

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : GUARDIAN PLUS

Other means of identification : Not applicable

Recommended use : Machine Warewashing Detergent

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : 0.09 % - 0.23 %

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 : 07/11/2019

SECTION 2. HAZARDS IDENTIFICATION
GHS Classification
Product AS SOLD

Corrosive to Metals : Category 1

Skin corrosion : Category 1A

Serious eye damage : Category 1

Product AT USE DILUTION

Skin corrosion : Category 1A

Serious eye damage : Category 1

GHS label elements
Product AS SOLD

Hazard pictograms :



Signal Word : Danger

Hazard Statements : May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**
Keep only in original container. Wash skin thoroughly after handling.
Response:
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. 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. Wash

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GUARDIAN PLUS

contaminated clothing before reuse. Absorb spillage to prevent material damage.

Storage:

Store locked up. Store in corrosive resistant stainless steel container with a resistant inner liner.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Product AT USE DILUTION

Hazard pictograms

:



Signal Word

: Danger

Hazard Statements

: Causes severe skin burns and eye damage.

Precautionary Statements

: **Prevention:**

Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. 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. Wash contaminated clothing before reuse.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

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 hydroxide | 1310-73-2 | 30 - 60 |
| Sodium Carbonate | 497-19-8 | 10 - 30 |
| sodium chloride | 7647-14-5 | 10 - 30 |
| ethylenediamine tetraacetate | 64-02-8 | 10 - 30 |

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.

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Continue rinsing. Get medical attention immediately.

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|---|---|--|
| In case of skin contact | : | Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. |
| If swallowed | : | Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately. |
| 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

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|-------------------------|---|--|
| 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. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately. |
| If swallowed | : | Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately. |
| If inhaled | : | Remove to fresh air. Treat symptomatically. 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 |
| 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 |

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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

: 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.

SECTION 7. HANDLING AND STORAGE

Product AS SOLD

Advice on safe handling

: Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. 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

: Do not store near acids. 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

: Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Product AS SOLD

Ingredients with workplace control parameters

| Components | CAS-No. | Form of exposure | Permissible concentration | Basis |
|------------------|-----------|------------------|---------------------------|-----------|
| sodium hydroxide | 1310-73-2 | Ceiling | 2 mg/m ³ | ACGIH |
| | | Ceiling | 2 mg/m ³ | NIOSH REL |
| | | TWA | 2 mg/m ³ | OSHA Z1 |

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

Personal protective equipment

Eye protection : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.

Hand protection : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.

Skin protection : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.

Respiratory protection : Due to the form and packaging of the product, no protective equipment is needed under normal use conditions.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. 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 : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

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 : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|------------|------------------------|
| | Product AS SOLD |
| Appearance | : Cast Solid |
| Color | : opaque, light yellow |

| |
|--------------------------------|
| Product AT USE DILUTION |
| liquid |
| colorless |

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| | | |
|---|--|---------------|
| Odor | : odorless | odorless |
| pH | : 13.0 - 14.0, (1 %) | 11.75 - 12.16 |
| 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 | : partly 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

| | |
|------------------------------------|--|
| 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. |
| Conditions to avoid | : None known. |
| Incompatible materials | : Acids Metals |
| 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 : Eye contact, Skin contact

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exposure

Potential Health Effects

Product AS SOLD

| | |
|------------------|---|
| Eyes | : Causes serious eye damage. |
| Skin | : Causes severe skin burns. |
| Ingestion | : Causes digestive tract burns. |
| Inhalation | : May cause nose, throat, and lung irritation. |
| Chronic Exposure | : Health injuries are not known or expected under normal use. |

Product AT USE DILUTION

| | |
|------------------|---|
| Eyes | : Causes serious eye damage. |
| Skin | : Causes severe skin burns. |
| Ingestion | : Causes digestive tract burns. |
| Inhalation | : May cause nose, throat, and lung irritation. |
| 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, Pain, Corrosion |
| Ingestion | : Corrosion, Abdominal pain |
| Inhalation | : Respiratory irritation, Cough |

