



MATERIAL SAFETY DATA SHEET

Section 1 - Identification of Chemical Product and Company

Ancare Australia Pty Limited
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Substance: Abamectin is a macrocyclic lactone derivative, Praziquantel is an acylated quinoline-pyrazine derivative.

Trade Name: **Genesis Tape Oral Abamectin/Praziquantel Drench for Sheep and Lambs**

Product Use: For the treatment and control of certain parasites in lambs and sheep as described on the product label.

Creation Date: **May, 2005**

Revision Date: **February, 2008**

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Not classified as hazardous according to the criteria of NOHSC Australia.
Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

Risk Phrases: R52. Harmful to aquatic organisms.

Safety Phrases: S61. Avoid release to the environment. Refer to special instructions/Safety Data Sheets.

SUSDP Classification: S5

ADG Classification: None allocated. Not a Dangerous Good under the ADG Code.

UN Number: None allocated

Emergency Overview

Physical Description & Colour: clear, pale yellow liquid.

Odour: Mild odour.

Major Health Hazards: Symptoms of poisoning observed in laboratory animals include pupil dilation, vomiting, convulsions and/or tremors, and coma. Abamectin acts on insects by interfering with the nervous system. At very high doses, it can affect mammals, causing symptoms of nervous system depression such as incoordination, tremors, lethargy, excitation, and pupil dilation. Very high doses have caused death from respiratory failure. Abamectin is not readily absorbed through skin. No significant acute risk factors have been found for this product.

Potential Health Effects

Inhalation

Short Term Exposure: Significant inhalation exposure is considered to be unlikely. Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short Term Exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However product may be mildly irritating, but is unlikely to cause anything more than mild discomfort which should disappear once contact ceases.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure: Exposure via eyes is considered to be unlikely. This product may be mildly irritating to eyes, but is unlikely to cause anything more than mild discomfort which should disappear once product is removed.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. This product is unlikely to cause any irritation problems in the short or long term.

Long Term Exposure: No data for health effects associated with long term ingestion.

MATERIAL SAFETY DATA SHEET

Carcinogen Status:

NOHSC: No significant ingredient is classified as carcinogenic by NOHSC.

NTP: No significant ingredient is classified as carcinogenic by NTP.

IARC: No significant ingredient is classified as carcinogenic by IARC.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%w/v	TWA (mg/m ³)	STEL (mg/m ³)
Abamectin	71751-41-2	1g/L	not set	not set
Praziquantel	55268-74-1	18.8g/L	not set	not set
Other non hazardous ingredients	secret	to 1L	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

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 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

Inhalation: First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Skin Contact: Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

Eye Contact: No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes.

Ingestion: If product is swallowed or gets in mouth, 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.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Only small quantities of decomposition products are expected from this products at temperatures normally achieved in a fire. This will only occur after heating to dryness.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: Not Combustible. Use extinguishing media suited to burning materials.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: Does not burn.

Upper Flammability Limit: Does not burn.

Lower Flammability Limit: Does not burn.

Autoignition temperature: Not applicable - does not burn.

Flammability Class: Does not burn.

Section 6 - Accidental Release Measures

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8).

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains



MATERIAL SAFETY DATA SHEET

Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water Distribution:	No data.
Viscosity:	20-22sec at 20°C (Ford # 4 cup)
Autoignition temp:	Not applicable - does not burn.

Section 10 - Stability and Reactivity

Reactivity: 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: This product should be kept in a cool place, preferably below 30°C. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: strong acids, strong bases, strong oxidising agents.

Fire Decomposition: Only small quantities of decomposition products are expected from this products at temperatures normally achieved in a fire. This will only occur after heating to dryness. Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. Hydrogen cyanide poisoning signs and symptoms are weakness, dizziness, headache, nausea, vomiting, coma, convulsions, and death. Death results from respiratory arrest. Hydrogen cyanide gas acts very rapidly; symptoms and death can both occur quickly.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Toxicity: Acute toxicity: Abamectin is highly toxic to insects and may be highly toxic to mammals as well. Emulsifiable concentrate formulations may cause slight to moderate eye irritation and mild skin irritation. Symptoms of poisoning observed in laboratory animals include pupil dilation, vomiting, convulsions and/or tremors, and coma. Abamectin acts on insects by interfering with the nervous system. At very high doses, it can affect mammals, causing symptoms of nervous system depression such as incoordination, tremors, lethargy, excitation, and pupil dilation. Very high doses have caused death from respiratory failure. Abamectin is not readily absorbed through skin. Tests with monkeys show that less than 1% of dermally applied abamectin was absorbed into the bloodstream through the skin. Abamectin does not cause allergic skin reactions. The oral LD₅₀ for abamectin in rats is 10 mg/kg, and in mice ranges from 14 mg/kg to greater than 80 mg/kg. The dermal LD₅₀ for technical abamectin in rats and rabbits is greater than 330 mg/kg.

Chronic toxicity: In a 1-year study with dogs given oral doses of abamectin, dogs at the 0.5 and 1 mg/kg/day doses exhibited pupil dilation, weight loss, lethargy, tremors, and recumbency. Similar results were seen in a 2-year study with rats fed 0.75, 1.5, or 2 mg/kg/day. Rats at all the dosage levels exhibited body weight gains significantly higher than the controls. A few individuals in the high dose group exhibited tremors. When mice were fed 8 mg/kg/day for 94 weeks, the males developed dermatitis and changes in blood formation in the spleen, while females exhibited tremors and weight loss.

Reproductive effects: Rats given 0.40 mg/kg/day of abamectin had increased stillbirths, decreased pup viability, decreased lactation, and decreased pup weights. These data suggest that abamectin may have the potential to cause reproductive effects at high enough doses.

