1. IDENTIFICATION OF THE SUBSTANCE/PREPARATIONS AND OF THE COMPANY UNDERTAKING

Product Name: VIRBAC PYRETHRIN DIP™ Anti-Parasitic
Product Description: Insect repellent concentrate for dogs, cats, puppies and kittens
Manufacturer/Supplier: Virbac AH, Inc.
Address: P.O. Box 162059
Fort Worth, Texas 76161
Phone Number: (800) 338-3659 for Technical Support
Chemtrec Number (24 hour): (800) 424-9300
Emergency Number: (800) 338-3659 for Human and Animal Medical Emergencies
MSDS Revision Date: March 1, 2011
MSDS Supersedes Date: October 13, 2010


2. HAZARDS IDENTIFICATION

Emergency Overview
CAUTION!
Avoid contact with eyes, skin and clothing.
Harmful if swallowed.
Keep out of reach of children.
Read entire label before each use.

Routes of Entry
Eye contact - Skin contact - Ingestion - Inhalation

Carcinogenic Status
Not considered carcinogenic by NTP, IARC, and OSHA. See Section 11.

Target Organs
Eyes - Skin - Respiratory System - Central Nervous System - Kidneys - Liver

Health Effects - Eyes
Contact with eyes can cause substantial but temporary eye injury.

Health Effects - Skin
Contact with skin may cause irritation and skin sensitization. Repeated, prolonged contact may cause adverse effects to the central nervous system, liver and kidneys.

Health Effects - Ingestion
Harmful if swallowed. Ingestion of this material may cause gastrointestinal effects such as nausea, vomiting, diarrhea, abdominal cramps and constipation. Ingestion of large quantities may cause adverse effects to the central nervous system, liver and kidneys.

Health Effects - Inhalation
No adverse effects expected under normal conditions of use.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins</td>
<td>8003-34-7</td>
<td>1.0%</td>
</tr>
<tr>
<td>Piperonyl Butoxide</td>
<td>51-03-6</td>
<td>4.00%</td>
</tr>
<tr>
<td>N-octyl bicycloheptene dicarboximide</td>
<td>113-48-4</td>
<td>6.00%</td>
</tr>
</tbody>
</table>

Revision Date: March 1, 2011
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
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</thead>
<tbody>
<tr>
<td>Di-n-propyl isocinchomeranate</td>
<td>136-45-8</td>
<td>4.00%</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>67-63-0</td>
<td>1 - 10%</td>
</tr>
<tr>
<td>Isoparaffinic Petroleum Solvent</td>
<td>64742-47-8</td>
<td>1 - 5%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Eyes**
Immediately flood the eye with plenty of water for at least 15-20 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

**Skin**
If irritation develops wash skin thoroughly with soap and water. Obtain medical attention if redness or soreness persists.

**Ingestion**
Call a poison control center or doctor immediately for treatment advice. 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.

**Inhalation**
No adverse effects expected under normal conditions of use.

**Advice to Physicians**
Treat symptomatically.

5. FIRE - FIGHTING MEASURES

**Extinguishing Media**
Use extinguishing media appropriate for surrounding materials.

**Unusual Fire and Explosion Hazards**
Combustible.

**Protective Equipment for Fire-Fighting**
Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Wear appropriate protective equipment. Wipe up and transfer into suitable containers for recovery or disposal. Prevent the material from entering drains or watercourses.

7. HANDLING AND STORAGE

Store in original container in a cool, dry place. Protect from freezing. Store away from children and pets. Do not store near foodstuffs.

Do not contaminate water, food or feed by storage.

Wear appropriate protective clothing. Avoid contact with skin, eyes and clothing. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Remove clothing/PPE immediately if pesticides get inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible wash thoroughly and change into clean clothing.

Do not use or store near heat or open flame.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards
Exposure limits are listed below, if they exist.

