1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Natural Yard and Kennel Spray</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS #</td>
<td>Mixture</td>
</tr>
<tr>
<td>Product use</td>
<td>Flea and tick control</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Natural Chemistry, Inc.</td>
</tr>
<tr>
<td></td>
<td>40 Richards Ave.</td>
</tr>
<tr>
<td></td>
<td>Norwalk, CT 06854 US</td>
</tr>
<tr>
<td></td>
<td>Phone: (800) 753-1233</td>
</tr>
<tr>
<td></td>
<td>Emergency Phone: CHEMTREC (800) 424-9300</td>
</tr>
</tbody>
</table>

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>Ingredient(s)</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>4.3</td>
</tr>
<tr>
<td>Benzaldehyde, 4-hydroxy-3-methoxy-</td>
<td>121-33-5</td>
<td>1.8</td>
</tr>
<tr>
<td>Oils, cinnamon</td>
<td>8015-91-6</td>
<td>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.
  - **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 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 sulphur.

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 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
Ingredient(s) | Exposure Limits
--- | ---
Benzaldehyde, 4-hydroxy-3-methoxy- | ACGIH-TLV
 | Not established
 | OSHA-PEL
 | Not established

Oils, cinnamon | ACGIH-TLV
 | Not established
 | OSHA-PEL
 | Not established

Sulfuric acid, mono-C10-C16 alkyl esters, sodium salts | ACGIH-TLV
 | Not established
 | OSHA-PEL
 | Not established

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Color</td>
<td>Light brown</td>
</tr>
<tr>
<td>Form</td>
<td>Spray</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight cinnamon</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>6.1 - 6.3</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>Pour point</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °F (&gt; 93.33 °C)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability limits in air, lower, % by volume</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability limits in air, upper, % by volume</td>
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</tr>
<tr>
<td>Vapor pressure</td>
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</tr>
<tr>
<td>Vapor density</td>
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</tr>
<tr>
<td>Specific gravity</td>
<td>1.01</td>
</tr>
<tr>
<td>Octanol/water coefficient</td>
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</tr>
<tr>
<td>Solubility (H2O)</td>
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</tr>
<tr>
<td>VOC (Weight %)</td>
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</tr>
<tr>
<td>Softening point</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>Not available</td>
</tr>
</tbody>
</table>

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

11. Toxicological Information

Component analysis - LC50

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzaldehyde, 4-hydroxy-3-methoxy-</td>
<td>Not available</td>
</tr>
<tr>
<td>Oils, cinnamon</td>
<td>Not available</td>
</tr>
<tr>
<td>Sulfuric acid, mono-C10-C16 alkyl esters, sodium salts</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Component analysis - Oral LD50
Ingredient(s)                  LD50
Benzaldehyde, 4-hydroxy-3-methoxy-  1580 mg/kg rat
Oils, cinnamon                  2650 mg/kg rat
Sulfuric acid, mono-C10-C16 alkyl esters, sodium salts  1300 mg/kg rat

Effects of acute exposure

Eye                                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.
Sensitization                     Contains a potential skin sensitizer.
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 Toxicologically Synergistic Products Not available

12. Ecological Information

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

Ecotoxicity - Freshwater Fish - Acute Toxicity Data
Benzaldehyde, 121-33-5 96 Hr LC50 Pimephales promelas: 53-61.3 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 88 mg/L [static]; 96 Hr LC50 Pimephales promelas: 57 mg/L [semi-static]
4-hydroxy-3-methoxy-

Ecotoxicity - Water Flea - Acute Toxicity Data
Benzaldehyde, 121-33-5 24 Hr EC50 Daphnia magna: 180 mg/L
4-hydroxy-3-methoxy-

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.

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.

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

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
United States & Puerto Rico

Inventory name
Toxic Substances Control Act (TSCA) Inventory

On inventory (yes/no)*
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

Health / 1
Flammability 1
Physical Hazard 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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Effective date
01-Mar-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.