SAFETY DATA SHEET

Section 1 - Identification of the Substance and Supplier

Product Name: Equest Plus Tape
Recommended Use: For the treatment and control of tapeworm (Anolecthala perfoliata), roundworms (including arterial larval stages of Strongylus vulgaris), adult and encysted stages (DL, LL3, EL4, including inhibited stages) of small strongyles, and bots of horses and ponies.

Company Details: Fort Dodge New Zealand Limited
Address: 4 Fisher Crescent, Mt Wellington, Auckland
Telephone No: 09 276 9393
Emergency Telephone No: FREE PHONE 0800 734 607 - 24 hour emergency advice
National Poisons Centre: 0800 764 766 (0800 POISON)
Emergency Services: In an emergency dial 111
Date of Preparation: 24 July 2007
Replaces Version Issued: 14 June 2006

Section 2 - Hazardous Identification

Hazard Classifications:
6.1D Acute oral toxin
6.3A Skin irritant
6.4A Eye irritant
6.5B Contact sensitiser
6.9B Target organ toxin
9.1A Aquatic toxin
9.2C Soil toxin
9.3C Terrestrial vertebrate toxin

Priority Identifiers:
WARNING. KEEP OUT OF REACH OF CHILDREN.
WARNING. Dangerous to the environment.

Secondary Identifiers:
6.1D May be harmful if swallowed. Wash hand and exposed skin before meals and after use.
6.3A May cause skin irritation. Avoid skin contact
6.4A May cause eye irritation. Avoid contact with eyes.
6.5B Repeated exposure may cause skin allergy. Avoid skin contact.
6.9B Moxidectin possibly may affect the nervous system. Handle with care.
9.1A Very toxic to the aquatic environment. Avoid contamination of any water supply with product or empty container.
9.2C Harmful to the soil environment. Avoid release to the environment.
9.3C Harmful to terrestrial vertebrates. Avoid release to the environment.
Section 3 - Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Conc. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moxidectin</td>
<td>113507-06-5</td>
</tr>
<tr>
<td>Praziquantel</td>
<td>55268-74-1</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
</tr>
<tr>
<td>Other ingredients</td>
<td>to 100</td>
</tr>
</tbody>
</table>

Section 4 - First Aid Measures

General Information:
You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 0800 POISON (0800 764 766) and is available at all times. Have this SDS with you when you call.

Inhalation: No first aid measures normally required. However, if vapours or dusts have been inhaled, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: If product gets on skin, thoroughly wash contacted areas. No further measures should normally be required unless irritation is noticed. If irritation persists, seek medical attention.

Eye Contact: If this product comes into contact with eyes, hold open and wash with running water for at least 15 minutes. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained. Seek medical attention.

Ingestion: If product is swallowed do NOT induce vomiting. Wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

Workplace Facilities: Eyebaths or eyewash stations should be provided where this product is being used.

Hygiene Practices: Avoid contact with eyes and skin. Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Notes for Medical Personnel: Treat symptomatically. Note the nature of this product.

Section 5 - Fire Fighting Measures

Type of Hazard: Non-inflammable, non-combustible, non-explosive.

Fire Hazard Properties: Not considered a flammable liquid. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Fire decomposition products from this product may form toxic mixtures in confined spaces. Do not allow fire water to enter waterways.

Regulatory Requirements: Non applicable

Extinguishing Media and Methods: Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. Extinguishing Media: Use extinguishing media suited to burning materials.
Section 6 - Accidental Release Measures

Emergency Procedures: In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including face mask, face shield and gauntlets. All skin areas should be covered. Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Dispose of only in accord with all regulations.

Section 7 - Handling and Storage

Precautions for Safe Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Approved Handlers: Not required.

Conditions for Safe Storage: Store below 25°C (room temperature). Keep out of reach of children. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10.

Packaging: Packaging Schedule 3 (UN Packing Group III) for quantities >5kg. (Hazardous Substances Packaging Regulations 2001)

Store Site Requirements: A requirement for an emergency management plan, secondary containment and signage whenever quantities of 100kg or more are stored.

Section 8 - Exposure Control / Personal Protection

This SDS describes personal protective measures relating to long term industrial and manufacturing exposure, and emergency situations, such as accidents and spills. See product label for personal protective measures during normal on farm usage.

Workplace Exposure Standards: None set for the ingredients of Equest Plus Tape.

Dusts 10 mg/m³

Application in the Workplace: See Engineering controls.
**Exposure Standards Outside the Workplace:**

The ADE for moxidectin is set at 0.002mg/kg bw.day

The ADE for praziquantel is set at 0.17mg/kg bw.day

The PDE\textsubscript{food} for moxidectin = 0.0014mg/kg bw/day

The PDE\textsubscript{drinking water} for moxidectin = 0.0004mg/kg bw/day

The PDE\textsubscript{dermal} for moxidectin = 0.0002mg/kg bw/day

The PDE\textsubscript{food} for praziquantel = 0.119mg/kg bw/day

The PDE\textsubscript{drinking water} for praziquantel = 0.034mg/kg bw/day

The PDE\textsubscript{dermal} for praziquantel = 0.017mg/kg bw/day

The TEL\textsubscript{skin surface deposition} for moxidectin = 0.03mg/m\textsuperscript{2}

The TEL\textsubscript{skin surface deposition} for praziquantel = 2.83mg/m\textsuperscript{2}

The EEL\textsubscript{water} for moxidectin = 0.0000003mg/L

The EEL\textsubscript{water} for Component B = 0.014mg/L

**Engineering Controls:**

In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify the process or environment to reduce the problem.

