Safety Data Sheet

Section 1: Identification

Product identifier

Product Name: Repel-X Lotion Fly Repellent for Horses and Ponies
Synonyms: 19903; EPA Reg. No.: 270-253
Product Description: White to pale yellow opaque liquid.

Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Insecticide.
Restrictions on use: Avoid contact with eyes and skin. Keep out of the reach of children. Avoid release to the environment.

Details of the supplier of the safety data sheet

Manufacturer: Farnam Companies, Inc.
1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173
United States
www.farnam.com

Emergency telephone number

Manufacturer: 1-800-234-2269
Manufacturer (Transportation): 1-800-424-9300 - CHEMTREC
Manufacturer (Transportation): 1-703-527-3887 - CHEMTREC - Outside the US collect calls accepted

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012: Eye Mild Irritation 2B
Skin Sensitization 1

Label elements

OSHA HCS 2012

WARNING

Hazard statements: May cause an allergic skin reaction
Causes eye irritation

Precautionary statements

Prevention • Wash thoroughly after handling.
Avoid breathing dust, fume, gas, mist, vapors and/or spray.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.

Response • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards

OSHA HCS 2012 • This product is extremely toxic to fish and aquatic invertebrates and highly toxic to bees exposed to direct treatment or to residues on crop or weeds. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

Substances

• Material does not meet the criteria of a substance.

Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identifiers</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cypermethrin</td>
<td>CAS:52315-07-8</td>
<td>0.15%</td>
</tr>
<tr>
<td>Pyrethrins</td>
<td>CAS:8003-34-7</td>
<td>0.2%</td>
</tr>
<tr>
<td>Piperonyl butoxide</td>
<td>CAS:51-03-6</td>
<td>1.63%</td>
</tr>
<tr>
<td>Di-n-propyl Isocinchomeronate</td>
<td>CAS:136-45-8</td>
<td>0.5%</td>
</tr>
<tr>
<td>Butoxypolypropylene glycol</td>
<td>CAS:9003-13-8</td>
<td>4.85%</td>
</tr>
<tr>
<td>Glycerine</td>
<td>CAS:56-81-5</td>
<td>3.5%</td>
</tr>
<tr>
<td>Imidazolidenyl urea</td>
<td>CAS:39236-46-9</td>
<td>0.15%</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>NDA</td>
<td>Balance</td>
</tr>
</tbody>
</table>

Section 4: First-Aid Measures

Description of first aid measures

Inhalation

• IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin

• IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.
Eye

• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion

• IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Have person sip a glass of water if able to swallow. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

• An allergic skin reaction may occur in individuals with a sensitivity to cypermethrin, piperonyl butoxide and/or imidazolidenyl urea. Causes eye irritation. Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

• Treat symptomatically and supportively.

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media
• Use appropriate extinguishing media for surrounding fire.

Unsuitable Extinguishing Media
• No data available.

Firefighting Procedures
• Stay upwind.
  Move containers from fire area if you can do it without risk.
  Dike far ahead of spill to collect runoff water.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
• No data available

Hazardous Combustion Products
• No data available

Advice for firefighters

• Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions
• Avoid any skin contact. Avoid contact with eyes. Use appropriate Personal Protective Equipment (PPE).

Emergency Procedures
• Keep out of low areas. Stay upwind. Avoid release into the environment. Do not allow runoff into water, storm drains or drainage ditches.

Environmental precautions

• Avoid release to the environment.

Methods and material for containment and cleaning up
Containment/Clean-up Measures  
Absorb spills with an inert material, clay granules or other inert absorbent material and put in container for disposal.

Section 7 - Handling and Storage

Precautions for safe handling
Handling  
Use good safety and industrial hygiene practices. Avoid contact with skin or eyes. Wash thoroughly with soap and water after handling. See product label for additional information.

Conditions for safe storage, including any incompatibilities
Storage  
Store in cool, dry, secure place. Keep out of reach of children. Keep only in the original container. Avoid excessive heat.

Other Information  
See product label for additional information.

Section 8 - Exposure Controls/Personal Protection

Control parameters
Exposure Limits/Guidelines  
No data available.

