1. PRODUCT and COMPANY IDENTIFICATION

Product Name: Vectra 3D for Dogs and Puppies 2.5-20 lbs and over 7 weeks of age
Vectra 3D for Dogs and Puppies 21-55 lbs and over 7 weeks of age
Vectra 3D for Dogs and Puppies 56-95 lbs
Vectra 3D for Dogs and Puppies over 95 lbs

Recommended Use: Control of fleas, ticks, mosquitoes, sand flies, mites and biting and sucking lice on dogs

EPA Registration No.: 83399-6

Emergency Information:
Transportation- CHEMTREC 1.800.424.9300
Non-Transportation- 1.800.999.0297 or after 6pm EST 1.888.426.4435

2. HAZARDS IDENTIFICATION

Appearance: Light yellow clear
Physical State: Liquid pipettes
Odor: Mild furan

OSHA Regulatory Status: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Potential Health Effects: Adverse health effects are considered unlikely when this product is used in accordance with the label directions or the package insert. Product should not be used on cats and kittens.

Route(s) of Exposure: Skin absorption, ingestion and eye contact. Inhalation exposure is unlikely when product is used as directed. Product should be applied in a well ventilated area.

Acute Effects:

- **Eyes**: Contact with eyes may cause irritation resulting in reddening, tearing or stinging. Avoid contact with eyes and skin or clothing. Wash thoroughly with soap and water after use.
- **Skin**: May cause mild skin irritation after prolonged contact with skin. Paraesthesia (a tingling sensation on the skin) may result from synthetic pyrethroid contact with the skin. (Paraesthesia will generally subside after 24 hours without treatment.)
- **Ingestion**: Not considered toxic to humans. Symptoms after accidental ingestion may include; gastrointestinal discomfort, diarrhea, nausea and vomiting

Chronic Effects: Chronic permethrin feeding studies using both mice and rats concluded that permethrin potential for induction of oncogenicity was low in experimental animals, therefore, the relationship, and likelihood of an oncogenic potential in humans and dogs would be extremely low if it exists at all.

Carcinogenetic Components:

- NTP- None
- IARC- None
- OSHA- None

See Section 11 for additional Toxicological information
2 of 5

Medical Conditions Aggravated by Exposure: None Known
Potential Environmental Effects: See Section 12 for additional ecological information
Classification: This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Exposure Limits</th>
<th>CAS-No:</th>
<th>Weight %:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dinotefuran</td>
<td>OSHA (PEL): Not Established</td>
<td>165252-70-0</td>
<td>4.0-8.0%</td>
</tr>
<tr>
<td></td>
<td>ACGIH (TLV): Not Established</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyriproxyfen</td>
<td>OSHA (PEL): Not Established</td>
<td>95737-68-1</td>
<td>2.0-5.0%</td>
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<tr>
<td></td>
<td>ACGIH (TLV): Not Established</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permethrin</td>
<td>OSHA (PEL): Not Established</td>
<td>52645-53-1</td>
<td>35.0-45.0%</td>
</tr>
<tr>
<td></td>
<td>ACGIH (TLV): Not Established</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye Contact: Hold eye(s) open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and continue rinsing. Call a poison control center or doctor for treatment advice. Get medical attention if irritation develops or persists.

Skin Contact: Take off contaminated clothing, rinse effected area with plenty of water for 15-20 minutes. Wash clothing and shoes before reuse. Contact a physician if irritation develops.

Inhalation: Move to fresh air, if breathing is difficult give oxygen. Contact a physician if irritation develops.

Ingestion: Contact a physician or Poison Control Center. Give water to help dilute. Avoid alcohol. If, ingested, do not induce vomiting, unless instructed by doctor or medical personnel. Never give anything by mouth to an unconscious person.

Note to Physician: In case of human or animal poisoning you may contact Summit VetPharm at 1.800.999.0297, during standard business hours or after 6pm EST call 1.888.426.4435 for emergency medical treatment information.

5. FIRE-FIGHTING MEASURES

Flash Point: >233°F (112°C)
Flammable Limits:
Upper Explosion Limits: Not established
Lower Explosion Limits: Not established
Suitable Extinguishing Media: Water, Foam, Carbon Dioxide, Dry Chemical
Specific Hazards arising from the chemical: Keep product and empty container away from heat and sources of ignition.
Protective Equipment and Precautions for Firefighters: Firefighters should be equipped with self-contained breathing apparatus to protect against any potential toxic and irritating fumes. Do not allow fire fighting water to enter sewer, surface or ground water. Equipment and materials used in fighting a pesticide fire may be contaminated and decontamination procedures may need to be considered.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep people and pets at a distance and stay upwind. Wear protective equipment, unprotected people should be kept away.

Environmental Precautions: Prevent further leakage or spillage when safe to do so. Prevent product from entering drains. Do not allow product to contaminate surface water.

Methods for Containment: Cover and absorb with liquid binding material (sand, diatomite, sawdust, vermiculite or other universal binders). Dispose of contaminated material as waste according to federal and state regulations.

