



## SAFETY DATA SHEET

### CHEM-STAR FLEX

#### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : CHEM-STAR FLEX

Other means of identification : Not applicable

Recommended use : Cleaning product

Product dilution information : 0.13 % - 0.39 %

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 : 04/24/2019

#### SECTION 2. HAZARDS IDENTIFICATION

##### GHS Classification

##### Product AS SOLD

Eye irritation : Category 2B

##### Product AT USE DILUTION

Not a hazardous substance or mixture.

##### GHS label elements

##### Product AS SOLD

Signal Word : Warning

Hazard Statements : Causes eye irritation.

Precautionary Statements : **Prevention:**  
Wash skin thoroughly after handling.  
**Response:**  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.

##### 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

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Pure substance/mixture : Mixture

Chemical name	CAS-No.	Concentration (%)
Sodium Petroleum Sulfonate	68608-26-4	10 - 30
poly(oxy-1,2-ethanediyl), .alpha.-isotridecyl-.omega.-hydroxy- amines, coco alkyl dimethyl, n-oxides	9043-30-5	1 - 5
	61788-90-7	1 - 5

### 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. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ 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	: 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

In case of eye contact : Rinse with plenty of water.

### Product AT USE DILUTION

	Rinse with plenty of water.
In case of skin contact	: Rinse with plenty of water.  Rinse with plenty of water.
If swallowed	: Rinse mouth. Get medical attention if symptoms occur.  Rinse mouth. Get medical attention if symptoms occur.
If inhaled	: Get medical attention if symptoms occur. Get medical attention if symptoms occur.

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### SECTION 5. FIRE-FIGHTING MEASURES

#### Product AS SOLD

- 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
- 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.

#### Product AT USE DILUTION

- 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.
- Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous

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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. 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 get in eyes, on skin, or on clothing. Wash hands thoroughly after handling.

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

Keep out of reach of children. Store in suitable labeled containers.

Storage temperature : -10 °C to 50 °C

#### Product AT USE DILUTION

Advice on safe handling : For personal protection see section 8. Wash hands after handling.

#### Product AT USE DILUTION

Wash hands after handling. For personal protection see section 8.

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

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

Contains no substances with occupational exposure limit values.

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

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

##### 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 : 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

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practice. 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.

#### Product AT USE DILUTION

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

#### Personal protective equipment

Eye protection : No special protective equipment required.

#### Personal protective equipment

No special protective equipment required.

Hand protection : No special protective equipment required.

No special protective equipment required.

Skin protection : No special protective equipment required.

No special protective equipment required.

Respiratory protection : No personal respiratory protective equipment normally required.  
No personal respiratory protective equipment normally required.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

	Product AS SOLD	Product AT USE DILUTION
Appearance	: liquid	liquid
Color	: pink	colorless
Odor	: slight	very faint
pH	: 8.92, (100 %)	6.5 - 8.5
Flash point	: Not applicable, Does not sustain combustion.	
Odor Threshold	: No data available	
Melting point/freezing point	: No data available	
Initial boiling point and boiling range	: > 100 °C	
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	: 1.026	

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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	: 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. 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	: In case of fire hazardous decomposition products may be produced such as: Carbon oxides

### SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: Inhalation, Eye contact, Skin contact Inhalation, Eye contact, Skin contact
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#### Potential Health Effects

#### Product AS SOLD

Eyes	: Causes serious eye damage. Causes serious eye damage. Causes serious eye irritation.
Skin	: Causes skin irritation. Causes skin irritation.
Ingestion	: Health injuries are not known or expected under normal use. Health injuries are not known or expected under normal use.
Inhalation	: Health injuries are not known or expected under normal use.

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Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

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.

#### Product AT USE DILUTION

Health injuries are not known or expected under normal use.

Skin : Health injuries are not known or expected under normal use.

Health injuries are not known or expected under normal use.

Ingestion : Health injuries are not known or expected under normal use.

Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

Health injuries are not known or expected under normal use.

#### Experience with human exposure

##### Product AS SOLD

Eye contact : Redness, Pain, Corrosion

Redness, Pain, Corrosion, Irritation

Skin contact : Redness, Irritation, slight irritation

Redness, Irritation

Ingestion : No symptoms known or expected.

No symptoms known or expected.

Inhalation : No symptoms known or expected.

No symptoms known or expected.

#### Product AT USE DILUTION

Eye contact : No symptoms known or expected.

#### Product AT USE DILUTION

No symptoms known or expected.

Skin contact : No symptoms known or expected.

No symptoms known or expected.

Ingestion : No symptoms known or expected.

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No symptoms known or expected.

Inhalation : No symptoms known or expected.

No symptoms known or expected.

#### Toxicity

##### Product AS SOLD

##### Product

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg  
Acute inhalation toxicity : No data available  
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. Toxic to aquatic life with long lasting effects.  
Harmful to aquatic life with long lasting 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 : Sodium Petroleum Sulfonate  
96 h LC50 Cyprinodon variegatus (sheepshead minnow): > 10,000 mg/l  
  
poly(oxy-1,2-ethanediyl), .alpha.-isotridecyl-.omega.-hydroxy-  
96 h LC50 Fish: 0.25 mg/l  
  
amines, coco alkyl dimethyl, n-oxides  
96 h LC50 Fish: 1 mg/l



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#### Components

Toxicity to daphnia and other aquatic invertebrates : Sodium Petroleum Sulfonate  
48 h EC50 Daphnia magna (Water flea): > 1,000 mg/l

#### Components

Toxicity to algae : Sodium Petroleum Sulfonate  
72 h EC50 Pseudokirchneriella subcapitata (green algae): > 1,000 mg/l

#### Persistence and degradability

##### Product AS SOLD

Poorly 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.

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 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 : 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.

Diluted product can be flushed to sanitary sewer.

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.

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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

### SECTION 15. REGULATORY INFORMATION

#### Product AS SOLD

#### EPCRA - Emergency Planning and Community Right-to-Know

##### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

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

**SARA 311/312 Hazards** : 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.

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

##### United States TSCA Inventory :

On the inventory, or in compliance with the 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

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**Japan. ENCS - Existing and New Chemical Substances Inventory :**  
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

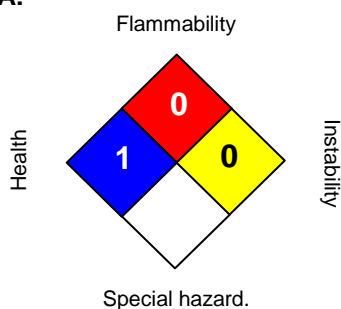
**China. Inventory of Existing Chemical Substances in China (IECSC) :**  
On the inventory, or in compliance with the inventory

**Taiwan Chemical Substance Inventory (TCSI) :**  
not determined

### SECTION 16. OTHER INFORMATION

#### Product AS SOLD

##### NFPA:



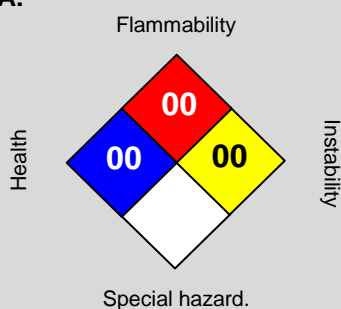
##### HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0

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

#### Product AT USE DILUTION

##### NFPA:



##### HMIS III:

HEALTH	00
FLAMMABILITY	0 0
PHYSICAL HAZARD	0 0

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

Issuing date : 04/24/2019  
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

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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.