

Solid X4 Enzymatic Manual Detergent
SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Solid X4 Enzymatic Manual Detergent

Other means of identification : Not applicable

Recommended use : Instrument cleaner

Product dilution information : 0.066 %

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 : 12/05/2018

SECTION 2. HAZARDS IDENTIFICATION
GHS Classification
Product AS SOLD

Skin irritation : Category 2

Serious eye damage : Category 1

Product AT USE DILUTION

Not a hazardous substance or mixture.

GHS label elements
Product AS SOLD

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Causes skin irritation.
Causes serious eye damage.

Precautionary Statements : **Prevention:**
Wash skin thoroughly after handling. Wear protective gloves/ eye protection/ face protection.
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. Immediately call a POISON CENTER/doctor. If skin irritation occurs: 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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Get medical advice/ attention if you feel unwell.

Storage:

Store in accordance with local regulations.

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Other hazards : None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product AS SOLD

Pure substance/mixture : Mixture

| Chemical name | CAS-No. | Concentration (%) |
|--|-------------|-------------------|
| Oxirane, methyl-, polymer with oxirane, mono(2-propylheptyl) ether | 166736-08-9 | 1 - 5 |
| N,N-dimethyldecylamine N-oxide | 2605-79-0 | 1 - 5 |
| monoethanolamine | 141-43-5 | 1 - 5 |
| Propylene glycol | 57-55-6 | 1 - 5 |
| subtilisin | 9014-01-1 | 0.1 - 1 |

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.
- 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.
- 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.

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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 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 : 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). 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 : Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling.

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

Storage temperature : 0 °C to 40 °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

| Components | CAS-No. | Form of exposure | Permissible concentration | Basis |
|------------------|-----------|------------------|--|-----------|
| monoethanolamine | 141-43-5 | TWA | 3 ppm | ACGIH |
| | | STEL | 6 ppm | ACGIH |
| | | TWA | 3 ppm 8 mg/m3 | NIOSH REL |
| | | STEL | 6 ppm 15 mg/m3 | NIOSH REL |
| | | TWA | 3 ppm 6 mg/m3 | OSHA Z1 |
| Propylene glycol | 57-55-6 | TWA | 10 mg/m3 | AIHA WEEL |
| subtilisin | 9014-01-1 | Ceiling | 0.00006 mg/m3 (crystalline active enzyme) | ACGIH |
| | | STEL | 0.00006 mg/m3 | NIOSH REL |

Engineering measures : 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 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.

Personal protective equipment

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| | |
|------------------------|---|
| 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 | Product AT USE DILUTION |
|---|--|-------------------------|
| Appearance | : solid | liquid |
| Color | : opaque, blue | light blue |
| Odor | : slight | odorless |
| pH | : 8.2 - 9.2, (1 %) | 8.4 - 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 | : No data available | |
| 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 | : The substance or mixture is not classified as oxidizing. | |
| 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. |

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| | |
|----------------------------------|--|
| 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 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 serious eye damage. |
| 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, Pain, Corrosion |
| 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 : > 5,000 mg/kg |
| Acute inhalation toxicity | : 4 h Acute toxicity estimate : 53.87 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

Product AS SOLD

Ecotoxicity

| | |
|-----------------------|---|
| Environmental Effects | : Toxic to aquatic life. Harmful to aquatic life with long lasting effects. |
|-----------------------|---|

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 | : Oxirane, methyl-, polymer with oxirane, mono(2-propylheptyl) ether 96 h LC50: > 10 - 100 mg/l N,N-dimethyldecylamine N-oxide 96 h LC50 Danio rerio (zebra fish): 2.4 mg/l Test substance: Information given is based on data obtained from similar substances. Propylene glycol 96 h LC50: > 10,000 mg/l |
|------------------|--|

Components

| | |
|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : N,N-dimethyldecylamine N-oxide 48 h EC50 Daphnia magna (Water flea): 2.63 mg/l Test substance: Information given is based on data obtained from |
|---|---|

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similar substances.

monoethanolamine
48 h LC50: 65 mg/l

Propylene glycol
48 h EC50: 18,340 mg/l

subtilisin
48 h EC50: 1.4 mg/l

Components

Toxicity to algae : N,N-dimethyldecylamine N-oxide
72 h EC50 *Pseudokirchneriella subcapitata* (green algae): 0.159 mg/l
Test substance: Information given is based on data obtained from similar substances.

Propylene glycol
96 h EC50: 19,000 mg/l

Persistence and degradability

Product AS SOLD

Not applicable - inorganic

Product AT USE DILUTION

Not applicable - inorganic

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

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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 : 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.

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) :

not determined

New Zealand. Inventory of Chemical Substances :

not determined

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

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Philippines Inventory of Chemicals and Chemical Substances (PICCS) :
not determined

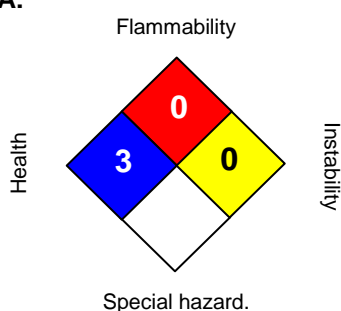
China. Inventory of Existing Chemical Substances in China (IECSC) :
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI) :
not determined

SECTION 16. OTHER INFORMATION

Product AS SOLD

NFPA:



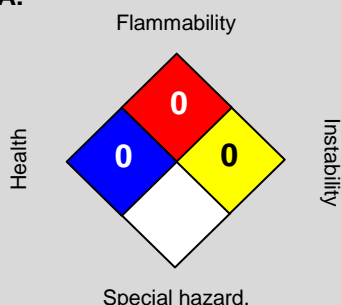
HMIS III:

| | |
|-----------------|---|
| HEALTH | 3 |
| 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 | 0 |
| FLAMMABILITY | 0 |
| PHYSICAL HAZARD | 0 |

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

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Version : 1.0
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 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.