1. Identification

Product identifier: YSI 1515 Cell Lysing Agent

Other means of identification: Not available.

Recommended use: Calibration of analytical instruments / Reagent.

Recommended restrictions: None known.

Manufacturer / Importer / Supplier / Distributor information:
- Company name: YSI, Inc
- Address: 1700/1725 Brannum Lane
- Telephone: (937) 767-7241
- E-mail: MSDSinfo@ysi.com

Emergency phone number:
- CHEMTREC (US/Canada): (800) 424-9300
- CHEMTREC (International): 011 703-527-3887

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
- Serious eye damage/eye irritation: Category 2

OSHA defined hazards: Not classified.

Label elements:
- Signal word: Warning
- Hazard statement: Causes serious eye irritation.

Precautionary statement:
- Prevention: Wash thoroughly after handling. Wear eye/face protection.
- 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.
- Storage: Not assigned.
- Disposal: Not assigned.

Hazard(s) not otherwise classified (HNOC):
- Not classified.

Environmental hazards:
- Hazardous to the aquatic environment, acute hazard: Category 2
- Hazardous to the aquatic environment, long-term hazard: Category 2

Supplemental information:
- Hazard symbol:

Precautionary statement:
- Prevention: Avoid release to the environment.
- Response: Collect spillage.

44% of the mixture consists of component(s) of unknown acute oral toxicity. 44% of the mixture consists of component(s) of unknown acute dermal toxicity. 44% of the mixture consists of component(s) of unknown acute inhalation toxicity.

3. Composition/information on ingredients

Mixtures
4. First-aid measures

**Inhalation**
Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.

**Skin contact**
Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Ingestion**
Rinse mouth. Do not induce vomiting without advice from poison control center. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed**
Causes eye irritation. Symptoms include itching, burning, redness, and tearing of eyes.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically.

**General information**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

**Suitable extinguishing media**
Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**
During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire-fighting equipment/instructions**
Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Be aware of potential for surfaces to become slippery. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

**Environmental precautions**
Avoid release to the environment. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

**Precautions for safe handling**
Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**
Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Keep away from incompatible material.

8. Exposure controls/personal protection

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene Glycol</td>
<td>9002-93-1</td>
<td>38 - 44</td>
</tr>
<tr>
<td>Octylphenol Ether</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>58 - 64</td>
</tr>
</tbody>
</table>

**US. Workplace Environmental Exposure Level (WEEL) Guides**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol (CAS 57-55-6)</td>
<td>TWA</td>
<td>10 mg/m3</td>
<td>Aerosol.</td>
</tr>
</tbody>
</table>

**Biological limit values**
No biological exposure limits noted for the ingredient(s).
Incompatible reactions: The product is stable and non-reactive under normal conditions of use, storage and transport.

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection
Wear safety glasses with side shields (or goggles).

#### Skin protection
- **Hand protection**: For prolonged or repeated skin contact use suitable protective gloves.
- **Other**: Wear suitable protective clothing.

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

#### Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

#### General hygiene considerations
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

### 9. Physical and chemical properties

#### Appearance
- **Physical state**: Liquid.
- **Form**: Liquid.
- **Color**: Clear green.
- **Odor**: Odorless.
- **Odor threshold**: Not available.
- **pH**: 6.5 - 7.5
- **Melting point/freezing point**: Not available.
- **Initial boiling point and boiling range**: 220 °F (104.44 °C)
- **Flash point**: > 212.0 °F (> 100.0 °C)
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not available.
- **Upper/lower flammability or explosive limits**
  - **Flammability limit - lower (%)**: Not available.
  - **Flammability limit - upper (%)**: Not available.
  - **Explosive limit - lower (%)**: Not available.
  - **Explosive limit - upper (%)**: Not available.
- **Vapor pressure**: < 1 mm Hg @ 20°C
- **Vapor density**: > 1
- **Relative density**: 1.05 (approximate)
- **Solubility(ies)**: Infinitely soluble
- **Partition coefficient (n-octanol/water)**: Not available.
- **Auto-ignition temperature**: Not available.
- **Decomposition temperature**: Not available.
- **Viscosity**: Not available.

