

# SAFETY DATA SHEET

Zoetis New Zealand Limited



## Section 1: Identification of the Substance and Supplier

<b>Trade Name:</b>	<b>CYDECTIN<sup>®</sup> Plus fluke Oral Solution for Sheep</b>
<b>ACVM Registration No.:</b>	A010264
<b>Classification:</b>	Unrestricted
<b>Recommended Use:</b>	Oral ectoparasiticide / endoparasiticide for treatment and control of liver fluke, gastrointestinal roundworms and lungworm of sheep.
<b>Company Details:</b>	Zoetis New Zealand Limited
<b>Address:</b>	Level 5, 8 Mahuhu Crescent Auckland Central Auckland 1010 New Zealand
<b>Telephone No.:</b>	0800 963 847 (Business Hours)
<b>Emergency Telephone No.:</b>	National Poisons Centre: 0800 POISON (0800 764 766) Emergency Services: In an emergency dial 111
<b>Date of Preparation:</b>	30 June 2014

## Section 2: Hazards Identification

<b>Hazard Classification:</b>	6.1E, 6.3B, 6.4A, 6.5B, 6.8B, 6.9B, 9.1A
<b>Priority Identifier(s):</b>	WARNING – KEEP OUT OF REACH OF CHILDREN ECOTOXIC
<b>Secondary Identifier(s):</b>	6.1E May be harmful if swallowed, inhaled or absorbed through the skin. 6.3B May cause mild skin irritation. Avoid skin contact. 6.4A May cause eye irritation. Avoid contact with the eyes. 6.5B May cause an allergic skin reaction. Avoid skin contact. 6.8B Suspected of damaging fertility or the unborn child from repeated oral exposure. 6.9B May cause target organ damage from repeated oral exposure at high doses. 9.1A Very toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container.

## Section 3: Composition / Information on Ingredients

### Chemical Identity of Ingredients

Ingredient	CAS No.	Concentration
Moxidectin	113507-06-5	0.1% w/v
Triclabendazole	68786-66-3	5% w/v
Benzyl alcohol	100-51-6	1% w/v
Butylated hydroxytoluene	128-37-0	0.25% w/v
Other ingredients determined not to be hazardous.	-	To 100% w/v

This is a commercial product whose exact ratio of components may vary.  
Trace quantities of impurities are also likely.

#### Section 4: First Aid Measures

<b>Necessary First Aid Measures:</b>	<p><b>For advice contact the National Poisons Centre at 0800 POISON (0800 764 766) or a doctor immediately.</b> If the patient is not breathing begin artificial respiration and seek medical advice immediately. Never give fluids or induce vomiting if a patient is unconscious or convulsing, regardless of injury.</p> <p><b>Ingestion:</b> DO NOT induce vomiting. If the patient is conscious wash mouth out with water. Do not give anything by mouth to an unconscious person. Seek medical advice immediately.</p> <p><b>Eye Contact:</b> Flush the eye(s) out with running water for at least 15 minutes. Removal of contact lenses should be done with caution within 5 minutes of exposure. If symptoms develop seek medical advice immediately.</p> <p><b>Skin Contact:</b> Remove any contaminated clothing and wash the affected area immediately with soap and water. If symptoms develop seek medical advice immediately.</p> <p><b>Inhalation:</b> Move the patient to fresh air. If symptoms develop seek medical advice immediately.</p>
<b>Poisoning Symptoms:</b>	No specific information is available.
<b>Workplace Facilities:</b>	No specific facilities required. Standard emergency equipment must be available.
<b>Hygiene Practices:</b>	Avoid ingestion, contact with skin and eyes, and inhalation of dusts, mists or vapours. Do not eat, drink or smoke while using this product. Wash hands and exposed skin before eating, drinking or smoking and after work. Wash any protective clothing after use.
<b>Notes for Medical Personnel:</b>	Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Note the nature of this product.

#### Section 5: Fire-Fighting Measures

<b>Type of hazard:</b>	This product is non-flammable, non-combustible and non-explosive.
<b>Fire Hazard Properties:</b>	This product does not burn. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. It will produce only minor quantities of decomposition products at temperatures normally achieved in a fire. Likely to decompose only after heating to dryness followed by further strong heating. Do not allow fire water to enter waterways.
<b>Regulatory Requirements:</b>	Not applicable.
<b>Extinguishing Media &amp; Methods:</b>	Use dry chemical, foam, carbon dioxide or water to extinguish fires involving this product.
<b>Hazchem Code:</b>	3Z
<b>Recommended Protective Clothing:</b>	During large-scale fire fighting operations wear approved positive pressure, self-contained breathing apparatus and full protective turn-out gear.