Product AT USE DILUTION

| | |
|--------------|---------------------------------|
| Eye contact | : Redness, Pain, Corrosion |
| Skin contact | : Redness, Pain, Corrosion |
| Ingestion | : Corrosion, Abdominal pain |
| Inhalation | : Respiratory irritation, Cough |

Toxicity

Product AS SOLD

Product

| | |
|---------------------------|---|
| Acute oral toxicity | : Acute toxicity estimate : 4,914 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 | : 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 | : Harmful 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 Carbonate 96 h LC50 <i>Lepomis macrochirus</i> (Bluegill sunfish): 300 mg/l sodium chloride 96 h LC50 Fish: 5,840 mg/l ethylenediamine tetraacetate 96 h LC50 Fish: 121 mg/l |
|------------------|--|

Components

| | |
|---|--|
| Toxicity to daphnia and other aquatic invertebrates | : Sodium hydroxide 48 h EC50: 40 mg/l Sodium Carbonate 48 h EC50 <i>Ceriodaphnia</i> (water flea): 213.5 mg/l |
|---|--|

Persistence and degradability

Product AS SOLD
Poorly biodegradable

Product AT USE DILUTION
Poorly biodegradable

Bioaccumulative potential

No data available

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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.

RCRA - Resource Conservation and Recovery Authorization Act Hazardous waste : D002 (Corrosive)

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.

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.

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)

UN number : 1823
Description of the goods : Sodium hydroxide, solid
Class : 8
Packing group : II
Environmentally hazardous : no

Sea transport (IMDG/IMO)

UN number : 1823
Description of the goods : SODIUM HYDROXIDE, SOLID
Class : 8
Packing group : II
Marine pollutant : no

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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 hydroxide | 1310-73-2 | 1000 | 2514 |

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Corrosive to Metals
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.

| Chemical Name | CAS-No. | Function | List(s) |
|------------------------------|-----------|----------------|----------------|
| Sodium hydroxide | 1310-73-2 | Cleaning Agent | 20 |
| Sodium Carbonate | 497-19-8 | Cleaning Agent | Not Applicable |
| sodium chloride | 7647-14-5 | Processing Aid | Not Applicable |
| ethylenediamine tetraacetate | 64-02-8 | Cleaning Agent | Not Applicable |
| water | 7732-18-5 | Processing Aid | Not Applicable |
| Polyacrylate | Withheld | Cleaning Agent | Not Applicable |
| Anionic polymer | Withheld | Cleaning Agent | Not Applicable |
| Silica | Withheld | Processing Aid | Not Applicable |
| Nonionic surfactant | Withheld | Cleaning Agent | Not Applicable |
| Propylene glycol | 57-55-6 | Cleaning Agent | 12 |

*refer to 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 Inventory of Chemical Substances (AICS) :

On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemical Substances :

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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

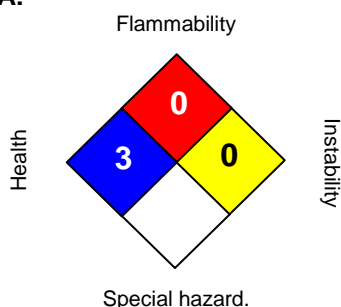
Philippines Inventory of Chemicals and Chemical Substances (PICCS) :
On the inventory, or in compliance with the inventory

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:

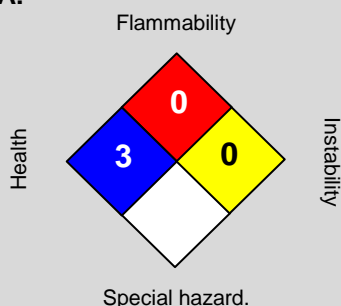


HMIS III:

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

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

Issuing date : 07/11/2019
Version : 2.0
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.

SAFETY DATA SHEET

GUARDIAN PLUS

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.