

MATERIAL SAFETY DATA SHEET



IVOMEC® ANTIPARASITIC INJECTION FOR CATTLE

Version: 3

Issue Date: 10 July 2011

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SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Recommended use: For the treatment and control of gastrointestinal roundworms, eyeworms, lungworms, lice, ticks, and mites in cattle.

Supplier name: Merial Australia Pty Ltd
Address: Level 6, 79 George Street
Parramatta NSW 2150

Telephone number (toll-free): 1800 808 691

All hours emergency phone number - Poisons Information Centre 131126 anywhere in Australia

SECTION 2 HAZARDS IDENTIFICATION

Classified as hazardous (Toxic T) according to Australian Safety and Compensation Commission (Safe Work Australia) Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)].

Not classified as Dangerous Goods according to the ADG Code.

Risk phrase(s) (Hazard): TOXIC IF SWALLOWED (R25)
HARMFUL BY INHALATION AND IN CONTACT WITH SKIN (R20/21)
IRRITATING TO EYES AND SKIN (R36/38)
VERY TOXIC TO AQUATIC ORGANISMS (R50)

Safety phrase(s):
(Precautionary statements) KEEP OUT OF THE REACH OF CHILDREN (S2)
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.
(S13)
WHEN USING, DO NOT EAT OR DRINK (S20)
AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF
WATER. (S28)
DO NOT EMPTY INTO DRAINS (S29)
IF SWALLOWED, SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW
THE CONTAINER OR LABEL. (S46)

SUSDP CLASSIFICATION - POISONS SCHEDULE: 5
ADG CODE CLASSIFICATION: Not a Dangerous Goods
UN No. None

LOCAL EFFECTS:
TARGET ORGANS:
INHALATION: See note to physician in Section 4.
Not a likely route of entry. At the concentration of active ingredient in this product, unlikely to be harmful.

SKIN CONTACT: May be irritating with prolonged or frequent contact.
EYE CONTACT: Irritating.
INGESTION: Harmful. May cause dilated pupils (mydriasis), in-coordination, drowsiness, slow breathing, nausea, vomiting, tachycardia, somnolence, tremors and blood pressure variations. No toxic effects reported in humans up to 2000µ/kg bw. Ivermectin can be excreted in milk.

CHRONIC EFFECTS: Not sensitising. At doses toxic to the mother, **pure ivermectin** is a reproductive toxin in mice and rats, however, in rabbits, ivermectin is foetotoxic at doses not toxic to the mother. Rats exposed *in utero*, through lactation and for an additional 3 months, showed signs of intravascular haemolysis. Reproductive toxicant category 2.

CARCINOGEN STATUS: Not classified by NOHSC, NTP or IARC



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SECTION 3

Ingredient

Ivermectin
Solvent
Vehicle

COMPOSITION/INFORMATION ON INGREDIENTS

CAS No.	Content %	Classification	Risk phrase
70288-86-7	1	T Toxic	R 20/21, 25, 50 61, 64
confidential	<40	not classified	-
confidential	bal	not classified	-

SECTION 4

FIRST AID MEASURES

ADVICE:

For advice, contact a Poisons Information Centre (Phone 131 126 anywhere in Australia), or call a doctor at once.

INHALATION:

If vapour or mist inhaled, remove from contaminated area. If adverse effects occur, contact a doctor and show this MSDS.

SKIN CONTACT:

If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

EYE CONTACT:

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

INGESTION:

If swallowed urgent hospital treatment is likely to be needed. Follow instruction of Poisons Information Centre. Medical observation for delayed symptoms needs to be carried out for up to 48 hours.

Medical conditions aggravated by exposure - none known. Treatment is symptomatic.

NOTE TO PHYSICIAN: Ivermectin is believed to bind to glutamate-gated chloride ion channels; avoid drugs that also interact with other ligand-gated chloride channels, including those which enhance GABA activity in patients with potentially toxic Ivermectin exposure. (barbiturates, benzodiazepines, valproic acid).

SECTION 5

FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS:

Not flammable but vehicle and solvent ingredients would provide a fuel source in a fire.

EXTINGUISHING MEDIA:

Water spray/fog, dry chemical or CO₂.

FIRE FIGHTING:

Do not use water jet.

Special advice in case of fire:

Emergency workers should wear full protective equipment and supplied-air breathing apparatus. Toxic or irritant gases, vapours or particulates may be generated in a fire. Spray water on containers to cool. Contain contaminated fire-fighting water.

Hazardous products of combustion:

Oxides of carbon and unidentified pyrogenic substances.

SECTION 6

ACCIDENTAL RELEASE MEASURES

If spill or leak is of significant quantity, move non-essential persons away. Place leaking receptacles in an over-bin. Contain spill with absorbent material such as dry sand or kitty litter. Do not allow liquid to enter drains or sewer. Sweep up used absorbent and pack in properly labelled container for disposal. To cleanse the contaminated area, wet down contaminated area with a small amount of water, cover again with absorbent and place in labelled container. Consult waste authority regarding disposal.

OCCUPATIONAL RELEASE: As above. Wear impervious gloves and eye protection to deal with a large spill or leak.

SECTION 7

HANDLING AND STORAGE

Poisonous if swallowed. Avoid contact with the eyes, skin and clothing.

If clothing becomes contaminated with product, remove clothing and launder. If product is on skin, immediately wash area with soap and water. If product is in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.



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HANDLING AND STORAGE Not classified as Dangerous Goods. Store away from oxidising agents.

Do not store with food. Store container below 30°C in carton to protect from light.

Ventilation: No special requirement.

Sources of ignition: No special requirement.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

No ingredients that require workplace atmosphere monitoring have been identified by the manufacturer.

EXPOSURE LIMITS: Safe Work Australia TWA = None established.

Safe Work Australia STEL= None established.

No exposure limits have been established by SWA, however, a TWA of not more than 0.2 mg/cu.m of ivermectin is recommended by the manufacturer.

The Time Weighted Average (TWA) is the concentration of the substance in the worker's breathing zone, exposure to which over 8-hour days, 5-day weeks over a working lifetime, should not cause any undue discomfort or health impairment to most workers. The Short Term Exposure Limit (STEL), means a 15 minute TWA exposure which should not be exceeded and should not be repeated within 60 minutes or more than four times per day.

Exposure Controls / Industrial hygiene:

VENTILATION: Not required for normal use.

RESPIRATOR: Not required for normal use.

EYE PROTECTION: Not required for normal use.

SKIN PROTECTION: Not required for normal use.

Equipment for cleaning-up a significant spill or leak:

EYE PROTECTION: Use face shield or eye protection complying with AS 1336 / 1337.

SKIN PROTECTION: Wear impervious gloves such as neoprene rubber or PVC-coated cotton gloves complying with AS/NZS 2161.2. Wear overalls and impervious footwear.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless to yellow liquid.
Odour.	None
pH.	Not available
Vapour pressure.	Not determined.
Boiling point/range.	192°C
Freezing Point	Not determined
Melting point	Not applicable
Solubility in water	Miscible (Ivermectin ingredient solubility = 4 mg/L)
Specific gravity or density.	Not determined
Flash point	81°C
Auto-ignition temperature.	Not self-igniting
Viscosity.	Not determined
Octanol/water partition coefficient.	log Po/w = 5.4 (Ivermectin)
Reactivity	Not an oxidising agent.
Burning characteristics.	Combustible but not flammable.
Incompatible materials.	Strong oxidizing agents or peroxide formers.

SECTION 10 STABILITY & REACTIVITY

Thermal decomposition: Not expected at normal temperatures.

Hazardous decomposition products: Products of photodegradation have not been identified.

Dangerous reactions: None known.