## Section 6: Accidental Release Measures

<b>Personal Precautions:</b>	Personnel involved in clean-up should wear appropriate personal protective equipment to minimise exposure. This may include eye protection, chemically resistant gloves, boots and overalls.
<b>Environmental Precautions:</b>	Prevent material from entering surface water drains or waterways. If a significant quantity of material enters drains, advise emergency services.
<b>Procedure for Spills:</b>	<ol style="list-style-type: none"><li>1. Non-essential personnel should be evacuated from the affected area.</li><li>2. Stop leak and contain the source of spill if it is safe to do so. Reposition any leaking containers to minimise further leakage.</li><li>3. Absorb the spill with an absorbent material (e.g. sand).</li><li>4. Collect the spilled material into labelled containers for disposal, minimising dust generation.</li><li>5. Decontaminate the spill area thoroughly with detergent and water, preventing runoff from entering drains.</li></ol>
<b>Procedure for Disposal:</b>	Contaminated material must be disposed of at an approved landfill or other approved facility in accordance with local, regional and national requirements. Avoid contamination of any water supply with product or empty container.

## Section 7: Handling and Storage

### Handling

<b>Precautions for Safe Handling:</b>	Keep exposure to this product to a minimum and minimise the quantities kept in work areas. Ensure the personal protective measures outlined in Section 8 are followed, and avoid contact or contamination with incompatible materials listed in Section 10. The measures detailed under "Storage" below should be followed during handling to minimise risks to persons using the product in the workplace.
<b>Regulatory Requirements:</b>	Not required.
<b>Handling Practices:</b>	Avoid ingestion, contact with skin and eyes, and inhalation of dusts, mists or vapours. Do not eat, drink or smoke while handling this product. Wash hands and exposed skin before eating, drinking or smoking and after work. Wash any protective clothing after use.
<b>Approved Handlers:</b>	Approved handlers are not required for this product.

### Storage

<b>Conditions for Safe Storage:</b>	Store below 25°C (Air Conditioning). Protect from light. Keep out of reach of children. Store in a well ventilated area in the original container, tightly closed, away from foodstuffs.
<b>Store Site Requirements:</b>	A requirement for an emergency management plan, secondary containment and signage is applicable when quantities of 100 L or more are stored.
<b>Packaging:</b>	Packaging Schedule 3 (UN Packing Group III) for quantities > 5 L (Hazardous Substances Packaging Regulations 2001). Store in the original container, away from foodstuffs.

## Section 8: Exposure Control / Personal Protection

Always Read and Follow the Label Instructions and Warnings

### Workplace Exposure Guidelines

<b>Workplace Exposure Standards:</b>	A time weighted average (TWA) concentration for an 8-hour day and a 5-day week has not been established by NOHSC Australia for any of the major ingredients in this product. There is a blanket limit of 10 mg/m <sup>3</sup> for dusts or mists when limits have not otherwise been established.
<b>Application in the Workplace:</b>	The nature of this product makes it unlikely that this level will be approached during normal handling.
<b>Exposure Standards Outside the Workplace:</b>	<p>Moxidectin:</p> <ul style="list-style-type: none"><li>▪ ADE: 0.002 mg/kg bw/day</li><li>▪ PDE<sub>food</sub>: 0.0014 mg/kg bw/day</li><li>▪ PDE<sub>drinking water</sub>: 0.0004 mg/kg bw per day</li><li>▪ PDE<sub>dermal</sub>: 0.0002 mg/kg bw per day</li><li>▪ TEL<sub>skin surface deposition</sub>: 0.03 mg/m<sup>2</sup></li><li>▪ EEL<sub>water</sub>: 0.0000003 mg/L</li></ul> <p>Triclabendazole:</p> <ul style="list-style-type: none"><li>▪ ADE: 0.003 mg/kg bw/day</li><li>▪ PDE<sub>food</sub>: 0.0021 mg/kg bw/day</li><li>▪ PDE<sub>drinking water</sub>: 0.0006 mg/kg bw per day</li><li>▪ PDE<sub>dermal</sub>: 0.0003 mg/kg bw per day</li><li>▪ TEL<sub>skin surface deposition</sub>: 0.05 mg/m<sup>2</sup></li></ul>
<b>Engineering Controls:</b>	Engineering controls should be used as the primary means to control exposures. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
<b>Personal Protection:</b>	<p>The following instructions are for those coming into frequent and / or lengthy contact with this product. For occasional handling employ precautions suitable for the conditions under which the product is being handled.</p> <p><b>Hands:</b> Impervious protective gloves should be worn when handling this product to prevent irritation. Consult AS/NZS 2161 for guidance.</p> <p><b>Eyes:</b> Protective eyewear should be worn when handling this product as eye contact may prove painful and dangerous, and should be avoided. Consult AS/NZS 1336 and 1337 for guidance.</p> <p><b>Skin:</b> Clean overalls or protective clothing, including safety boots, should be worn. Consult AS/NZS 2919 and 2210 for guidance.</p> <p><b>Respiratory:</b> Respiratory protection is not normally required; however, if the product is being handled in dusty or confined conditions, use of a mask or respirator may be preferred. Consult AS/NZS 1715 for guidance.</p>
<b>General Hygiene:</b>	Change work clothes regularly. Avoid ingestion, contact with skin and eyes, and inhalation of dusts, mists or vapours. Do not eat, drink or smoke while handling this product. Wash hands and exposed skin before eating, drinking or smoking and after work. Wash any protective clothing after use.