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pyrethrins</strong></td>
<td>TWAs</td>
<td>5 mg/m3 TWA</td>
<td>5 mg/m3 TWA</td>
</tr>
<tr>
<td><em>(8003-34-7)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Glycerine</strong></td>
<td>TWAs</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td><em>(56-81-5)</em></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exposure Limits Supplemental
ACGIH  
**Pyrethrins (8003-34-7):** TLV Basis - Critical Effects: (liver damage; lower respiratory tract irritation)

Exposure controls
Engineering Measures/Controls  
Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Personal Protective Equipment
Pictograms  

Respiratory  
In case of insufficient ventilation, use NIOSH approved respiratory protection.

Eye/Face  
Wear chemical splash safety goggles.

Hands  
Impervious gloves.

Skin/Body  
It is recommended for handlers to wear appropriate clothing to prevent skin contact including long sleeves, long pants, socks and shoes.
Environmental Exposure Controls

• Refer to Section 13 - Disposal Considerations.

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Physical Form</th>
<th>Appearance/Description</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Liquid</td>
<td>White to pale yellow opaque liquid</td>
<td>Fragrant</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
<td>Physical and Chemical Properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

General Properties

| Boiling Point                             | No data available | Melting Point/Freezing Point | No data available |
| Decomposition Temperature                 | No data available | pH                          | 6 to 7            |
| Specific Gravity/Relative Density         | 1.003 @ 20 °C(68 °F) Water=1 | Bulk Density                | 8.55 lb/gal       |
| Water Solubility                          | Insoluble       | Viscosity                   | 600 to 2500 Centipoise (cPs, cP) or mPas @ 22.5 °C(72.5 °F) |

Vapor Pressure                            No data available | Vapor Density            No data available
Evaporation Rate                           No data available | VOC (Wt.)                No data available
VOC (Vol.)                                 No data available

Flammability

| Flash Point                               | 205 °F(96.1111 °C) | UEL                        | No data available |
| LEL                                       | No data available  | Autoignition               | No data available |
| Flammability (solid, gas)                 | No data available  |                           |                     |

Environmental

Octanol/Water Partition coefficient        No data available

Section 10: Stability and Reactivity

Reactivity

• Non-reactive under normal handling and storage conditions.

Chemical stability

• Stable under normal temperatures and pressures.

Possibility of hazardous reactions

• Hazardous polymerization will not occur.

Conditions to avoid

• Excessive heat.

Incompatible materials

• No data available

Hazardous decomposition products

• May decompose upon heating to produce toxic vapors/gases.

Section 11 - Toxicological Information
**Information on toxicological effects**

<table>
<thead>
<tr>
<th>CAS</th>
<th><strong>Acute Toxicity</strong></th>
<th><strong>Irritation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Repel-X Lotion Fly Repellent for Horses and Ponies</td>
<td>Ingestion/Oral-Rat, adult female LD50 • &gt;5000 mg/kg; Inhalation-Rat LC50 • &gt;2.03 mg/L; Skin-Rat TD50 • &gt;5000 mg/kg;</td>
<td>Eye-Rabbit • Mild irritation; Skin-Rabbit • Mild irritation</td>
</tr>
</tbody>
</table>

**GHS Properties**

<table>
<thead>
<tr>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute toxicity</strong></td>
</tr>
<tr>
<td><strong>Skin corrosion/Irritation</strong></td>
</tr>
<tr>
<td><strong>Serious eye damage/Irritation</strong></td>
</tr>
<tr>
<td><strong>Skin sensitization</strong></td>
</tr>
<tr>
<td><strong>Respiratory sensitization</strong></td>
</tr>
<tr>
<td><strong>Aspiration Hazard</strong></td>
</tr>
<tr>
<td><strong>Carcinogenicity</strong></td>
</tr>
<tr>
<td><strong>Germ Cell Mutagenicity</strong></td>
</tr>
<tr>
<td><strong>Toxicity for Reproduction</strong></td>
</tr>
<tr>
<td><strong>STOT-SE</strong></td>
</tr>
<tr>
<td><strong>STOT-RE</strong></td>
</tr>
</tbody>
</table>

**Potential Health Effects**

**Inhalation**
- **Acute (Immediate)**: Under normal conditions of use, no health effects are expected.
- **Chronic (Delayed)**: No data available

**Skin**
- **Acute (Immediate)**: May cause slight skin irritation. May cause an allergic reaction in individuals with a sensitivity to cypermethrin, piperonyl butoxide and/or imidazolidinyl urea. Contact with cypermethrin may cause reversible skin sensations (parethesia) which may include numbing, burning or tingling.
- **Chronic (Delayed)**: No data available

