1. IDENTIFICATION

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Equell® (ivermectin) Paste 1.87%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended use of the chemical and restrictions on use</td>
<td>Worm control for horses.</td>
</tr>
<tr>
<td>Identified uses</td>
<td>Not for human use.</td>
</tr>
<tr>
<td>Restrictions on Use</td>
<td></td>
</tr>
<tr>
<td>Company Identification</td>
<td>Virbac AH, Inc.</td>
</tr>
<tr>
<td></td>
<td>P.O. Box 162059</td>
</tr>
<tr>
<td></td>
<td>Fort Worth, Texas 76161</td>
</tr>
<tr>
<td>Customer Information Number</td>
<td>(800) 338-3659</td>
</tr>
<tr>
<td>Emergency Telephone Number</td>
<td></td>
</tr>
<tr>
<td>Chemtrec Number</td>
<td>(800) 424-9300</td>
</tr>
<tr>
<td>Other Emergency Number:</td>
<td>Poison Control Center: 1-800-222-1222 (human)</td>
</tr>
<tr>
<td></td>
<td>HOT LINE NUMBER: 1-800-345-4735 (human and pet)</td>
</tr>
<tr>
<td>Issue Date</td>
<td>December 17, 2015</td>
</tr>
<tr>
<td>Supersedes Date</td>
<td>November 9, 2011</td>
</tr>
</tbody>
</table>

Safety Data Sheet prepared in accordance with OSHA’s Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARDS IDENTIFICATION

Hazard Classification
Acute Hazards to the Aquatic Environment – Category 1 (This classification not adopted by OSHA.)

Label Elements
Hazard Symbols

Signal Word: Warning

Hazard Statements
Very toxic to aquatic life.

Precautionary Statements
Prevention
Avoid release to the environment.
Response
None
Storage
None
Disposal
Dispose of contents/container in accordance with local regulation.
2. HAZARDS IDENTIFICATION

Other Hazards
None

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity.
Acute oral toxicity 0%
Acute dermal toxicity <10%
Acute inhalation toxicity <10%
Acute aquatic toxicity 10 - 20%

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:
This product is a mixture.

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivermectin</td>
<td>70288-86-7</td>
<td>1.87%</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>1 - 5%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Description of necessary 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
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
Remove person to fresh air. Seek medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed
Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians
Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Extinguishing Media
Use extinguishing media appropriate for surrounding materials.
5. **FIRE - FIGHTING MEASURES**

**Unusual Fire and Explosion Hazards**
Can release hazardous vapors during a fire.

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

6. **ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**
Wear appropriate protective clothing.

**Environmental Precautions**
Prevent the material from entering drains or watercourses.

**Methods and materials for containment and cleaning up**
Wipe up and transfer into suitable containers for recovery or disposal.

7. **HANDLING AND STORAGE**

**Precautions for safe handling**
Wear appropriate protective clothing. Wash hands after dispensing to dog and before eating, drinking or smoking.

**Conditions for safe storage**
Store in original container at room temperature 25°C/77°F with excursions permitted between 59°F and 86°F (15°C - 30°C). Keep out of sunlight. Keep away from children.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**
Exposure limits are listed below, if they exist.

**Ivermectin**
None established

**Titanium Dioxide**
ACGIH TLV: 10 mg/m³ TWA
OSHA PEL: 15 mg/m³ TWA (Total dust)

**Appropriate engineering controls**
No specific measures necessary. Good general room ventilation is expected to be adequate to control airborne levels.

**Individual protection measures**

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

**Skin Protection**
Protective gloves.

**Eye/Face Protection**
Not required under normal conditions of use.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid (paste)</td>
</tr>
<tr>
<td>Physical State</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Range/Point (°C/F)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point (°C/F)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point (PMCC) (°C/F)</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>VOC</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosive limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosive limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
Data is not available

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Heat - high temperatures

Incompatible Materials
Strong oxidizers

Hazardous Decomposition Products
Oxides of carbon – organic compounds
11. **TOXICOLOGICAL INFORMATION**

See product insert and/or packaging for additional information.

**Acute Toxicity**

Ivermectin:

- Oral LD50 (rat) 50 mg/kg
- Oral LD50 (human) >15mg/kg
- Dermal LD50 406 mg/kg (rabbit)

**Specific Target Organ Toxicity (STOT) – single exposure**

Ivermectin: At high doses in humans and animals vomiting, tachycardia, blood pressure fluctuation, CNS effects (somnolence, ataxia) and visual disturbances have been observed. Higher doses may cause death due to respiratory depression.

**Specific Target Organ Toxicity (STOT) – repeat exposure**

Ivermectin: No data available

**Serious Eye damage/Irritation**

Ivermectin: Slightly irritating to eyes in rabbit tests.

**Skin Corrosion/Irritation**

Ivermectin: Non-irritating in animal studies.

**Respiratory or Skin Sensitization**

Ivermectin: Hypersensitivity reactions have been reported in humans.

**Carcinogenicity**

Titanium Dioxide: IARC Overall Evaluation is 2B (Possibly carcinogenic to humans) IARC evaluation guidelines consider the generation of tumors, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence. The conclusions of several epidemiology studies on more than 20000 TiO\textsubscript{2} industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO\textsubscript{2} dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO\textsubscript{2} dust. Based upon these studies, titanium dioxide is not expected to cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.

**Germ Cell Mutagenicity**

Ivermectin: Negative in the AMES Assay, and in a mouse lymphoma mutation assay. In addition, it did not induce unscheduled DNA synthesis in a human fibroblast cell culture, suggesting that it does not damage DNA.

**Reproductive Toxicity**

Ivermectin: Teratogenic in rats, rabbit and mice at or near materno-toxic dose levels. The abnormalities are limited mainly to cleft palate

**Aspiration Hazard**

Not an aspiration hazard.
12. ECOLOGICAL INFORMATION

Ecotoxicity
Ivermectin:
LC50 (Trout) 0.003mg/l 96hr
LC50 (Daphnia magna) 0.000025mg/l 48hr

Mobility in soil
Ivermectin: Ivermectin is metabolized in the soil. Water solubility is limited and it binds to soil very tightly. It does not bioconcentrate in fish and is not taken up from soil into plants.

Persistence/Degradability
Ivermectin: Slow biodegradation. Photodegrades rapidly.

Bioaccumulative Potential
No relevant studies identified.

Other adverse effects
No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Dispose of the syringe in an approved landfill or by incineration.

14. TRANSPORT INFORMATION

Contact supplier for transport information.

15. REGULATORY INFORMATION

United States TSCA Inventory
This product is not regulated under the US EPA Toxic Substance Control Act.

Canada DSL Inventory
All ingredients have been verified for listing on the Domestic Substance List (DSL).

California Proposition 65
This product does not contain any materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

SARA Title III Sect. 311/312 Categorization
None

SARA Title III Sect. 313
This product does not contain any chemicals listed in Section 313 at or above de minimis concentrations.
16. OTHER INFORMATION

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
BOD: Biological Oxygen Demand
CAS#: Chemical Abstracts Service Number
DSL: Domestic Substances List ECHA:
EPA: Environmental Protection Agency
FIFRA: Federal Insecticide, Fungicide and Rodenticide Act
HDT: Highest Dose Tested
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
LOEL: Lowest Observed Effect Level
N/A: Denotes no applicable information found or available
NFPA: National Fire Protection Association
NOEL: No Observed Effect Level
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
TSCA: Toxic Substances Control Act
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
WHMIS: Workplace Hazardous Materials Information System
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Revision Date: December 17, 2015
Replaces: November 9, 2011
Changes made: Updated to GHS Classification.

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

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