1. SECTION 1: CHEMICAL/MIXTURE IDENTIFICATION

1.1 Product identifier
Product Name: Defunkify Dish Washing Detergent – Free & Clear
CAS No.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified use(s): Dish washing 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
Emergency Phone No.: (800) 424-9300 [CHEMTREC]

1.5 Contact E-mail
Info@defunkify.com

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): None.

Signal word(s): Warning
Hazard statement(s): H316 – Skin Corrosion/Irritation – Category 3
H320 – Serious Eye Damage/Irritation – Category 2B

Precautionary statement(s): IF IN EYES: Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Rinse cautiously with water for several minutes. If eye irritation persists: get medical advice/attention.

IF SWALLOWED: Drink plenty of water. Do NOT induce vomiting. Call a poison center or doctor if you feel unwell.
2.3 Other hazards

None.

2.4 Additional Information

None.

3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

**Table:**

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>%W/W</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium citrate</td>
<td>20 - 30</td>
<td>6132-4-3</td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>15 - 25</td>
<td>497-19-8</td>
</tr>
<tr>
<td>Sodium percarbonate</td>
<td>10 - 20</td>
<td>15630-89-4</td>
</tr>
<tr>
<td>Potassium carbonate</td>
<td>2 - 10</td>
<td>584-08-07</td>
</tr>
<tr>
<td>Sodium sulfate</td>
<td>2 - 10</td>
<td>7757-82-6</td>
</tr>
<tr>
<td>Sodium gluconate</td>
<td>2 - 10</td>
<td>527-07-1</td>
</tr>
<tr>
<td>Sodium silicate (hydrous)</td>
<td>2 - 10</td>
<td>1344-09-08</td>
</tr>
<tr>
<td>Protease enzyme</td>
<td>1 - 3</td>
<td>9001-92-7</td>
</tr>
<tr>
<td>Carboxymethyl inulin (CMI)</td>
<td>1 - 3</td>
<td>430439-54-6</td>
</tr>
<tr>
<td>Tetrasodium glutamate diacetate (GLDA)</td>
<td>1 - 3</td>
<td>51981-21-6</td>
</tr>
<tr>
<td>Sodium C14-C16 olefin sulfonate</td>
<td>1 - 3</td>
<td>68439-57-6</td>
</tr>
<tr>
<td>Lauryl/myristyl glucoside</td>
<td>1 - 3</td>
<td>110615-47-9</td>
</tr>
<tr>
<td>Sorbitan laureate</td>
<td>0.5 - 1.5</td>
<td>1338-39-2</td>
</tr>
<tr>
<td>Amylase enzyme</td>
<td>0.1 - 1.0</td>
<td>9000-90-2</td>
</tr>
<tr>
<td>Tetraacetylethlenediamine (TAED)</td>
<td>0.1 - 1.0</td>
<td>10543-57-4</td>
</tr>
</tbody>
</table>

3.2 Additional Information

None.

4. SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

**Inhalation**: N/A

**Skin Contact**: Rinse with plenty of water. If skin irritation occurs: get medical advice/attention.

**Eye Contact**: Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Rinse cautiously with water for several minutes. If eye irritation persists: get medical advice/attention.

**Ingestion**: Drink plenty of water. Do NOT induce vomiting. Call a poison center or doctor if you feel unwell.

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.

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

Household Handling
Small spills and leaks may be cleaned up and disposed of in household trash or diluted and disposed of down drain.

Industrial Handling
Stop spill at source and contain material. Adsorb spillages onto sand, earth or any suitable adsorbent material. Dispose of liquid and adsorbent material in accordance with all applicable local, state, and federal regulations. Small amounts may be flushed to a sewer.

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

Household Handling
Use as directed on product label. Wash hands and exposed skin after use. Do not eat, drink or smoke when using this product.

Industrial Handling
Wear suitable personal protective equipment. Wash hands and exposed skin after use.

7.2 Conditions for safe storage, including any incompatibilities

Storage Temperature
Ambient.

Storage Life
Stable under normal conditions.

Incompatible materials
None know.

7.3 Specific end use(s)
Laundry detergent.

8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits
Not established.

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. Wear impervious gloves (EN374).

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
Solid powder.

Color
White/off-white

Odor
Unfragranced.

Odor Threshold
Not established.

pH (1% aqueous solution)
10.0-11.0

Solubility
Soluble in water.
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
Cleaning products should not be mixed with other household chemicals unless specifically provided according to label directions.