**Personal Protection:**

Respiratory Protection: It is usually safe to not use a dust mask or respirator protection on account of this product. However, if the product is being used in dusty or confined conditions, use of a mask or respirator may be preferred. For help in selecting suitable equipment, consult AS/NZS 1715.

Protective Gloves: Impermeable protective gloves should be worn when you are using this product, to prevent irritation. For help in selecting suitable equipment, consult AS/NZS 2161.

Eye Protection: Protective eyewear should be worn when using this product. Eye contact may prove painful and dangerous and should be avoided. Consult AS/NZS 1336 and AS/NZS 1337 for advice on Industrial Eye Protection.

Clothing: Clean overalls or protective clothing should be worn, preferably with an apron. Consult AS2919 for advice on Industrial Clothing.

Safety Boots: Wearing safety boots in industrial situations is advisory. Consult AS/NZS2210 for advice on Occupational Protective Footwear.

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**Section 9 - Physical and Chemical Properties**

**Physical Description and Colour:** Translucent gel

**Odour:** Mild aromatic odour

**Boiling Point:** Approximately 100°C at 100kPa
Freezing/Melting Point: No specific data. Pasty solid (gel) at normal temperatures.
Volatile: No data
Specific Gravity: 1.03-1.05
Water Solubility: Soluble

Section 10 - Stability and Reactivity

Stability of the Substance: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.
Conditions to Avoid: Store as recommended (see Section 7). No special conditions to avoid.
Material to Avoid: Strong acids, strong bases, strong oxidising agents.
Hazardous Decomposition Products:
- Fire Decomposition: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water.
- This product is unlikely to spontaneously decompose.
Hazardous Polymerisation
- This product is unlikely to spontaneously polymerise.

Section 11 - Toxicological Information

Equest Plus Tape:
May be harmful if swallowed. May cause skin irritation. May cause eye irritation. Repeated exposure may cause skin allergy. Prolonged oral exposure may be hazardous. Moxidectin possibly may affect the nervous system.

Ingredients:
Moxidectin is a macrocyclic lactone, structurally similar to ivermectin, abamectin and milbemycin. Moxidectin is an acute oral toxin with nervous system effects [LD_{50} (oral, mice) 42mg/kg, LD_{50} (dermal) is >2000 mg/kg]. Only mild signs of skin irritation were seen (rabbit, exposure for up to 72hrs). Moderate eye irritation was noted (rabbit), but signs resolved 48-72hrs after treatment. Laboratory rodent reproductive studies reported foetal malformations, decrease in number of live births, reduced pup weights and neonatal & lactational deaths [lowest NOEL 0.4 mg/kg/day]. A chronic feeding study (90 days; 0 to 1.6 mg/kg/d) induced toxicity in dogs. At the highest dose lacrimation, tremors, salivation, slight ataxia and a languid appearance were reported. Dose-dependant reductions in absolute body weight and food consumption were noted [NOEL 0.3mg/kg]. In a second study (52 weeks; 0-1.15mg/kg/d], no signs of toxicity occurred and body weights remained comparable to controls throughout the study [NOEL 1.15mg/kg]. Moxidectin is not mutagenic or carcinogenic.

Benzyl alcohol is an acute toxin [LD_{50} (oral, rabbit) 1040mg/kg, LD_{50} (dermal, rabbit) 2000mg/kg], an eye irritant and a contact sensitiser.
Section 12 - Environmental Information

Equest Plus Tape:
Very toxic to the aquatic environment. Harmful to the soil environment. Harmful to terrestrial vertebrates.

Ingredients:
Moxidectin is very toxic to aquatic life [Bluegill sunfish LC50 (96hrs) 0.62 ppb; Rainbow trout LC50 (96hrs) 0.16 ppb; Daphnia magna EC50 (48 hrs) 30 ppt; bioaccumulative] and soil life [Dung beetle EC50s are 2.5677mg/kg; 0.4693mg/kg & 0.134mg/kg. Soil DT50 > 30 days]. Moxidectin is also very toxic to terrestrial vertebrates [LD50 (mice) = 42mg/kg] and bees [LD50 (oral) = 0.46ug/bee; LD50 (contact) 0.025ug/bee].

Benzyl alcohol is an aquatic toxin [Lepomis macrochirus LC50 (96hrs) 10 mg/L; Daphnia magna EC50 (24hrs) 55 mg/L], but does not bioaccumulate or persist. Also a soil toxin [Photobacterium phosphoreum EC50 (5min) 50 mg/L] and a terrestrial vertebrate toxin based on the acute oral LD50 [LD50 (oral, rabbit) 1040mg/kg].

Praziquantel may be hazardous to terrestrial vertebrates based on an oral LD50 (rabbits) of 1050mg/kg.

Section 13 - Disposal Considerations

Preferably dispose of the product by use. Otherwise dispose of product and packaging at an approved landfill or other approved facility. Care must be taken to ensure that the EEL is not exceeded outside the disposal site. Do not burn empty containers or the product. Dispose of empty container by wrapping with paper and putting in garbage.

Section 14 - Transport Information

UN Number: 3077
Dangerous Goods Class: 9
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Moxidectin 2%)

The maximum quantity per package of this substance allowed for carriage on public transport is 0.5kg.

Section 15 - Regulatory Information

Registered pursuant to the ACVM Act 1997, No. A9085
See www.nzfsa.govt.nz/acvm for registration conditions
ERMA Approval Code: HSR000055
See www.ermanz.govt.nz/search/registers for controls.

Section 16 - Other Information

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS.