1. Product and Company Identification

Product name: DeFlea Yard Spray

CAS #: Mixture

Product use: Flea and tick control

Manufacturer: Natural Chemistry L.P.
40 Richards Ave.
Norwalk, CT 06854 US
Phone: (800) 753-1233
Emergency Phone: CHEMTREC (800) 424-9300

2. Hazards Identification

Emergency overview: WARNING
EYE AND SKIN IRRITANT.

Potential short term health effects:

Routes of exposure: Eye, Skin contact, Inhalation, Ingestion.

Eyes: May cause irritation.

Skin: Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals.

Inhalation: May cause respiratory tract irritation.

Ingestion: May cause stomach distress, nausea or vomiting.

Target organs: Eyes. Skin.

Chronic effects: Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms: Symptoms may include redness, edema, drying, defatting 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: Components of this product have been identified as having potential environmental concerns.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid, mono-C10-C16 alkyl esters, sodium salts</td>
<td>68585-47-7</td>
<td>&lt;= 4.3</td>
</tr>
<tr>
<td>Benzaldehyde, 4-hydroxy-3-methoxy-</td>
<td>121-33-5</td>
<td>&lt;= 1.8</td>
</tr>
<tr>
<td>Oils, cinnamon</td>
<td>8015-91-6</td>
<td>&lt;= 1.8</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.

Notes to physician: Not available

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
Unsuitable extinguishing media
Not available

Protection of firefighters
Specific hazards arising from the chemical
Not available
Protective equipment and precautions for firefighters
Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products
May include and are not limited to: Oxides of carbon. Oxides of sulfur.

Explosion data
Sensitivity to mechanical impact
Not available.
Sensitivity to static discharge
Not available.

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
Do not contaminate water.

Methods for containment
Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.

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 to 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
Not available

Engineering controls
General ventilation normally adequate.

Personal protective equipment
Eye / face protection
Wear safety glasses with side shields.
Hand protection
Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection
As required by employer code.
Respiratory protection
Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations
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.

9. Physical and Chemical Properties

Appearance
Clear
Color
Light Gold
Form
Liquid
Odor
Slight cinnamon
Odor threshold
Not available.
Physical state
Liquid.
pH
6 - 6.3
Freezing point
Not available.
Boiling point
Not available.
Pour point
Not available.
Evaporation rate  
Flash point  
> 200.0 °F (> 93.3 °C)
Auto-ignition temperature  
Not available.
Flammability limits in air, upper, % by volume  
Not available.
Flammability limits in air, lower, % by volume  
Not available.
Vapor pressure  
Not available.
Vapor density  
Not available.
Specific gravity  
1 - 1.02
Partition coefficient (n-octanol/water)  
Not available.
Solubility (water)  
Complete
Relative density  
8.3 - 8.5
Viscosity  
Not available.
VOC  
Not available
Percent volatile  
Not available

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  
Hazardous decomposition products  
May include and are not limited to: Oxides of carbon. Oxides of sulfur.

11. Toxicological Information

<table>
<thead>
<tr>
<th>Toxicological data</th>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzaldehyde, 4-hydroxy-3-methoxy- (CAS 121-33-5)</td>
<td>Acute</td>
<td>Dermal</td>
<td>Rabbit</td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td></td>
<td>5010 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Oral</td>
<td></td>
<td>Guinea pig</td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td></td>
<td>1400 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td></td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td></td>
<td>1580 mg/kg</td>
</tr>
<tr>
<td>Oils, cinnamon (CAS 8015-91-6)</td>
<td>Acute</td>
<td>Dermal</td>
<td>Rabbit</td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td></td>
<td>5000.1 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Oral</td>
<td></td>
<td>Rat</td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td></td>
<td>2650 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LC50</td>
<td></td>
<td>Not available.</td>
</tr>
<tr>
<td>Sulfuric acid, mono-C10-C16 alkyl esters, sodium salts (CAS 68585-47-7)</td>
<td>Acute</td>
<td>Dermal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LD50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. Ecological Information

Ecotoxicity
Components of this product have been identified as having potential environmental concerns.

Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzaldehyde, 4-hydroxy-3-methoxy- (CAS 121-33-5)</td>
<td>Fathead minnow (Pimephales promelas)</td>
<td>53 - 61.3 mg/l, 96 hours</td>
</tr>
<tr>
<td>Aquatic</td>
<td>Fish</td>
<td>LC50</td>
</tr>
<tr>
<td>Sulfuric acid, mono-C10-C16 alkyl esters, sodium salts (CAS 68585-47-7)</td>
<td>Water flea (Ceriodaphnia dubia)</td>
<td>1.2 - 2.2 mg/l, 48 hours</td>
</tr>
<tr>
<td>Aquatic</td>
<td>Crustacea</td>
<td>EC50</td>
</tr>
</tbody>
</table>

Persistence and degradability  Not available.
Bioaccumulation / Accumulation Not available.
Mobility in environmental media Not available.
Environmental effects Not available.
Aquatic toxicity Not available.
Partition coefficient
Benzaldehyde, 4-hydroxy-3-methoxy- 1.37

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.

Flea and tick control. Minimum risk pesticide. This product has not been registered by the US EPA. Natural Chemistry, Inc. represents that this product qualifies for exemption from registration under the FIFRA Act.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

CERCLA (Superfund) reportable quantity
None

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

State regulations
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Not listed.

US - Texas Effects Screening Levels: Listed substance
Benzaldehyde, 4-hydroxy-3-methoxy- (CAS 121-33-5) Listed.

US. Massachusetts RTK - Substance List
Not regulated.

US. Pennsylvania RTK - Hazardous Substances
Not regulated.

US. Rhode Island RTK
Not regulated.

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 |
|--------|--------|-------|
| HEALTH | FLAMMABILITY | PHYSICAL HAZARD |
| Severe  | 4       | 1     |
| Serious | 3       |       |
| Moderate| 2       |       |
| Slight  | 1       |       |
| Minimal | 0       |       |
| PERSONAL PROTECTION | B |
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.

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Prepared by
Dell Tech Laboratories, Ltd. Phone: (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.