**Eye**
- **Acute (Immediate)**: Causes eye irritation.
- **Chronic (Delayed)**: No data available

**Ingestion**
- **Acute (Immediate)**: Under normal conditions of use, no health effects are expected.
- **Chronic (Delayed)**: No data available

**Mutagenic Effects**
- Cypermethrin is not a mutagen. Pyrethrins were not found to be genotoxic and did not damage DNA in any study conducted which included: Ames assay, chromosome aberration in Chinese hamster ovaries (CHO) cells and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells. Piperonyl butoxide was not mutagenic in a battery of tests. Di-n-propyl isocinchomeranate is not a mutagen. Butoxypolypropylene glycol is not a mutagen.
Carcinogenic Effects

- No component in this product present at 0.1% or greater is listed by IARC, OSHA or NTP.

Reproductive Effects

- Cypermethrin does not cause birth defects or adverse effects on reproduction. Pyrethrins did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits. Piperonyl butoxide did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits. Di-n-propyl isocinchomeronate showed adverse effects on reproduction in laboratory animals. Butoxypolypropylene glycol does not cause birth defects.

### Section 12 - Ecological Information

#### Toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cypermethrin (0.15%)</td>
<td>Aquatic Toxicity-Fish: 96 Hour(s) LC50 Rainbow trout 0.00039 mg/L [Acute] NOEC Fathead minnow 0.00014 mg/L [Chronic] 96 Hour(s) LC50 Sheepshead minnow 0.00095 mg/L [Acute] Aquatic Toxicity-Crustacea: NOEC Mysis shrimp 0.0000008 mg/L [Chronic] 48 Hour(s) LC50 Hyalella Azteca 0.0000036 mg/L [Acute] 96 Hour(s) LC50 Mysis shrimp 0.0000048 mg/L [Acute]</td>
</tr>
<tr>
<td>Pyrethrins (0.2%)</td>
<td>Aquatic Toxicity-Fish: 96 Hour(s) LC50 Rainbow trout 0.0051 mg/L [Acute] 96 Hour(s) LC50 Sheepshead minnow 0.016 mg/L [Acute] NOEC Fathead minnow 0.0019 mg/L [Chronic] NOEC Sheepshead minnow 0.0059 mg/L [Chronic (Est.)] Aquatic Toxicity-Crustacea: LC50 Daphnia magna 0.00086 mg/L [Chronic] NOEC Mysis shrimp 0.0001 mg/L [Chronic (Est.)] 48 Hour(s) LC50 Daphnia magna 0.0116 mg/L [Acute] 96 Hour(s) LC50 Mysis shrimp 0.0014 mg/L [Acute]</td>
</tr>
<tr>
<td>Piperonyl butoxide (1.63%)</td>
<td>Aquatic Toxicity-Fish: LC50 Rainbow Trout 1.9 mg/L [Acute] LC50 Sheepshead minnow 3.94 mg/L [Acute] NOEC Fathead minnow 0.04 mg/L [Chronic] Aquatic Toxicity-Crustacea: LC50 Gammarus fasciatus (amphipod) 0.51 mg/L [Acute] LC50 Mysis shrimp 0.49 mg/L [Acute] NOEC Daphnia magna 0.03 mg/L [Chronic]</td>
</tr>
<tr>
<td>Di-n-propyl Isocinchomeronate (0.5%)</td>
<td>Aquatic Toxicity-Fish: LC50 Rainbow Trout 1 mg/L [Acute] LC50 Bill gill 0.44 mg/L [Acute] Aquatic Toxicity-Crustacea: 48 Hour(s) LC50 Daphnia magna 18 mg/L [Acute]</td>
</tr>
</tbody>
</table>

**Persistence and degradability**

- Cypermethrin: Non-persistent. Readily hydrolyzed. Not readily biodegradable. Pyrethrins have low persistence in the environment due to rapid breakdown in presence of UV light.

**Bioaccumulative potential**

- Cypermethrin: The substance does not have a potential for bioconcentration.

**Mobility in Soil**

- Permethrin: Immobile in soil. Pyrethrins are relatively immobile in soil.

