1. Product and Company Identification

Product Name: Sergeant's Dual Action Flea & Tick Collar for Dogs

Synonym(s): EPA Registration # 2517-61

Product use: Flea and tick collar for dogs over 12 weeks of age

Manufacturer: Sergeant's Pet Care Products, Inc.
2625 South 158th Plaza
Omaha, NE 68130-1770 US
Phone: 1-800-224-7387
Fax: 1-402-938-7099
Emergency Phone: 1-800-781-4738

CHEMTREC
1-800-424-9300

2. Hazards Identification

Emergency overview: CAUTION
HARMFUL IF SWALLOWED
EYE IRRITANT

Potential short term health effects:

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

Eyes:
Causes moderate irritation to the eyes.

Skin:
May cause irritation.

Inhalation:
May cause respiratory tract irritation.

Ingestion:
Harmful if swallowed. May cause stomach distress, nausea or vomiting.

Target organs:

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:
See Section 12

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propoxur</td>
<td>114-26-1</td>
<td>2.5 – 10</td>
</tr>
<tr>
<td>N-Octyl bicycloheptene dicarboximide</td>
<td>113-48-4</td>
<td>2.5 – 10</td>
</tr>
<tr>
<td>D-Phenothrin</td>
<td>26002-80-2</td>
<td>2.5 – 10</td>
</tr>
</tbody>
</table>

4. First Aid Measures

First aid procedures:

Eye contact:
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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:
Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Notes to physician:
Dust release by this collar is a cholinesterase inhibitor. Atropine is antidotal.
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. 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

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 nitrogen.

Explosion data

Sensitivity to mechanical impact

Not applicable

Sensitivity to static discharge

Not applicable

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, or confined areas.

Methods for containment

Place in closed labeled container.

Methods for cleaning up

Before attempting clean up, refer to hazard data given above and use appropriate personal protective equipment (PPE). Use broom to collect material without raising dust. Place in suitable labeled container for disposal. Rinse area with water. If unsure of clean-up methods, contact emergency services and/or supplier for advice.

7. Handling and Storage

Handling

Use good industrial hygiene practices in handling this material. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

Storage

Store in a cool, dry area that is inaccessible to children or pets. Protect from freezing.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s) | Exposure Limits
--- | ---
Propoxur | ACGIH-TLV
TWA: 0.5 mg/m³
OSHA-PEL
Not established

N-Octyl bicycloheptene dicarboximide | ACGIH-TLV
Not established
OSHA-PEL
Not established

D-Phenothrin | 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>PVC Strip</td>
</tr>
<tr>
<td>Color</td>
<td>Varies</td>
</tr>
<tr>
<td>Form</td>
<td>Collar</td>
</tr>
<tr>
<td>Odor</td>
<td>Baby powder</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>pH</td>
<td>Not Applicable</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>Not Applicable</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 Applicable</td>
</tr>
<tr>
<td>Flammability limits in air, upper, % by volume</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.15 g/in</td>
</tr>
<tr>
<td>Octanol/water coefficient</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.
Incompatible materials
None known.
Hazardous decomposition products
May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological Information

<table>
<thead>
<tr>
<th>Component analysis - LC₅₀</th>
<th>Ingredient(s)</th>
<th>LC₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Propoxur</td>
<td>0.498 mg/l/4h rat</td>
</tr>
<tr>
<td></td>
<td>N-Octyl bicycloheptene dicarboximide</td>
<td>Not available</td>
</tr>
<tr>
<td></td>
<td>D-Phenothrin</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Component analysis - Oral LD50

Ingredients

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propoxur</td>
<td>70 mg/kg rat</td>
</tr>
<tr>
<td>N-Octyl bicycloheptene dicarboximide</td>
<td>2800 mg/kg rat</td>
</tr>
<tr>
<td>D-Phenothrin</td>
<td>1000 mg/kg rat</td>
</tr>
</tbody>
</table>

Effects of acute exposure

- **Eye**: Causes moderate eye irritation.
- **Skin**: May cause irritation.
- **Inhalation**: May cause respiratory tract irritation.
- **Ingestion**: Harmful if swallowed. May cause stomach distress, nausea or vomiting.