Methods for Clean-up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Absorbsents and other materials contaminated by the spill should be collected for proper disposal. Do not allow spilled material and or wash water to enter sewers, surface water, or ground water.

Other Information: Not applicable

Handling: Ensure adequate ventilation.

7. HANDLING and STORAGE

Storage Temperature: Avoid extreme heating and freezing. Optimum storage temperatures 32°F to 95°F

Precautions: No special handling measures are required when using the product as outlined on the labeling and package insert.

Shelf Life: None established

Handling and Storage Information: Product packaged in single dose pipettes. Pipette should only be opened at time of treatment. Do not store opened and unused pipettes. Store in a cool dry place, in original container, out of the reach of children. Store separate from food products. Keep away from heat, sparks and open flame.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

Exposure Guidelines: This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. Do not store near food.

Engineering Controls: Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

General protective and hygiene measures when using Vectra products:

- Do not store or keep near food, foodstuffs or beverages.
- Avoid contact with eyes and skin, by washing hands both before and after handling.
- Do not eat, drink or smoke when using the product.

Eye Protection Requirements: Avoid contact with eyes. If handling large quantities/volumes use chemical safety goggles or glasses.

Skin Protection Requirements: Avoid unnecessary contact with skin. If handling large quantities/volumes use permeation resistant gloves, footwear and clothing as practical.

Ventilation Requirements: Use local and general exhaust ventilation to control levels of exposure when handling large quantities of material.

Respirator Requirements: Use local and general exhaust ventilation to control levels of exposure when handling large quantities of material.

Additional Protective Measures for Those Handling Large Volumes: Emergency showers and eye wash stations should be available. Training and education of employees and staff on proper handling of pesticides is recommended. Follow all label directions. Laundering of work clothing should be separate from family laundry. Employees need to follow good hygiene practices, such as, always wash their hands before eating, drinking, using bathroom facilities and using tobacco products.

Odor: Mild furan
9. PHYSICAL and CHEMICAL PROPERTIES

**Appearance:** Light yellow clear

**Physical State:** Liquid

**pH:** Anhydrous/ not applicable

**Boiling Point/Range:** No data available

**Evaporation Rate:** Not available

**Flammability Limits in Air:** Not flammable

**Odor:** Mild furan

**Viscosity:** 13 cps@ 21.5°C

**Specific Gravity/Bulk Density:** 9.171 lbs/gal@25°C

10. STABILITY and REACTIVITY

**Chemical Stability:** Stable

**Conditions to Avoid:** Temperature extremes, flames and sparks

**Incompatible Materials:** Strong acids. Alkaline

**Hazardous Decomposition Products:** None known, other than carbon oxides. Thermal release of large quantities may lead to release of irritating gases and vapors.

**Possibility of Hazardous Reactions:** None under normal processing.

11. TOXICOLOGICAL INFORMATION

**Acute Toxicity LD50 Oral:** >5000 mg/kg bw (rats)

**Acute Toxicity LD50 Dermal:** >5000 mg/kg bw (rats)

**Primary Skin Irritation:** Moderately irritating (rabbits)

**Skin Sensitization:** Not a sensitizer

**Eye Irritation:** Severely irritating to eyes

**Specific Health Effects:** Adverse health effects are not considered likely when product is used appropriately using label directions. Since the product is packaged in single dose applicators and the quantity of material is small, over exposure is considered unlikely.

12. ECOLOGICAL INFORMATION

**Ecological Data:** No data available for this product

13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Avoid disposal and make effort to use product completely for intended pet treatment. If need to dispose of unused product, do so in accordance with local, state and federal regulations.

**Contaminated Packaging:** Empty containers should be taken for local recycling, recovery or waste disposal in accordance with local state and federal regulations.

14. TRANSPORT INFORMATION

**Technical shipping name:** Pesticide

**Freight Class:**
- Bulk: Insecticide, N.O.I.
- Package: Insecticide, N.O.I.

**DOT:** Hazard Class Non-Regulated

**ICAO/IATO:** Hazard Class Non-Regulated

**IMDG/IMO:** Hazard Class Non-Regulated

15. REGULATORY INFORMATION

**Federal Regulations Status**

**FIFRA:** This product is registered with the U.S.EPA as a pesticide.

**TSCA Status:** This product is excluded from TSCA regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

**SARA 313:** Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does contain Permethrin (CAS# 52645-53-1); Reporting Threshold of 1%, concentration in this product 35-45%.

**SARA 311/312:**
- Hazardous Categorization Acute Health Hazard- No
- Chronic Health Hazard- No
- Fire Hazard- No
- Sudden Release of Pressure Hazard- No
Reactive Hazard: No

State Regulations

NFPA Classification:
- Health: 2
- Flammability: 1
- Instability: 1

16. OTHER INFORMATION

Revision Date Revision Summary: Not available

Disclaimer
The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. Summit VetPharm assumes no legal responsibility for use or reliance on this data.

Company Contact: MSDS Coordinator

End of MSDS