Teratogenic effects: Abamectin produced cleft palate in the offspring of treated mice and rabbits, but only at doses that were also toxic to the mothers. There were no birth defects in the offspring of rats given up to 1 mg/kg/day. Abamectin is unlikely to cause teratogenic effects except at doses toxic to the mother.

Mutagenic effects: Abamectin does not appear to be mutagenic. Mutagenicity tests in live rats and mice were negative. Abamectin was shown to be nonmutagenic in the Ames test.

Carcinogenic effects: Abamectin is not carcinogenic in rats or mice. The rats were fed dietary doses of up to 2 mg/kg/day for 24 months, and the mice were up to 8 mg/kg/day for 22 months. These represent the maximum tolerated doses.

Organ toxicity: Animal studies indicate that abamectin may affect the nervous system.

Fate in humans and animals: Tests with laboratory animals show that ingested avermectin B1a is not readily absorbed into the bloodstream by mammals and that it is rapidly eliminated from the body within 2 days via the faeces. Rats given single oral doses of avermectin B1a excreted 69 to 82% of the dose unchanged in the faeces. The average half-life of avermectin B1a in rat tissue is 1.2 days. Lactating goats given daily oral doses for 10 days excreted 89% of the administered avermectin, mainly in the faeces. Less than 1% was recovered in the urine.

MATERIAL SAFETY DATA SHEET

Praziquantel is rapidly absorbed after administration orally, even when taken with a meal; more than 80% of a dose is reported to be absorbed. Peak plasma concentrations are achieved 1 to 3 hours after a dose, but there is a pronounced first-pass effect and praziquantel undergoes rapid and extensive metabolism in the liver, being hydroxylated to metabolites that are thought to be inactive. It is distributed into the CSF. The plasma elimination half-life of praziquantel is 1 to 1.5 hours and that of the metabolites about 4 hours. It is excreted in the urine, mainly as metabolites, about 80% of the dose being eliminated within 4 days and more than 90% of this in the first 24 hours.

Section 12 - Ecological Information

Effects on birds: Abamectin is practically nontoxic to birds. The LD₅₀ for abamectin in bobwhite quail is >2000 mg/kg. The dietary LC₅₀ is 3102 ppm in bobwhite quail. There were no adverse effects on reproduction when mallard ducks were fed dietary doses of 3, 6, or 12 ppm for 18 weeks.

Effects on aquatic organisms: Abamectin is highly toxic to fish and extremely toxic to aquatic invertebrates. Its LC₅₀ (96-hour) is 0.003 mg/L in rainbow trout, 0.0096 mg/L in bluegill sunfish, 0.015 mg/L in sheepshead minnows, 0.024 mg/L in channel catfish, and 0.042 mg/L in carp. Its 48-hour LC₅₀ in *Daphnia magna*, a small freshwater crustacean, is 0.003 mg/L. The 96-hour LC₅₀ for abamectin is 0.0016 mg/L in pink shrimp, 430 mg/L in eastern oysters, and 153 mg/L in blue crab. While highly toxic to aquatic organisms, actual concentrations of abamectin in surface waters adjacent to treated areas are expected to be low. Abamectin did not bioaccumulate in bluegill sunfish exposed to 0.099 µg/L for 28 days in a flow-through tank. The levels in fish were from 52 to 69 times the ambient water concentration, indicating that abamectin does not accumulate or persist in fish.

Effects on other organisms: Abamectin is highly toxic to bees, with a 24-hour contact LC₅₀ of 0.002 µg/bee and an oral LD₅₀ of 0.009 µg/bee.

Breakdown in soil and groundwater: Abamectin is rapidly degraded in soil. At the soil surface, it is subject to rapid photodegradation, with half-lives of 8 hours to 1 day reported. When applied to the soil surface and not shaded, its soil half-life is about 1 week. Under dark, aerobic conditions, the soil half-life was 2 weeks to 2 months. Loss of abamectin from soils is thought to be due to microbial degradation. The rate of degradation was significantly decreased under anaerobic conditions. Because abamectin is nearly insoluble in water and has a strong tendency to bind to soil particles, it is immobile in soil and unlikely to leach or contaminate groundwater. Compounds produced by the degradation of abamectin are also immobile and unlikely to contaminate groundwater.

Breakdown in water: Abamectin is rapidly degraded in water. After initial distribution, its half-life in artificial pond water was 4 days. Its half-life in pond sediment was 2 to 4 weeks. It undergoes rapid photodegradation, with a half-life of 12 hours in water. When tested at pH levels common to surface and groundwater (pH 5, 7, and 9), abamectin did not hydrolyze.

Breakdown in vegetation: Plants do not absorb abamectin from the soil. Abamectin is subject to rapid degradation when present as a thin film, as on treated leaf surfaces. Under laboratory conditions and in the presence of light, its half-life as a thin film was 4 to 6 hours.

Praziquantel: no data available.

Section 13 - Disposal Considerations

Disposal: Instructions concerning the disposal of this product and its containers are given on the product label. These should be carefully followed.

Section 14 - Transport Information

ADG Code: This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

Section 15 - Regulatory Information

AICS: All of the significant ingredients in this formulation are to be found in the public AICS Database. The following ingredients: Abamectin, Praziquantel, are mentioned in the SUSDP.

Section 16 - Other Information

This MSDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
AICS	Australian Inventory of Chemical Substances
CAS Number	Chemical Abstracts Service Registry Number



MATERIAL SAFETY DATA SHEET

Hazchem Number	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOHSC	National Occupational Health and Safety Commission
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
UN Number	United Nations Number

THIS MSDS 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 MSDS 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

Please read all labels carefully before using product.

This MSDS is prepared in accord with the NOHSC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]
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