**Other adverse effects**

### Potential Environmental Effects

- This material is extremely toxic to fish. This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds.
Section 13 - Disposal Considerations

Waste treatment methods

Product waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. Do not empty into drains.

Packaging waste
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. See product label for disposal instructions.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN proper shipping name</th>
<th>Transport hazard class(es)</th>
<th>Packing group</th>
<th>Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>UN3082</td>
<td>9</td>
<td>III</td>
<td>RQ = Pyrethrins = 1 lb.</td>
</tr>
<tr>
<td>IMO/IMDG</td>
<td>UN3082</td>
<td>9</td>
<td>III</td>
<td>Marine Pollutant</td>
</tr>
<tr>
<td>IATA/ICAO</td>
<td>UN3082</td>
<td>9</td>
<td>III</td>
<td>Acute Aquatic Toxicity</td>
</tr>
</tbody>
</table>

Special precautions for user
- None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- No data available

Other information
- IMO/IMDG: No data available
- IATA/ICAO: No data available

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications
- Acute, SARA Title III Section 313

FIFRA – Pesticide Labeling

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

**CAUTION**

Precautionary Statements
- KEEP OUT OF REACH OF CHILDREN.

Hazards to Humans and Domestic Animals
For use on horses and ponies only. Not for use on humans. Harmful if absorbed through skin or inhaled. Contact with this product may cause transitory tingling sensation. Avoid contact with skin, eyes, or clothing. Avoid breathing vapors. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water, after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. User Safety
Recommendations

Users should wash hands with plenty of soap and water, before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing immediately, if pesticide gets inside. Then, wash thoroughly and put on clean clothing.

First Aid

IF ON SKIN OR CLOTHING: If you suspect a reaction to this product • Discontinue use. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice. IF INHALED • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor, for further treatment advice. IF IN EYES • 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. IF SWALLOWED • Immediately call a poison control center or doctor. • Do not induce vomiting, unless told to do so by the poison control center or doctor. • Have person sip a glass of water, if able to swallow. • Do not give anything by mouth to an unconscious person. In case of medical emergencies, or health and safety inquiries, or in case of fire, leaking or damaged containers, or for product use information, call 800-234-2269. Have the product container or label with you, when calling a poison control center or doctor or going for treatment.

Environmental Hazards

This product is extremely toxic to fish and aquatic invertebrates. Do not apply directly to or near water. Drift and run-off may be hazardous to fish in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate. See Directions for Use for additional requirements. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds, while bees are actively visiting the treatment area.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di-n-propyl Isocinchomeronate</td>
<td>136-45-8</td>
<td>No</td>
</tr>
<tr>
<td>Butoxypolypropylene glycol</td>
<td>9003-13-8</td>
<td>Yes</td>
</tr>
<tr>
<td>Piperonyl butoxide</td>
<td>51-03-6</td>
<td>Yes</td>
</tr>
<tr>
<td>Pyrethrins</td>
<td>8003-34-7</td>
<td>No</td>
</tr>
<tr>
<td>Cypermethrin</td>
<td>52315-07-8</td>
<td>No</td>
</tr>
</tbody>
</table>

### Inventory

#### United States

**Environment**

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

- Butoxypolypropylene glycol
  - CAS: 9003-13-8
  - TSCA: Not Listed
- Piperonyl butoxide
  - CAS: 51-03-6
  - TSCA: Not Listed
- Di-n-propyl Isocinchomeronate
  - CAS: 136-45-8
  - TSCA: Not Listed
- Pyrethrins
  - CAS: 8003-34-7
  - TSCA: Not Listed
- Cypermethrin
  - CAS: 52315-07-8
  - TSCA: Not Listed

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

- Butoxypolypropylene glycol
  - CAS: 9003-13-8
  - TSCA: Not Listed
- Piperonyl butoxide
  - CAS: 51-03-6
  - TSCA: 1.0 % de minimis concentration
<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di-n-propyl Isocinchomeronate</td>
<td>136-45-8</td>
<td>1.0 % de minimis</td>
</tr>
<tr>
<td>Pyrethrins</td>
<td>8003-34-7</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Cypermethrin</td>
<td>52315-07-8</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

**Section 16 - Other Information**

- **Preparation Date**: 1/July/2010
- **Revision Date**: 19/May/2017

**Disclaimer/Statement of Liability**

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.