**Sensitization**: Non-hazardous by OSHA criteria.

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

**Carcinogenicity**: See below.

ACGIH - Threshold Limit Values - Carcinogens

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Threshold Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propoxur</td>
<td>A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans</td>
</tr>
</tbody>
</table>

**U.S. - California - Proposition 65 - Carcinogens List**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Threshold Limit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propoxur</td>
<td>carcinogen, initial date 8/11/06</td>
</tr>
</tbody>
</table>

**Mutagenicity**: Non-hazardous by OSHA criteria.

**Reproductive effects**: Contains a potential reproductive toxin.

**Teratogenicity**: Contains a potential teratogen.

**Name of Toxicologically Synergistic Products**: Not available

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12. Ecological Information

**Ecotoxicity**: See below

**Ecotoxicity - Freshwater Algae - Acute Toxicity Data**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>EC50 Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propoxur</td>
<td>13.4 mg/L</td>
</tr>
</tbody>
</table>

**Ecotoxicity - Freshwater Fish - Acute Toxicity Data**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>EC50 Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propoxur</td>
<td>7.4-10.5 mg/L</td>
</tr>
</tbody>
</table>

**Ecotoxicity - Water Flea - Acute Toxicity Data**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>EC50 Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propoxur</td>
<td>0.15 mg/L</td>
</tr>
</tbody>
</table>

**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

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13. Disposal Considerations

**Disposal instructions**: Non-refillable container. Do not reuse or refill the container. Dispose of expired collar in trash or call your local waste agency for disposal instructions.

**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.

IMDG (Marine Transport)

Basic shipping requirements:
Proper shipping name: Environmentally Hazardous Substance, Solid, n.o.s. (PROPOXUR)
Hazard class: 9
UN number: 3077
Packing group: III

Additional information:
Special provisions: 179, 274, 335, 909
Limited quantity: 5kg
Excepted quantity code: E1
Stowage location: Cat A

IATA/ICAO (Air)

Basic shipping requirements:
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (PROPOXUR)
Hazard class: 9
UN number: 3077
Packing group: III

Additional information:
Special provisions: A97, A158, A179
Excepted quantity code: E1
Limited quantity: 30kg

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.

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Propoxur: 114-26-1
1.0 % de minimis concentration

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

D-Phenothrin: 26002-80-2
1.0 % de minimis concentration

Propoxur: 114-26-1
1.0 % de minimis concentration

CERCLA (Superfund) reportable quantity

Propoxur: 100.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance: No

Section 311 hazardous chemical: No

Clean Air Act (CAA): Not available

Clean Water Act (CWA): Not available
State regulations

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances
Propoxur 114-26-1 Present

U.S. - California - Proposition 65 - Carcinogens List
Propoxur 114-26-1 carcinogen, initial date 8/11/06

U.S. - Illinois - Toxic Air Contaminants
Propoxur 114-26-1 Present

U.S. - Louisiana - Reportable Quantity List for Pollutants
Propoxur 114-26-1 100 Lb final RQ; 45.4 kg final RQ

U.S. - Massachusetts - Right To Know List
Propoxur 114-26-1 Neurotoxin

U.S. - Minnesota - Hazardous Substance List
Propoxur 114-26-1 Present

U.S. - New Jersey - Right to Know Hazardous Substance List
D-Phenothrin 26002-80-2 sn 3727
Propoxur 114-26-1 sn 1604

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances
Propoxur 114-26-1 1 Lb RQ (air); 1 lb RQ (land/water)

U.S. - Pennsylvania - RTK (Right to Know) List
Propoxur 114-26-1 Environmental hazard

U.S. - Rhode Island - Hazardous Substance List
Propoxur 114-26-1 Toxic

U.S. - Washington - Dangerous Waste - Dangerous Waste Constituents List
Propoxur 114-26-1 Present

U.S. - Washington - Dangerous Waste - Discarded Chemical Products List
Propoxur 114-26-1 Dangerous Waste No. U411

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

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

16. Other Information

<table>
<thead>
<tr>
<th>LEGEND HMIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
</tr>
<tr>
<td>* 2</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
</tr>
<tr>
<td>PHYSICAL HAZARD</td>
</tr>
<tr>
<td>PERSONAL PROTECTION</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
09-Nov-2011

Effective date
01-Nov-2011

Prepared by
Sergeant’s Regulatory Department

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.

Supersedes MSDS dated: 15-Apr-2008