1. Product and Company Identification

Product Name: De Flea Pet Shampoo  
CAS #: Mixture  
Product use: Pesticide  
Manufacturer: Natural Chemistry, Inc.  
40 Richards Ave.  
Norwalk, CT 06854 US  
Phone: (800) 753-1233  
Emergency Phone: CHEMTREC (800) 424-9300

2. Hazards Identification

Emergency overview: CAUTION  
EYE AND SKIN IRRITANT.

Potential short term health effects:
   Routes of exposure: Eye, Skin contact, Inhalation, Ingestion.  
   Eyes: May cause irritation.  
   Skin: May cause irritation.  
   Inhalation: May cause respiratory tract irritation.  
   Ingestion: May cause stomach distress, nausea or vomiting.

Target organs: Eyes. Skin. Respiratory system.  
Chronic effects: Prolonged or repeated exposure can cause drying, defattting and dermatitis.

Signs and symptoms: Symptoms may include redness, edema, drying, defattting and cracking of the skin.  
   Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

OSHA Regulatory Status: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential environmental effects: This product has not been tested.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt</td>
<td>577-11-7</td>
<td>3.13</td>
</tr>
</tbody>
</table>

4. First Aid Measures

First aid procedures:
   Eye contact: Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.  
   Skin contact: Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.  
   Inhalation: If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.  
   Ingestion: Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.  
   General advice: If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties: Not flammable by OSHA criteria.  
Extinguishing media: Suitable extinguishing media  
Treat for surrounding material.
Unsuitable extinguishing media
Protection of firefighters
Specific hazards arising from the chemical
Protective equipment for firefighters
Hazardous combustion products
Explosion data
Sensitivity to mechanical impact
Sensitivity to static discharge

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas.

Methods for containment
Stop leak if you can do so without risk.

Methods for cleaning up
Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

7. Handling and Storage

Handling
Use good industrial hygiene practices in handling this material.

Storage
Keep out of reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>Exposure Limits</th>
</tr>
</thead>
</table>
| Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt | ACGIH-TLV  
Not established  
OSHA-PEL  
Not established |

Engineering controls
General ventilation normally adequate.

Personal protective equipment

<table>
<thead>
<tr>
<th>Protection</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye / face protection</td>
<td>Wear safety glasses with side shields.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Rubber gloves. Confirm with a reputable supplier first.</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>As required by employer code.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.</td>
</tr>
<tr>
<td>General hygiene considerations</td>
<td>Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.</td>
</tr>
</tbody>
</table>

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear.</td>
</tr>
<tr>
<td>Color</td>
<td>Light mint green</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>pH</td>
<td>7.3 - 7.8</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Boiling point Not available
Pour point Not available
Evaporation rate Not available
Flash point Not available
Auto-ignition temperature Not available
Flammability limits in air, lower, % by volume Not available
Flammability limits in air, upper, % by volume Not available
Vapor pressure Not available
Vapor density Not available
Specific gravity 1
Relative density 8.33
Octanol/water coefficient Not available
Solubility (H2O) Miscible

10. Stability and Reactivity

Reactivity None known.
Possibility of hazardous reactions Hazardous polymerization does not occur.
Chemical stability Stable under recommended storage conditions.
Conditions to avoid Do not mix with other chemicals.
Incompatible materials Acids. Oxidizers.
Hazardous decomposition products May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Component analysis - LC50

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Component analysis - Oral LD50

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt</td>
<td>2643 mg/kg mouse; 1900 mg/kg rat</td>
</tr>
</tbody>
</table>

Effects of acute exposure

Eye May cause irritation.
Skin May cause irritation.
Inhalation May cause respiratory tract irritation.
Ingestion May cause stomach distress, nausea or vomiting.
Sensitization Non-hazardous by OSHA criteria.
Chronic effects Non-hazardous by OSHA criteria.
Carcinogenicity Non-hazardous by OSHA criteria.
Mutagenicity Non-hazardous by OSHA criteria.
Reproductive effects Non-hazardous by OSHA criteria.
Teratogenicity Non-hazardous by OSHA criteria.
Name of Toxically Synergistic Products Not available
12. Ecological Information

Ecotoxicity - Freshwater Fish - Acute Toxicity Data
Butanedioic acid, sulfo-,
1,4-bis(2-ethylhexyl) ester,
sodium salt 577-11-7
96 Hr LC50 Oncorhynchus mykiss: 20-40 mg/L [semi-static]; 96 Hr LC50 Oncorhynchus mykiss: <24 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 37 mg/L [static]

Ecotoxicity - Water Flea - Acute Toxicity Data
Butanedioic acid, sulfo-,
1,4-bis(2-ethylhexyl) ester,
sodium salt 577-11-7
48 Hr EC50 Daphnia magna: 36 mg/L

Persistence / degradability Not available
Bioaccumulation / accumulation Not available
Mobility in environmental media Not available
Environmental effects Not available
Aquatic toxicity Not available
Partition coefficient Not available
Chemical fate information Not available

13. Disposal Considerations

Disposal instructions Review federal, state and local government requirements prior to disposal.
Waste from residues / unused products Not available
Contaminated packaging Not available

14. Transport Information

U.S. Department of Transportation (DOT)
Not regulated as dangerous goods.

15. Regulatory Information

Occupational Safety and Health Administration (OSHA)
29 CFR 1910.1200 hazardous chemical Yes

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

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
Section 302 extremely hazardous substance No
Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available
Clean Water Act (CWA) Not available
State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Inventory status
Country(s) or region Inventory name On inventory (yes/no)*
United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
16. Other Information

**LEGEND HMIS/NFPA**

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Health</td>
<td>/</td>
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<tr>
<td>Flammability</td>
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<tr>
<td>Physical Hazard</td>
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<td></td>
</tr>
<tr>
<td>Personal Protection</td>
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<td></td>
</tr>
</tbody>
</table>

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

**Issue date**

11-Feb-2011

**Effective date**

01-Apr-2011

**Prepared by**

Dell Tech Laboratories Ltd. (519) 858-5021

**Other information**

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.