1. **SECTION 1: CHEMICAL/MIXTURE IDENTIFICATION**

1.1 **Product identifier**
- **Product Name**: Defunkify Liquid Laundry Detergent, Defunkify Liquid Laundry Detergent – Fresh Air Scent, Defunkify Liquid Laundry Detergent – Free and Clear.
- **Mixture**

1.2 **Relevant identified uses of the substance or mixture and uses advised against**
- **Identified use(s)**: Laundry Detergent
- **Uses advised against**: None known.

1.3 **Details of the supplier of the product**
- **Company Identification**: Dune Sciences, Inc.
  350 W. 5th Ave.
  Eugene, OR 97401
- **Telephone**: (541) 359-1959
- **E-Mail**: Info@defunkify.com

1.4 **Emergency telephone number**: (800) 424-9300 [CHEMTREC]

2. **SECTION 2: HAZARDS IDENTIFICATION**

"Consumer Products", defined by the US Consumer Product Safety Act and are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided to assist in the safe handling and proper use of the product.

2.1 **Classification of the substance or mixture**
- **GHS 29 CFR 1910.1200**

2.2 **Label elements**
- **Hazard pictogram(s)**
- **Signal word(s)**: Warning
- **Hazard statement(s)**:
  - H302 – Harmful if swallowed – Category 4
  - H315 – Causes skin irritation – Category 2
  - H319 – Causes serious eye irritation – Category 2A
  - H402 – Harmful to aquatic life, acute – Category 3
  - H412 – Harmful to aquatic life, long-term – Category 3

- **Precautionary statement(s)**:
  - PREVENTION: Wear gloves/protective clothing and eye/face protection during use. Wash skin thoroughly after handling. Do not eat, drink, or smoke while using this product. Avoid release into the environment.
  - 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 attention. IF SWALLOWED: Drink plenty of water. Call poison control if person feels unwell. IF ON SKIN: Take off contaminated clothing. Rinse with plenty of water. If skin irritation occurs, get medical attention.

2.3 Other hazards
None.

2.4 Additional Information
None.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures
29CFR 1910.1200

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>%W/W</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decyl glucoside</td>
<td>&gt;=8 - &lt;20</td>
<td>68515-73-1</td>
</tr>
<tr>
<td>Sodium C14-16 olefin sulfonate</td>
<td>&gt;=5 - &lt;10</td>
<td>68439-57-6</td>
</tr>
<tr>
<td>Lauryl glucoside</td>
<td>&gt;=5 - &lt;10</td>
<td>110615-47-9</td>
</tr>
<tr>
<td>Enzyme blend</td>
<td>&gt;=1 - &lt;5</td>
<td>Confidential Business Information</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>&gt;= 0.5 - &lt;2</td>
<td>1310-58-3</td>
</tr>
<tr>
<td>Ethanol</td>
<td>&gt;=0.5 - &lt;2</td>
<td>64-17-5</td>
</tr>
</tbody>
</table>

3.2 Additional Information
None.

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures
Inhalation
Remove person to fresh air. If symptoms persist, get medical attention.

Skin Contact
Take off contaminated clothing. Rinse with plenty of water. If skin irritation develops, get medical attention.

Eye Contact
Flush eyes with water for several minutes while holding eyelids open. Remove contact lenses if present and easy to do. If eye irritation develops, get medical attention.

Ingestion
Give plenty of water to drink. Do NOT induce vomiting. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed
None anticipated.

4.3 Indication of any immediate medical attention and special treatment needed
Unlikely to be required but if necessary treat symptomatically.

5. SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing Media
Suitable Extinguishing Media
Water spray, foam, dry powder or CO2.

Unsuitable Extinguishing Media
None known.

5.2 Special hazards arising from the substance or mixture
None anticipated. Not flammable or combustible.

5.3 Advice for fire-fighters
Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

6. SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Caution - spillages may be slippery. Ensure adequate ventilation. Wear personal protective equipment.

6.2 Environmental precautions
Do not release large quantities into the surface water or into drains.

6.3 Methods and material for containment and cleaning up
Adsorb spillages onto sand, earth, vermiculite or any suitable adsorbent material; collect in container for disposal according to local / national regulations.
6.4 Reference to other sections

See Also Section: 8, 13.

7. SECTION 7: HANDLING AND STORAGE

General hygiene measures for the handling of chemicals are applicable.

7.1 Precautions for safe handling

Wear suitable personal protective equipment. Wash hands and exposed skin after use. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a cool, well ventilated place.

Storage Temperature
Ambient.

Storage Life
Stable under normal conditions.

Incompatible materials
None known.

7.3 Specific end use(s)

Laundry detergent.

8. SECTION 8: EXPOSURE CONTROLS/PERSOANL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

ACGIH (TLV), NIOSH (REL), and OSHA (PEL) exposure limits have not been established for this product or reportable ingredients.

8.1.2 Biological limit value

Not established.

8.1.3 PNECs and DNELs

Not established.

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Provide adequate ventilation.