### 10. Stability and reactivity

#### Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

#### Chemical stability
Material is stable under normal conditions.

#### Possibility of hazardous reactions
Polymerization will not occur.

#### Conditions to avoid
Contact with active metals (copper, aluminum, zinc) can generate explosive hydrocarbons.

#### Incompatible materials
Strong oxidizing agents.

11. Toxicological information

Information on likely routes of exposure

**Ingestion**
Ingestion may cause irritation and stomach discomfort. Do not ingest.

**Inhalation**
Do not inhale this material.

**Skin contact**
Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Avoid contact with skin.

**Eye contact**
Causes serious eye irritation. Avoid contact with eyes.

Symptoms related to the physical, chemical and toxicological characteristics

Causes serious eye irritation. Symptoms include itching, burning, redness, and tearing of eyes.

Information on toxicological effects

**Acute toxicity**

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol (CAS 57-55-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>30 g/kg</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Due to lack of data the classification is not possible.</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Causes serious eye irritation.</td>
<td></td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Due to lack of data the classification is not possible.</td>
<td></td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Due to lack of data the classification is not possible.</td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No information available on the mixture. However, none of the components are classified in respect of this hazard (or are present at a level below the concentration threshold for classification).</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Due to lack of data the classification is not possible.</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - single exposure</td>
<td>Due to lack of data the classification is not possible.</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - repeated exposure</td>
<td>Due to lack of data the classification is not possible.</td>
<td></td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Due to lack of data the classification is not possible.</td>
<td></td>
</tr>
</tbody>
</table>

12. Ecological information

**Ecotoxicity**
Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene Glycol Octylphenol Ether (CAS 9002-93-1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Bluegill (Lepomis macrochirius)</td>
</tr>
<tr>
<td>Propylene glycol (CAS 57-55-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fathead minnow (Pimephales promelas)</td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>No data is available on the degradability of this product.</td>
<td></td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>No data available for this product.</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient n-octanol / water (log Kow)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propylene glycol (CAS 57-55-6)</td>
<td></td>
<td>-0.92</td>
</tr>
<tr>
<td>Mobility in soil</td>
<td>Not available.</td>
<td></td>
</tr>
<tr>
<td>Other adverse effects</td>
<td>No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.</td>
<td></td>
</tr>
</tbody>
</table>

13. Disposal considerations

**Disposal instructions**
Dispose of contents/container in accordance with local/regional/national/international regulations.
### Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

### Waste from residues / unused products
Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

### Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT
Not regulated as a hazardous material by DOT.

#### IATA
- **UN number**: UN3082
- **UN proper shipping name**: Environmentally hazardous substance, liquid, n.o.s. (Polyethylene Glycol Octylphenol Ether)
- **Transport hazard class(es)**: 9
- **Subsidiary class(es)**: -
- **Packaging group**: III
- **Environmental hazards**: Yes
- **Labels required**: Not available.
- **ERG Code**: 9L
- **Special precautions for user**: Read safety instructions, SDS and emergency procedures before handling.

#### IMDG
- **UN number**: UN3082
- **UN proper shipping name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Polyethylene Glycol Octylphenol Ether)
- **Transport hazard class(es)**: 9
- **Subsidiary class(es)**: -
- **Packaging group**: III
- **Environmental hazards**: Marine pollutant
- **Labels required**: Not available.
- **EmS**: F-A, S-F
- **Special precautions for user**: Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
This substance/mixture is not intended to be transported in bulk.

### 15. Regulatory information

#### US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

- **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**
  Not regulated.
  Not listed.
- **CERCLA Hazardous Substance List (40 CFR 302.4)**
  Not listed.

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

- **Hazard categories**
  - Immediate Hazard - Yes
  - Delayed Hazard - No
  - Fire Hazard - No
  - Pressure Hazard - No
  - Reactivity Hazard - No
- **SARA 302 Extremely hazardous substance**
  No
- **SARA 311/312 Hazardous chemical**
  No
- **SARA 313 (TRI reporting)**
  Not regulated.

#### Other federal regulations

- **Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**
  Not regulated.
- **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**
  Not regulated.
Safe Drinking Water Act (SDWA) Not regulated.
Food and Drug Administration (FDA) Not regulated.

US state regulations
US. Massachusetts RTK - Substance List
Not regulated.
US. New Jersey Worker and Community Right-to-Know Act
Not regulated.
US. Pennsylvania RTK - Hazardous Substances
Propylene glycol (CAS 57-55-6)
US. Rhode Island RTK
Not regulated.
US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*"Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
*A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision
Issue date 05-December-2013
Revision date -
Version # 01

NFPA Ratings

Disclaimer
The information in the sheet was written based on the best knowledge and experience currently available.