**Pyrethins**
ACGIH: TLV 5 mg/m³ 8h TWA
OSHA: PEL 5 mg/m³ 8h TWA

**Piperonyl Butoxide**
None established

**N-octyl bicycloheptene dicarboximide**
None established

**Isopropyl Alcohol**
ACGIH: 200ppm 8h TWA 400 ppm 15-min STEL
OSHA: PEL 400ppm (980 mg/m³) 8h TWA

**Di-n-propyl isocinchomeronate**
None established

**Isoparaffinic Petroleum Solvent**
None established

Engineering Control Measures
No specific measures necessary. Good general room ventilation is expected to be adequate to control airborne levels.

**Respiratory Protection**
Not required under normal conditions of use.

**Hand Protection**
Chemical-resistant gloves made of any waterproof material.

**Eye Protection**
Wear protective eyewear (face shield or goggles).

**Body Protection**
Long sleeve shirt, long pants, shoes and socks.

9. PHYSICAL AND CHEMICAL PROPERTIES

- **Physical State**: Liquid
- **Color**: White
- **Odor**: Floral
- **pH**: No data available
- **Specific Gravity**: No data available
- **Boiling Range/Point (°C/F)**: No data available
- **Melting Point (°C/F)**: No data available
- **Flash Point (PMCC) (°C/F)**: Not flammable
- **Explosion Limits (%)**: No data available
- **Vapor Pressure**: No data available
- **Density**: No data available
- **Solubility in Water**: Soluble
- **Vapor Density (Air = 1)**: No data available
10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions.

Conditions to Avoid
Heat - high temperatures

Materials to Avoid
Strong oxidizers – acids - bases

Hazardous Polymerization
Will not occur.

Hazardous Decomposition Products
Oxides of carbon – oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

See product insert and/or packaging for additional information.

Acute Toxicity
Pyrethrins: Oral LD50 (rat, male) 470 mg/kg, LD50 (rabbit) >5000 mg/kg
Piperonyl Butoxide: Oral LD50 (rat, male) 4570 mg/kg Dermal LD50 (rabbit)>2000 mg/kg
\[ \text{Inhalation LC50 (rat) >5.9 mg/l} \]
N-octyl bicycloheptene dicarboximide: Oral LD50 (rat) 5000 mg/kg Dermal LD50 (rabbit) >2000 mg/kg
Di-n-propyl isocinchomeranate: Oral LD50 (rat) 5120 mg/kg Dermal LD50 (rabbit) >2000 mg/kg
\[ \text{Inhalation LC50 (rat) >6.09 mg/l} \]
Isopropyl Alcohol: Oral LD50 (rat) 5045 mg/kg

Specific Target Organ Systemic Toxicity (single and repeat)
Isopropyl Alcohol: Causes adverse central nervous system effects.
Isoparaffinic Petroleum Solvent: Repeated, prolonged exposure may cause damage to the kidneys, liver and central nervous system.
The following is provided for informational purposes. Inhalation exposure is not expected under normal conditions of use.
Pyrethrins: In laboratory animal studies has shown adverse nervous system, thyroid and liver effects.
Following inhalation exposure, neurobehavioral effects we observed initially and respiratory tract lesions were observed at all dose levels.
Piperonyl Butoxide: In subchronic inhalation toxicity studies in rats adverse effects to the respiratory system were observed.
N-octyl bicycloheptene dicarboximide: In inhalation exposure in laboratory animals adverse effects to the respiratory tract have been observed.

Serious Eye damage/Eye Irritation
Isopropyl Alcohol: Causes eye irritation.
Piperonyl Butoxide: Minimally irritating.

Skin Corrosion/Irritation
Pyrethrins: Mild skin irritant.
Di-n-propyl isocinchomeranate: Moderately irritating to the skin.
Isoparaffinic Petroleum Solvent: Repeated or prolonged skin contact can cause moderate irritation.

Respiratory or Skin Sensitization
N-octyl bicycloheptene dicarboximide: Positive results for dermal sensitization in guinea pigs.
Di-n-propyl isocinchomeranate: Negative results for dermal sensitization in guinea pigs.
Pyrethrins: Not a dermal sensitizer (EPA report).

