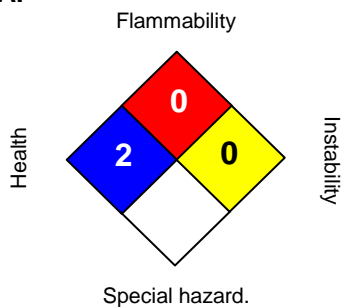
Taiwan Chemical Substance Inventory :

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

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Prepared by : Regulatory Affairs 1-800-352-5326

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.