## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>TITAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other means of identification</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Recommended use</td>
<td>Degreaser</td>
</tr>
<tr>
<td>Restrictions on use</td>
<td>Reserved for industrial and professional use.</td>
</tr>
<tr>
<td>Product dilution information</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

**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**  
07/23/2019

## SECTION 2. HAZARDS IDENTIFICATION

**GHS Classification**

**Product AS SOLD**  
- **Serious eye damage**: Category 1

**Product AT USE DILUTION**  
- **Serious eye damage**: Category 1

**GHS label elements**

**Product AS SOLD**  
**Hazard pictograms**

**Signal Word**  
Danger

**Hazard Statements**  
Causes serious eye damage.

**Precautionary Statements**  
**Prevention:**  
Wear eye protection/ face protection.  
**Response:**  
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.

**Product AT USE DILUTION**  
**Hazard pictograms**

---

924604 1 / 11
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TITAN

Signal Word: Danger

Hazard Statements: Causes serious eye damage.

Precautionary Statements:

Prevention: Wear eye protection/ face protection.

Response: 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.

Product AS SOLD

Other hazards: None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Product AS SOLD

Pure substance/mixture: Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>potassium carbonate</td>
<td>584-08-7</td>
<td>5 - 10</td>
</tr>
<tr>
<td>ethylenediamine tetraacetate</td>
<td>64-02-8</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Sodium Xylenesulfonate</td>
<td>1300-72-7</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Alcohols, C9-11, ethoxylated</td>
<td>68439-46-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Alcohols, C10-14, ethoxylated</td>
<td>66455-15-0</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

Product AT USE DILUTION

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>potassium carbonate</td>
<td>584-08-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>ethylenediamine tetraacetate</td>
<td>64-02-8</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Sodium Xylenesulfonate</td>
<td>1300-72-7</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

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: Rinse with plenty of water.

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 immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do.
SAFETY DATA SHEET

TITAN

Continue rinsing. Get medical attention immediately.

In case of skin contact: Rinse with plenty of water.
If swallowed: Rinse mouth. Get medical attention if symptoms occur.
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
- 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: 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: 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
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 get in eyes, on skin, or on clothing. 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).


Storage temperature: 0 °C to 50 °C

**Product AT USE DILUTION**

Advice on safe handling: Do not get in eyes, on skin, or on clothing. 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

**Product AS SOLD**

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

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: No special protective equipment required.

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

<table>
<thead>
<tr>
<th>Protection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye protection</strong></td>
<td>Wear eye protection/ face protection.</td>
</tr>
<tr>
<td><strong>Hand protection</strong></td>
<td>No special protective equipment required.</td>
</tr>
<tr>
<td><strong>Skin protection</strong></td>
<td>No special protective equipment required.</td>
</tr>
<tr>
<td><strong>Respiratory protection</strong></td>
<td>No personal respiratory protective equipment normally required.</td>
</tr>
</tbody>
</table>

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th><strong>Product AS SOLD</strong></th>
<th><strong>Product AT USE DILUTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>clear, purple</td>
<td>purple</td>
</tr>
<tr>
<td>Odor</td>
<td>citrus</td>
<td>citrus</td>
</tr>
<tr>
<td>pH</td>
<td>12.2 - 13.2, (100 %)</td>
<td>11.8 - 12.8</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>100 °C</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>1.138 - 1.148</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>soluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>The substance or mixture is not classified as oxidizing.</td>
<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>VOC</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

### 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

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: Inhalation, Eye contact, Skin contact

Potential Health Effects

Product AS SOLD
Eyes: Causes serious eye damage.
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.

Product AT USE DILUTION
Eyes: Causes serious eye damage.
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: No symptoms known or expected.
Ingestion: No symptoms known or expected.
Inhalation: No symptoms known or expected.

Product AT USE DILUTION
Eye contact: Redness, Pain, Corrosion
## Toxicity

**Product AS SOLD**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Acute toxicity estimate: &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>Acute inhalation toxicity</td>
<td>4 h Acute toxicity estimate: 74.61 mg/l Test atmosphere: dust/mist</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>Acute toxicity estimate: &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No skin irritation</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproductive effects</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration toxicity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### Ecotoxicity

<table>
<thead>
<tr>
<th>Environmental Effects</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Harmful to aquatic life.</td>
</tr>
</tbody>
</table>

#### Product

<table>
<thead>
<tr>
<th>Toxicty to fish</th>
<th>No data available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicty to daphnia and other aquatic invertebrates</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicty to algae</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### Components

- Toxicity to fish:
  - potassium carbonate
    - 96 h LC50 Fish: 230 mg/l
  - ethylenediamine tetraacetate
    - 96 h LC50 Fish: 121 mg/l
  - Alcohols, C9-11, ethoxylated
    - 96 h LC50 Oncorhynchus mykiss (rainbow trout): 5 mg/l
  - alcohols, c10-14, ethoxylated
SAFETY DATA SHEET

TITAN

96 h LC50 Fish: 1.125 mg/l

Components
Toxicity to daphnia and other aquatic invertebrates: Alcohols, C9-11, ethoxylated
48 h EC50 Daphnia magna (Water flea): 2.5 mg/l

Components
Toxicity to algae: Sodium Xylenesulfonate
96 h EC50: 230 mg/l

Alcohols, C9-11, ethoxylated
96 h EC50 Pseudokirchneriella subcapitata (algae): 1.4 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: 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 reuse 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.

Disposal considerations: Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not reuse empty containers. Dispose of in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION
SAFETY DATA SHEET

TITAN

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.

California Cleaning Product Right to Know Act of 2017 (SB 258)
This regulation applies to this product.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Function</th>
<th>List(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>7732-18-5</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>potassium carbonate</td>
<td>584-08-7</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>ethylenediamine tetraacetate</td>
<td>64-02-8</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Sodium Xylenesulfonate</td>
<td>1300-72-7</td>
<td>Stabilizer</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Alcohols, C9-11, ethoxylated</td>
<td>68439-46-3</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>alcohols, c10-14, ethoxylated</td>
<td>66455-15-0</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Inorganic salt</td>
<td>Withheld</td>
<td>Buffer</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>silicate</td>
<td>Withheld</td>
<td>Film Former</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Limonene</td>
<td>5989-27-5</td>
<td>Fragrance</td>
<td>FRA</td>
</tr>
<tr>
<td>Fragrance Ingredient(s)</td>
<td>Not Available</td>
<td>Fragrance</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Colorant</td>
<td>Withheld</td>
<td>Dye</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>benzenesulfonic acid, 3-[[4-amino-9,10-dihydro-9,10-dioxo-3-[sulfo-4-(1,1,3,3-tetramethylbutyl)phenoxy]-1-anthracenyl]am</td>
<td>72243-90-4</td>
<td>Dye</td>
<td>7</td>
</tr>
</tbody>
</table>
### The ingredients of this product are reported in the following inventories:

- **Switzerland. New notified substances and declared preparations**: not determined
- **United States TSCA Inventory**: All substances listed as active on the TSCA inventory
- **Canadian Domestic Substances List (DSL)**: This product contains one or several components listed in the Canadian NDLS.
- **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)**: not determined
- **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**

<table>
<thead>
<tr>
<th>Flammability</th>
<th>Health</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Special hazard.**

**NFPA:**

- **Flammability**: 3
- **Health**: 3
- **Instability**: 0

**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**
Issuing date : 07/23/2019
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 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.