## Section 9: Physical and Chemical Properties

<b>Appearance:</b>	White liquid
<b>Odour:</b>	Mild odour
<b>Specific Gravity / Density:</b>	Approximately 1.05
<b>Freezing / Melting Point:</b>	Approximately 0°C
<b>Boiling Point:</b>	Approximately 100°C at 100 kPa
<b>pH:</b>	No data available. Expected to be approximately neutral
<b>Solubility in Water:</b>	Completely soluble
<b>Flashpoint:</b>	Not applicable. This product is not flammable
<b>Oxidising Properties:</b>	Not applicable. This product is not an oxidiser
<b>Corrosive Properties:</b>	Not applicable. This product is not corrosive
<b>Vapour Pressure:</b>	2.37 kPa @ 20°C (water vapour pressure)

## Section 10: Stability and Reactivity

<b>Stability of the Substance:</b>	This product is unlikely to react or decompose under normal storage conditions.
<b>Conditions to Avoid:</b>	Store as recommended. No specific conditions to avoid.
<b>Material to Avoid:</b>	No specific materials to avoid.
<b>Hazardous Decomposition Products:</b>	This product is unlikely to spontaneously decompose.
<b>Hazardous Polymerisation:</b>	This product is unlikely to spontaneously polymerise.
<b>Specific Data:</b>	No specific data available.

## Section 11: Toxicological Information

### HSNO Classifications

- 6.1E** May be harmful if swallowed, inhaled or absorbed through the skin.
- 6.3B** May cause mild skin irritation. Avoid skin contact.
- 6.4A** May cause eye irritation. Avoid contact with the eyes.
- 6.5B** May cause an allergic skin reaction. Avoid skin contact.
- 6.8B** Suspected of damaging fertility or the unborn child from repeated oral exposure.
- 6.9B** May cause target organ damage from repeated oral exposure at high doses.

### Acute Effects

<b>Moxidectin:</b>	Moxidectin is a macrocyclic lactone, structurally similar to ivermectin, abamectin and milbemycin. Moxidectin is an acute oral toxin with nervous system effects [LD <sub>50</sub> (oral, mice) 42 mg/kg, LD <sub>50</sub> (dermal) is >2000 mg/kg]. Only mild signs of skin irritation were seen (rabbit, exposure for up to 72 hrs). Moderate eye irritation was noted (rabbit), but signs resolved 48-72 hrs after treatment.
<b>Triclabendazole:</b>	Triclabendazole is an acute oral toxin [LD <sub>50</sub> (oral, rabbit) 206 mg/kg]. Positive sensitisation reaction found in Guinea Pigs to intradermal challenge, but not to epidermal challenge.
<b>Benzyl alcohol:</b>	Benzyl alcohol is an acute toxin [LD <sub>50</sub> (oral, rabbit) 1040 mg/kg, LD <sub>50</sub> (dermal, rabbit) 2000 mg/kg], an eye irritant and a contact sensitiser.
<b>Butylated hydroxytoluene:</b>	Butylated hydroxytoluene is an acute toxin [LD <sub>50</sub> (oral, mouse) 650 mg/kg] and a known sensitiser.