Carcinogenicity
Piperonyl Butoxide: EPA Classification: Group C-possible human carcinogen with no cancer quantification
Di-n-propyl isocinchomeranate: EPA classification B2: Probable human carcinogen
11. TOXICOLOGICAL INFORMATION

Germ Cell Mutagenicity
Di-n-propyl isocinchomeranate: No evidence of mutagenicity was noted with or without metabolic activation.
N-octyl bicycloheptene dicarboximide: Negative in the CHO chromosome aberration assay.

Toxicity to Reproduction
Isopropyl alcohol: Developmental effects seen only at maternally toxic doses.

12. ECOLOGICAL INFORMATION

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Mobility
No relevant studies identified.

Persistence/Degradability
No relevant studies identified.

Bio-accumulation
No relevant studies identified.

Ecotoxicity
Pyrethrins: LC50 Bluegill 58 ug/l 96 h
Piperonyl Butoxide: LC50 Rainbow trout 3.4 ug/l 96 h
Di-n-propyl isocinchomeranate: LC50 Rainbow trout 1.0 mg/l, EC50 daphnia magna 18mg/l 48 hr

13. DISPOSAL CONSIDERATIONS

Product Disposal:
Do not contaminate water, food or feed by disposal. Never place any unused product down an indoor or outdoor drain. Call your local solid waste agency for disposal instructions

Container Disposal:
Nonrefillable container. Do not reuse or refill container. Offer for recycling, if available.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data
Not Regulated

UN Proper Shipping Name
Not Regulated

UN Class
None.

UN Number
None.

UN Packaging Group
None.

Classification for AIR
Consult current IATA Regulations prior to shipping by air.

Transportation (IATA)

15. REGULATORY INFORMATION

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

TSCA Listing
This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance (TSCA) Inventory.

DSL (Canadian) Listing
This product contains ingredients that have not been verified for listing on the Domestic Substance List (DSL).
15. REGULATORY INFORMATION

WHMIS Classification
D.2.B
This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

MA Right To Know Law
This product contains the following chemicals on the Massachusetts Right to Know Law: Isopropyl Alcohol (67-63-0) - Pyrethrins (8003-34-7) - Piperonyl Butoxide (51-03-6) - Trisodium Nitrilotriacetate (5064-31-30) trace

PA Right To Know Law
This product contains the following chemicals on the Pennsylvania Hazardous Substance List: Isopropyl Alcohol (67-63-0) - Pyrethrins (8003-34-7)

NJ Right To Know Law
This product contains the following chemicals on the New Jersey Workplace Hazardous Substance List: Isopropyl Alcohol (67-63-0) - Pyrethrins (8003-34-7) - Piperonyl Butoxide (51-03-6)

California Proposition 65
This product contains the following materials which the State of California has found to cause cancer, birth defects or other reproductive harm: Di-n-propyl isocinchomeronate (136-45-8)

SARA Title III Sect. 311/312 Categorization
Immediate (acute) Delayed (chronic)

SARA Title III Sect. 313
This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations: Piperonyl Butoxide (51-03-6) - Di-n-propyl isocinchomeronate (136-45-8)

16. OTHER INFORMATION

NFPA Ratings
NFPA Code for Flammability - 0
NFPA Code for Health - 1
NFPA Code for Reactivity - 0
NFPA Code for Special Hazards – 0

HMIS Ratings
HMIS Code for Flammability - 0
HMIS Code for Health - 2
HMIS Code for Reactivity - 0
HMIS Code for Personal Protection - See Section 8

Abbreviations
ACGIH: American Conference of Governmental Industrial Hygienists
BOD: Biological Oxygen Demand
CAS#: Chemical Abstracts Service Number
FIFRA: Federal Insecticide, Fungicide and Rodenticide Act
IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
N/A: Denotes no applicable information found or available
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act
16. OTHER INFORMATION

For further Information call: (800) 338-3659
Prepared By: EnviroNet LLC

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