10.5 Incompatible materials
Strong oxidizers or reducing agents, strong acids or strong bases.

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>Ingredient(s)</th>
<th>CAS No.</th>
<th>Oral LD 50 (Rat)</th>
<th>Dermal LD 50 (Mouse)</th>
<th>Inhalation LC 50 (Rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium citrate</td>
<td>6132-4-3</td>
<td>11700 mg/kg</td>
<td>&gt;2000 mg/kg</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>2800 mg/kg</td>
<td>&gt;2000 mg/kg</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium percarbonate</td>
<td>15630-89-4</td>
<td>1034 mg/kg</td>
<td>&gt;2000 mg/kg</td>
<td>4580 g/m³</td>
</tr>
<tr>
<td>Potassium carbonate</td>
<td>584-08-07</td>
<td>&gt;2000 mg/kg</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium sulfate</td>
<td>7757-82-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium gluconate</td>
<td>527-07-1</td>
<td>&gt;2000 mg/kg</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium silicate (hydrors)</td>
<td>1344-09-08</td>
<td>3400 mg/kg</td>
<td>&gt;5000 mg/kg</td>
<td>2.06 g/m³</td>
</tr>
<tr>
<td>Protease enzyme</td>
<td>9001-92-7</td>
<td>1800 mg/kg</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Carboxymethyl inulin (CMI)</td>
<td>430439-54-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Tetrasodium glutamate diacetate (GLDA)</td>
<td>51981-21-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium C14-C16 olefin sulfonate</td>
<td>68439-57-6</td>
<td>2079 mg/kg</td>
<td>6300 – 13500 mg/kg</td>
<td>&gt;52 mg/L</td>
</tr>
<tr>
<td>Lauryl/myristyl glucoside</td>
<td>110615-47-9</td>
<td>&gt;5,000 mg/kg</td>
<td>&gt;5,000 mg/kg</td>
<td>&gt;5 mg/L</td>
</tr>
<tr>
<td>Sorbitan laurate</td>
<td>1338-39-2</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Amylase enzyme</td>
<td>9000-90-2</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Tetraacetyleneplenediamine (TAED)</td>
<td>10543-57-4</td>
<td>5.9 g/kg</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

- **Acute toxicity**: None anticipated.
- **Irritation**: Causes mild skin and eye irritation.
- **Corrosivity**: None anticipated.
- **Sensitisation**: 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 LC 50 (96h)</th>
<th>Daphne EC 50 (48h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium citrate</td>
<td>6132-4-3</td>
<td>Not listed</td>
<td>1535 mg/L</td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>300 mg/L</td>
<td>200 – 227 mg/L</td>
</tr>
<tr>
<td>Sodium percarbonate</td>
<td>15630-89-4</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Potassium carbonate</td>
<td>584-08-07</td>
<td>68 mg/L</td>
<td>430 mg/L</td>
</tr>
<tr>
<td>Sodium sulfate</td>
<td>7757-82-6</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Sodium gluconate</td>
<td>527-07-1</td>
<td>&gt;1000 mg/L</td>
<td>&gt;1000 mg/L</td>
</tr>
<tr>
<td>Sodium silicate (hydrors)</td>
<td>1344-09-08</td>
<td>1108 mg/L</td>
<td>1700 mg/L</td>
</tr>
<tr>
<td>Protease enzyme</td>
<td>9001-92-7</td>
<td>8.2 mg/L</td>
<td>586 µg/L</td>
</tr>
<tr>
<td>Carboxymethyl inulin (CMI)</td>
<td>430439-54-6</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Tetrasodium glutamate diacetate (GLDA)</td>
<td>51981-21-6</td>
<td>8.2 mg/L</td>
<td>586 µg/L</td>
</tr>
<tr>
<td>Sodium C14-C16 olefin sulfonate</td>
<td>68439-57-6</td>
<td>4.2 mg/L</td>
<td>4.53 mg/L</td>
</tr>
<tr>
<td>Substance</td>
<td>CAS Number</td>
<td>PBT/VpVb Limit</td>
<td>vpVpB Limit</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>--------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Lauryl/myristyl glucoside</td>
<td>110615-47-9</td>
<td>&gt; 1 – 10 mg/L</td>
<td>&gt; 1 – 10 mg/L</td>
</tr>
<tr>
<td>Sorbitan laurate</td>
<td>1338-39-2</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Amylase enzyme</td>
<td>9000-90-2</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
<tr>
<td>Tetraacetylethylene diamine (TAED)</td>
<td>10543-57-4</td>
<td>Not listed</td>
<td>Not listed</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 regulated for transport in accordance with US DOT Regulations.

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 CPSC’s implementation of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

16. SECTION 16: OTHER INFORMATION

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

This product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and, as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

**LEGEND**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTEL</td>
<td>Long Term Exposure Limit</td>
</tr>
<tr>
<td>STEL</td>
<td>Short Term Exposure Limit</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No Effect Level</td>
</tr>
<tr>
<td>PNEC</td>
<td>Predicted No Effect Concentration</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

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