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REACTIVITY:	Stable but readily oxidised by oxidising agents, e.g. pool and spa chlorine, permanganates, chlorates. May catch fire in contact with them.
CONDITIONS TO AVOID:	Contact with any oxidising agent, strong acids and strong alkali. Incompatible with oxidising agents.
HAZARDOUS DECOMPOSITION:	No significant decomposition expected at normal temperatures.
POLYMERISATION:	No hazardous polymerisation will occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Health effects from the likely routes of exposure:

	Product estimate	Active ingredient
LD50 acute oral (rat):	5000 mg/kg	50 mg/kg
LD50 acute dermal (rat):	>66,000 mg/kg	>660 mg/kg
LD50 acute dermal (rabbit):	40,000 mg/kg	406 mg/kg
Inhalation LC50/4 hr (rat):	511 mg/L	5.11 mg/L
Skin irritation (rabbit):	Skin irritant	Skin irritant
Eye irritation (rabbit):	Eye irritant	Eye irritant
Sensitisation (guinea pig):	Not a sensitising agent	Not a sensitising agent
Genotoxicity	Not genotoxic	Not genotoxic
LOCAL EFFECTS OF PRODUCT:	May be irritant to eyes and skin.	
TARGET ORGANS:	Eyes, Skin.	
HAZARDOUS INGREDIENTS:	Ivermectin R-phrases = 20/21, 25, 50 Harmful by inhalation and in contact with skin. Toxic if swallowed.	
MUTAGENICITY DATA:	Negative in Ames test. Negative in mouse lymphoma mutation assay. Does not induce unscheduled DNA synthesis in human fibroblast cell culture (MSD 1988)	
Subacute to chronic toxicity:	No data available on the sub-chronic or reproductive effects of the product.	
Additional toxicological information:	Ivermectin is believed to bind to glutamate-gated chloride ion channels; avoid drugs that also interact with other ligand-gated chloride channels, including those which enhance GABA activity in patients with potentially toxic Ivermectin exposure. Reproductive toxicant in rabbits and mice. Repro. Cat 2.	
The following symptoms may occur:	Overexposure to ivermectin may cause dilated pupils, incoordination, drowsiness, depressed motor activity, slowed breathing, tremors, vomiting, anorexia, muscle tremors, headache and dizziness.	

SECTION 12 ECOLOGICAL INFORMATION

The following applies to the **Ivermectin** active ingredient.

Environmental fate: Ivermectin photodegrades rapidly in the environment and 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. Does not bioaccumulate.

TOXICITY TO FISH:	LC50 = 0.3 µg/L - Rainbow Trout - very toxic to fish.
TOXICITY TO DAPHNIA:	EC50 48 hr = 0.025 µg/L (<i>D. magna</i>) - very toxic to Daphnia
TOXICITY TO ALGA:	Not available
TOXICITY TO BACTERIA:	Not available
READY BIODEGRADABILITY:	Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of empty containers and outer packaging by wrapping in paper and putting in garbage. As the active ingredient is highly toxic to aquatic organisms, great care is needed to ensure that the product does not reach drains, or waterways.

For the disposal of the clean-up materials from a significant spill, consult waste authority.



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SECTION 14 TRANSPORT INFORMATION

Surface transport:

UN Number	None
UN Proper Shipping Name	None
Class and subsidiary risk	None
Packing Group	None
Special precautions for user	None
Hazchem Code	None
Labelling:	No DG labelling required
Transport as:	
Incompatible stowage:	Foodstuffs

SECTION 15 REGULATORY INFORMATION

This formulation is registered with the Australian Pesticides & Veterinary Medicines Authority:
IVOMEC Injection for Cattle: APVMA 46570.

SECTION 16 OTHER INFORMATION

Do not allow product to reach ground water, water course or sewage system. Poisonous to fish and some aquatic organisms.

ACRONYMS USED IN THIS MSDS

SUSDP	Standard for the Uniform scheduling of Drugs and Poisons
ADG Code	Australian Dangerous Goods (DG) Code
CAS No.	Chemical Abstracts number
UN No.	United Nations identifying number for DG
R-phrases	Risk phrases identifying main hazard of ingredient or product
S-phrases	Safety phrases identifying main safety measures to be used
SWA	Safe Work Australia (formerly NOHSC)
NTP	National Toxicology Programme (USA)
IARC	International Agency for Research on Cancer

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SUPPLIER STATEMENT: *The product should be stored, handled and used in accordance with good industrial hygiene practices and in conformity with legal regulations.. The information in this MSDS is based on the level of knowledge at the time of preparation and relates to the product in the state in which it is supplied. The information describes the product from the safety point of view and is not intended to guarantee any particular properties and shall not establish a legally valid contractual relationship*