### Chronic / Long Term Effects

<b>Moxidectin:</b>	Laboratory rodent reproductive studies reported foetal malformations, decreased 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 0.3 mg/kg]. In a second study (52 weeks; 0-1.15 mg/kg/d), no signs of toxicity occurred and body weights remained comparable to controls throughout the study [NOEL 1.15 mg/kg]. Moxidectin is not mutagenic or carcinogenic.
<b>Triclabendazole:</b>	A 13 week study of dogs fed a diet containing 0.35-39 mg/kg triclabendazole showed depressed weight gains and hepatotoxicity at high doses, LOAEL 3.5 mg/kg/day.
<b>Butylated hydroxytoluene:</b>	Repeated oral doses caused weight loss in laboratory animal studies (NOAEL 75 mg/kg).

## Section 12: Ecotoxicity Information

### HSNO Classifications

**9.1A** Very toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container.

The environmental characteristics of this material have not been fully evaluated.  
Avoid contamination of any water supply with product or empty container.

### Ecotoxicity Effects

<b>Moxidectin:</b>	Moxidectin is very toxic to aquatic life [Bluegill sunfish LC <sub>50</sub> (96 hrs) 0.62 ppb; Rainbow trout LC <sub>50</sub> (96 hrs) 0.16 ppb; <i>Daphnia magna</i> EC <sub>50</sub> (48 hrs) 30 ppt; bioaccumulative] and soil life [Dung beetle EC <sub>50</sub> 's are 2.5677 mg/kg; 0.4693 mg/kg & 0.134 mg/kg. Soil DT <sub>50</sub> > 30 days]. Moxidectin is also very toxic to terrestrial vertebrates [LD <sub>50</sub> (mice) = 42 mg/kg] and bees [LD <sub>50</sub> (oral) = 0.46 ug/bee; LD <sub>50</sub> (contact) 0.025 ug/bee].
<b>Triclabendazole:</b>	Triclabendazole may be hazardous to terrestrial vertebrates based on an oral LD50 (rabbits) of 206 mg/kg.
<b>Benzyl alcohol:</b>	Benzyl alcohol is an aquatic toxin [ <i>Lepomis macrochirus</i> LC <sub>50</sub> (96 hrs) 10 mg/L; <i>Daphnia magna</i> EC <sub>50</sub> (24 hrs) 55 mg/L], but does not bioaccumulate or persist. Also a soil toxin [ <i>Photobacterium phosphoreum</i> EC <sub>50</sub> (5 min) 50 mg/L] and a terrestrial vertebrate toxin based on the lowest acute oral LD <sub>50</sub> [LD <sub>50</sub> (oral, rabbit) 1040 mg/kg].
<b>Butylated hydroxytoluene:</b>	Butylated hydroxytoluene is an aquatic toxin [ <i>Daphnia pulex</i> EC <sub>50</sub> (48 hrs) 1.44 mg/L], bioaccumulates and persists. Also a terrestrial vertebrate toxin based on the acute oral LD <sub>50</sub> [LD <sub>50</sub> (oral, mouse) 650 mg/kg].

### Environmental Fate

No further information available.

### Section 13: Disposal Considerations

<b>Product Disposal:</b>	Preferably dispose of product by use in accordance with label directions. Otherwise dispose of product at an approved landfill, or other approved facility in accordance with local, regional and national regulations. Avoid contamination of any water supply with product.
<b>Container Disposal:</b>	Dispose of empty containers by wrapping in paper and putting in garbage for disposal at an approved landfill, or other approved facility in accordance with local, regional and national regulations. Avoid contamination of any water supply with empty container.

### Section 14: Transport Information

#### Dangerous Goods Classification

<b>UN No.:</b>	3082
<b>Class:</b>	9
<b>Packing Group:</b>	III
<b>Proper Shipping Name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Moxidectin 0.1%)

The maximum quantity per package of this substance allowed for carriage on public transport is 0.1 L.

### Section 15: Regulatory Information

<b>HSNO Approval No.:</b>	HSR000058
<b>HSNO Controls:</b>	See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> for controls
<b>ACVM Registration No.:</b>	A010264
<b>ACVM Controls:</b>	See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration conditions

## Section 16: Other Information

**Note:** This product is a veterinary medicine and must therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

**CONTACT POINT:**      **Zoetis New Zealand Limited:**      0800 963 847 (Business Hours)  
                                 **National Poisons Centre:**                      0800 POISON (0800 764 766)  
                                 **Emergency Services:**                                  Dial 111

This Safety Data Sheet 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 should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

**PLEASE READ ALL LABELS CAREFULLY BEFORE USING PRODUCT.**

If clarification of further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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