8.2.2 Personal protection equipment

Eye/face protection
Wear protective eye glasses for protection against liquid splashes.

Skin protection (Hand protection/ Other)
Wear suitable gloves if prolonged skin contact is likely.

Respiratory protection
Normally no personal respiratory protection is necessary.

Thermal hazards
Not applicable.

8.2.3 Environmental Exposure Controls

Do not release large quantities into the surface water or into drains.

9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance
Semi-viscous liquid.

Color
Clear, may be discolored slightly.

Odor
Un-scented.

Odor Threshold
Not established.

pH
7-9.

Melting Point/Freezing Point
Not applicable.

Initial boiling point and boiling range
No information available.

Flash point
No information available.

Evaporation rate
No information available.

Flammability (solid, gas)
No information available.

Upper/lower flammability or explosive limits
No information available.

Vapour pressure
No information available.

Vapour density
Not applicable.

Relative density
No information available.

Solubility
Soluble in water.

Partition coefficient: n-octanol/water
No information available.

Auto-ignition temperature
No information available.

Decomposition Temperature
No information available.
Viscosity
Exploding properties
Oxidising properties

9.2 Other information
None.

10. SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Stable under normal conditions.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid
None anticipated.

10.5 Incompatible materials
None in particular.

10.6 Hazardous Decomposition Product(s)
No hazardous decomposition products known.

11. SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Oral LD50 (rat)</th>
<th>Dermal LD50 (rabbit)</th>
<th>Inhalation LC50 (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decyl glucoside</td>
<td>68515-73-1</td>
<td>&gt; 5,000 mg/kg</td>
<td>&gt; 2,000 mg/kg (rabbit)</td>
<td>No data</td>
</tr>
<tr>
<td>Sodium C14-16 olefin sulfonate</td>
<td>68439-57-6</td>
<td>&gt; 2,000 mg/kg (rat)</td>
<td>&gt; 2,000 mg/kg (rabbit)</td>
<td>No data</td>
</tr>
<tr>
<td>Lauryl glucoside</td>
<td>110615-47-9</td>
<td>&gt; 5,000 mg/kg (rat)</td>
<td>&gt; 5,000 mg/kg (rabbit)</td>
<td>No data</td>
</tr>
<tr>
<td>Enzyme blend</td>
<td>CBI</td>
<td>1,800 mg/kg (rat)</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>1310-58-3</td>
<td>365 mg/kg (rat)</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>8,370 mg/kg (rat)</td>
<td>17,193 mg/kg (rabbit)</td>
<td>135.7 mg/L</td>
</tr>
</tbody>
</table>

Acute toxicity: Harmful if swallowed.
Irritation: Irritating to skin and eyes.
Corrosivity: Irritating to skin. Causes serious eye irritation.
Sensitisation: Irritating to skin.
Repeated dose toxicity: None anticipated.
Carcinogenicity: No evidence of carcinogenicity.
Mutagenicity: No evidence of mutagenic potential.
Toxicity for reproduction: None anticipated.

11.2 Other information
None.

12. SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS No.</th>
<th>Fish (LC50, 96h)</th>
<th>Daphnia magna (EC50, 48h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decyl glucoside</td>
<td>68515-73-1</td>
<td>&gt; 100 mg/L</td>
<td>&gt; 100 mg/L</td>
</tr>
<tr>
<td>Sodium C14-16 olefin sulfonate</td>
<td>68439-57-6</td>
<td>2.6 mg/L</td>
<td>4.48 mg/L</td>
</tr>
<tr>
<td>Lauryl glucoside</td>
<td>110615-47-9</td>
<td>1-10 mg/L</td>
<td>10-100 mg/L</td>
</tr>
<tr>
<td>Enzyme blend</td>
<td>CBI</td>
<td>58.3-326.7 mg/L</td>
<td>31.7-457 mg/L</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>1310-58-3</td>
<td>80 mg/L</td>
<td>60 mg/L</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability
No information available.

12.3 Bioaccumulative potential
No information available.

12.4 Mobility in soil
No information available.

12.5 Results of PBT and VPvB assessment
Not classified as PBT or vPvB.

12.6 Other adverse effects
None known.

13. SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Use appropriate tools to put the spilled substance in a convenient waste disposal container. Finish cleaning by spreading soap and water on the contaminated surface.

13.2 Additional Information
Disposal should be in accordance with local, state or national legislation.
14. SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous for transport.

14.1 UN number Not applicable.
14.2 UN Proper Shipping Name Not applicable.
14.3 Transport hazard class(es) Not applicable.
14.4 Packing Group Not applicable.
14.5 Environmental hazards Not applicable.
14.6 Special precautions for user Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15. SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2 GHS Created in accordance with the OSHA’s implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

15.3 US EPA TSCA: All ingredients are on the TSCA inventory.

16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16

LEGEND

DNEL Derived No Effect Level
PNEC Predicted No Effect Concentration
PBT Persistent, Bioaccumulative and Toxic
vPvB very Persistent and very Bioaccumulative

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Annex to the extended Safety Data Sheet (eSDS)

No information available.