1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name
ELS® Liquid Concentrate

Alternate Commercial Name
ELS® Concentrate

Recommended use of the chemical and restrictions on use

Recommended Use:
Bioremediation product for the remediation of contaminated soil and groundwater

Restrictions on Use
Use as recommended by the label: For groundwater treatment.

Manufacturer/Supplier
PeroxyChem LLC
2005 Market Street
Suite 3200
Philadelphia, PA 19103
Phone: +1 267/ 422-2400 (General Information)
E-Mail: sdsinfo@peroxychem.com

Emergency telephone numbers
For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)
1 303/ 389-1409 (Medical - U.S. - Call Collect)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Hazard Statements
Mixture not classified as hazardous
**Hazard not otherwise classified (HNOC)**

No hazards not otherwise classified were identified.

**Other Information**

Warning! Product can make the ground slippery.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorbitan monooleate, ethoxylated</td>
<td>9005-65-6</td>
<td>5 - 15</td>
</tr>
<tr>
<td>Lecithin</td>
<td>8002-43-5</td>
<td>70 - 90</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Eye Contact**

In case of contact, immediately flush eyes with plenty of water. Get medical attention if irritation develops and persists.

**Skin Contact**

Wash skin with soap and water. Get medical attention if irritation develops and persists.

**Inhalation**

Move to fresh air in case of accidental inhalation of vapors. Consult a physician if necessary.

**Ingestion**

If swallowed, do not induce vomiting - seek medical advice. Call a POISON CENTER or doctor/physician if exposed or you feel unwell.

**Most important symptoms and effects, both acute and delayed**

None known.

**Indication of immediate medical attention and special treatment needed, if necessary**

Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Carbon dioxide (CO₂). Dry chemical. Dry powder.

**Specific Hazards Arising from the Chemical**

None known.

**Flammable properties**

Combustible material: may burn but does not ignite readily

**Explosion data**

- Sensitivity to Mechanical Impact: Not sensitive.
- Sensitivity to Static Discharge: Not sensitive.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**

For personal protection see Section 8.

**Other**

For further clean-up instructions, call PeroxyChem Emergency Hotline number listed in...
Section 1 “Product and Company Identification” above.

Environmental Precautions
Prevent undiluted spillage from entering sewers, basements or watercourses.

Methods for Containment
Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up
After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling
Handle in accordance with good industrial hygiene and safety practice.

Storage
Any vessel that contains wet ELS must be vented due to potential pressure build up from fermentation gases. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible products
Strong oxidizing agents, Alkalis, Water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering measures
None under normal use conditions.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Safety glasses with side-shields.

Skin and Body Protection
Wear suitable protective clothing.

Hand Protection
Protective gloves

Respiratory Protection
Use only with adequate ventilation.

Hygiene measures
Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Amber viscous liquid</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Amber</td>
</tr>
<tr>
<td>Odor</td>
<td>odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>6.5 - 6.9</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No information available</td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Density: No information available
Specific gravity: No information available
Water solubility: Dispersible in water
Solubility in other solvents: No information available
Partition coefficient: No information available
Autoignition temperature: No information available
Decomposition temperature: No information available
Viscosity, kinematic: No information available
Viscosity, dynamic: No information available
Explosive properties: Non-explosive
Oxidizing properties: Non-oxidizing
Molecular weight: No information available
Bulk density: Not applicable

10. STABILITY AND REACTIVITY

Reactivity: None under normal use conditions
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: None under normal processing.
Hazardous polymerization: Hazardous polymerization does not occur.
Conditions to avoid: Temperatures above 71°C.
Incompatible materials: Strong oxidizing agents, Alkalis, Water.
Hazardous Decomposition Products: May emit toxic fumes under fire conditions: Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Product Information
Product does not present an acute toxicity hazard based on known information.

LD50 Oral: There are no data available for this product.
LD50 Dermal: There are no data available for this product
LC50 Inhalation: No information available
Serious eye damage/eye irritation: May cause slight irritation.
Skin corrosion/irritation: May cause slight irritation.
Sensitization: Not expected to be sensitizing based on the components.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
<th>NOAEL Oral Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorbitan monooleate, ethoxylated</td>
<td>= 34500 µL/kg (Rat)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9005-65-6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Information on toxicological effects
Symptoms: No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
Carcinogenicity: Contains no ingredient listed as a carcinogen.
Mutagenicity: This product is not recognized as mutagenic by Research Agencies.
Reproductive toxicity  
This product does not contain any known or suspected reproductive hazards.

STOT - single exposure  
No information available.

STOT - repeated exposure  
No information available.

Aspiration hazard  
No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects  
Not dangerous to the environment according to Regulation (CE) No 1272/2008 and its amendments

Persistence and degradability  
Expected to biodegrade, based on component information.

Bioaccumulation  
Bioaccumulation is unlikely.

Mobility  
Will likely be mobile in the environment due to its water solubility but will likely degrade over time.

Other Adverse Effects  
None known.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods  
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Dispose of in accordance with federal, state and local regulations.

Contaminated Packaging  
Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT  
NOT REGULATED

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories
This product is not subject to reporting under the Emergency Planning and Community Right-to-Know rule.

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA/EPCRA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

**U.S. State Right-to-Know Regulations**
This product does not contain any substances regulated under applicable state right-to-know regulations

**California Proposition 65**
This product does not contain any Proposition 65 chemicals

**CANADA**

**Environmental Emergencies**
This product contains no substances listed under Canada's Environmental Emergency regulations.

**Canadian National Pollutant Release Inventory**
This product contains no substances reportable under Canada's National Pollutant Release Inventory regulations.

**International Inventories**

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA (United States)</th>
<th>DSL (Canada)</th>
<th>EINECS/EL INCS (Europe)</th>
<th>ENCS (Japan)</th>
<th>China (IECSC)</th>
<th>KECL (Korea)</th>
<th>PICCS (Philippines)</th>
<th>AICS (Australia)</th>
<th>NZIoC (New Zealand)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorbitan monooleate, ethoxylated 9005-65-6 (5 - 15)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lecithin 8002-43-5 (70 - 90)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Mexico**

**Mexico - Grade** Minimum risk, Grade 0

**16. OTHER INFORMATION**

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Stability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical hazard</th>
<th>Special precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

| NFPA/HMIS Ratings Legend | Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0 |

Revision date: 2018-12-11
Revision note: Qualify trade name.
Issuing Date: 2018-12-11

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