SAFETY DATA SHEET

TRI-STAR LAUNDRY GREASY SOIL REMOVER

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: TRI-STAR LAUNDRY GREASY SOIL REMOVER
Other means of identification: Not applicable
Recommended use: Laundry detergent
Restrictions on use: Reserved for industrial and professional use.
Product dilution information: 0.03% - 0.09%

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: 07/26/2019

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:**  
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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>benzenesulfonic acid, dodecyl-, compd. with 2-aminoethanol (1:1)</td>
<td>26836-07-7</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Alcohol Ethoxylate</td>
<td>Proprietary Ingredient</td>
<td>10 - 30</td>
</tr>
<tr>
<td>2-methylpentane-2,4-diol</td>
<td>107-41-5</td>
<td>10 - 30</td>
</tr>
<tr>
<td>dodecyldimethylamine oxide</td>
<td>1643-20-5</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

**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.
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 : 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. 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.

Storage temperature: 0 °C to 40 °C

Product AT USE DILUTION
Advice on safe handling: Wash hands after handling. In case of mechanical malfunction, or if in contact with unknown dilution of product, wear full Personal Protective Equipment (PPE). 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

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Form of exposure</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-methylpentane-2,4-diol</td>
<td>107-41-5</td>
<td>Ceiling</td>
<td>25 ppm 125 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Vapour.)</td>
<td>25 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL (Vapour.)</td>
<td>50 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL (Inhalable fraction, Aerosol only)</td>
<td>10 mg/m³</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th></th>
<th>Product AS SOLD</th>
<th>Product AT USE DILUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>cloudy, amber</td>
<td>colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>alcohol-like</td>
<td>odorless</td>
</tr>
<tr>
<td>pH</td>
<td>7.5 - 10.0, (100%)</td>
<td>6.5 - 8.5</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable, Does not sustains combustion.</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>&gt; 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>1.01 - 1.03</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>49.447 mm²/s (40 °C)</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</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
**SAFETY DATA SHEET**

**TRI-STAR LAUNDRY GREASY SOIL REMOVER**

**Product AS SOLD**

<table>
<thead>
<tr>
<th>Reactivity</th>
<th>No dangerous reaction known under conditions of normal use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>No dangerous reaction known under conditions of normal use.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>None known.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>None known.</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>In case of fire hazardous decomposition products may be produced such as: Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides</td>
</tr>
</tbody>
</table>

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

| Inhalation, Eye contact, Skin contact |

**Potential Health Effects**

**Product AS SOLD**

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Causes serious eye damage.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
<tr>
<td>Chronic Exposure</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
</tbody>
</table>

**Product AT USE DILUTION**

<table>
<thead>
<tr>
<th>Eyes</th>
<th>Health injuries are not known or expected under normal use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
<tr>
<td>Chronic Exposure</td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
</tbody>
</table>

**Experience with human exposure**

**Product AS SOLD**

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>Redness, Pain, Corrosion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin contact</td>
<td>Redness, Irritation</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No symptoms known or expected.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No symptoms known or expected.</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

TRI-STAR LAUNDRY GREASY SOIL REMOVER

Product AT USE DILUTION

<table>
<thead>
<tr>
<th>Eye contact</th>
<th>No symptoms known or expected.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin contact</td>
<td>No symptoms known or expected.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No symptoms known or expected.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No symptoms known or expected.</td>
</tr>
</tbody>
</table>

Toxicity

Product AS SOLD

Acute oral toxicity : Acute toxicity estimate : 2,199 mg/kg
Acute inhalation toxicity : No data available
Acute dermal toxicity : No data available
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

Components

Acute inhalation toxicity : 2-methylpentane-2,4-diol
4 h LC50 Rat: > 1.1 mg/l
Test atmosphere: dust/mist

Components

Acute dermal toxicity : 2-methylpentane-2,4-diol
LD50 Rat: > 2,000 mg/kg

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: Alcohol Ethoxylate
96 h LC50 Fish: 5 mg/l
dodecyldimethylamine oxide
96 h LC50 Lepomis macrochirus (Bluegill sunfish): 31.8 mg/l

Components
Toxicity to daphnia and other aquatic invertebrates: 2-methylpentane-2,4-diol
48 h EC50 Daphnia: 2,800 mg/l
dodecyldimethylamine oxide
48 h EC50 Daphnia magna (Water flea): 3.9 mg/l

Persistence and degradability
Product AS SOLD
No data available

Product AT USE DILUTION
No data available

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

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.

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>Diluent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>benzenesulfonic acid, dodecyl-, compd. with 2-aminoethanol (1:1)</td>
<td>26836-07-7</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Fatty alcohol alkoxylate</td>
<td>Not Available</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Fatty alcohol polyglycol ether</td>
<td>Not Available</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>2-methylpentane-2,4-diol</td>
<td>107-41-5</td>
<td>Solvent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Nonionic polymer</td>
<td>Withheld</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>dodecyldimethylamine oxide</td>
<td>1643-20-5</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Substituted alkylamine</td>
<td>Withheld</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Nonionic surfactant</td>
<td>Withheld</td>
<td>Cleaning Agent</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Sulfonic Acid</td>
<td>Withheld</td>
<td>Brightener</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Solvent</td>
<td>Withheld</td>
<td>Stabilizer</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Nonionic surfactant</td>
<td>Withheld</td>
<td>Stabilizer</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Silicone</td>
<td>Withheld</td>
<td>Stabilizer</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Siloxane reaction products</td>
<td>Withheld</td>
<td>Stabilizer</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Silicon-containing polymer</td>
<td>Withheld</td>
<td>Stabilizer</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

*refer to ecolab.com/sds for electronic links to designated lists
SAFETY DATA SHEET

TRI-STAR LAUNDRY GREASY SOIL REMOVER

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 components are listed or exempted.

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):
not determined

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

China. Inventory of Existing Chemical Substances in China (IECSC):
not determined

Taiwan Chemical Substance Inventory (TCSI):
not determined

SECTION 16. OTHER INFORMATION

Product AS SOLD
NFPA:

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

Special hazard.

HMIS III:

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABILITY</td>
<td>0</td>
</tr>
<tr>
<td>PHYSICAL HAZARD</td>
<td>0</td>
</tr>
</tbody>
</table>

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

Product AT USE DILUTION
Issuing date: 07/26/2019
Version: 4.0
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 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.