

**MATERIAL SAFETY DATA SHEET****A18180/03/AUS****ADVOCATE FOR DOGS****SECTION 1 – IDENTIFICATION, CONTACTS, HAZARDOUS NATURE**

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Contact Point (for non-emergency calls)

Animal Health Division
Telephone Number: (02) 9391-6000

Product Name

Advocate for Dogs

Product Use

Spot-on treatment for flea control, gastrointestinal worm control, and prevention of heartworm infection in dogs.

Other Names

Imidacloprid, moxidectin, benzyl alcohol
This MSDS covers the following four products:

- ◆ Advocate for Puppies and Small Dogs up to 4 kg
- ◆ Advocate for Dogs 4-10kg
- ◆ Advocate for Dogs 10-25kg
- ◆ Advocate for Dogs over 25kg

Creation Date

25th June 2003

Revision Date

23rd September 2003**SECTION 2 – HAZARDS IDENTIFICATION**

Hazard Classification

HAZARDOUS SUBSTANCE
NON-DANGEROUS GOODS

Risk Phrases

Harmful by inhalation and if swallowed.

Safety Phrases

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

RISK & SAFETY PHRASES ARE NOT REQUIRED ON PACKAGES INTENDED FOR END USERS. APPROPRIATE SAFETY DIRECTIONS AND FIRST AID STATEMENTS ARE SHOWN ON THE PRODUCT LABEL.

SECTION 3 – COMPOSITION		
Ingredients	CAS No	Proportion
Imidacloprid*	138261-41-3	10%
Moxidectin**	113507-06-5	2.5%
Benzyl alcohol	100-51-6	>60%
Other ingredients determined not to be hazardous	-	10 - <30%
<p>*Imidacloprid is a neonicotinoid: 1-(6-chloro-3-pyridinyl)methyl -N-nitro-2-imidazolidinimine</p> <p>**Moxidectin is a milbemycin derivative: (2aE, 4E, 5'R, 6R, 6'S, 8E, 11R, 13S, 15S, 17aR, 20R, 20aR, 20bS)-6'-[(E)-1,2-Dimethyl-1-butenyl]-5', 6, 6', 7, 10, 11, 14, 15, 17a, 20, 20a, 20b-dodecahydro-20, 20b-dihydroxy-5', 6, 8, 19-tetramethylspiro[11, 15-methano-2H, 13H, 17H-furo[4,3,2-pq][2,6]benzodioxacyclooctadecin-13,2'-[2H]pyrano-4',17(3'H)-dione, 4'-(E)-(O-methyloxime)</p>		

SECTION 4 – FIRST AID MEASURES	
Label Regulated First Aid Statement	If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126.
General	Remove victim from contaminated area. If there is a risk of unconsciousness, position and transport in a stable lateral position. Remove soiled or soaked clothing immediately.
Scheduled Poisons	Poisons Information Centres in each State capital city can provide additional assistance for scheduled poisons. Phone 131126.
Inhalation	Harmful by inhalation. After inhalation remove from exposure and perform artificial respiration if necessary.
Skin contact	Remove contaminated clothing. Wash affected area immediately with soap and water. Seek medical attention if required.
Eye contact	Irritating to the eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion	Harmful if swallowed. If vomiting occurs keep head lower than hips to help prevent aspiration. Seek medical attention if required.

Advice to doctor	<p>The formulation is extremely bitter and unlikely to be swallowed in significant quantity.</p> <p>Imidacloprid is a chloronicotinyl compound (syn. neonicotinoid) which displays high affinity for the acetylcholine site of the nicotinic acetylcholine receptor in the insect central nervous system. In insects, imidacloprid interferes with the acetylcholine-mediated transmission of nerve impulses and is an antagonist, as it depolarises the neuron. Imidacloprid interacts selectively with insect nicotinic acetylcholine receptors, while its potential to interact with mammalian receptors is much less.</p> <p>The mode of action of moxidectin, a milbemycin derivative, is similar to the mode of action of ivermectin and abamectin. Moxidectin stimulates the release of GABA and increases its binding to post-synaptic receptors. This results in an opening of the post-synaptic chloride channels and allows influx of chloride ions and induction of an irreversible resting state. Under these condition, there is inhibition of transmission of inhibitory signals from interneurons to motoneurons. Moxidectin is closely related to the avermectins where there is experience from the medical use of avermectin in man.</p> <p>Apply basic aid and decontamination procedures. Treat symptomatically.</p>
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SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media	Sprayed water jet, foam, dry powder, CO ₂ , sand
Fire and Explosion Hazards	Combustible liquid - Class C1.
Hazardous Combustion Products	Thermal decomposition products include hydrogen chloride, hydrogen cyanide, carbon monoxide, and nitrogen oxides.
Fire Fighting	<p>Fight fire in the early stages if safe to do so. Wear respiratory protection.</p> <p>In well ventilated areas wear full face mask with a combination filter. (Offers no protection from carbon monoxide)</p> <p>In enclosed premises: respirator with independent air supply.</p> <p>Contain firefighting water.</p>

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Accidental Release	<p>Use any personal protective equipment listed in Chapter 8.</p> <p>Prevent spillage from spreading or entering soil, waterways and drains.</p> <p>Take up with absorbent material such as sawdust, peat or chemical binder. Fill material along with any contaminated soil etc., into sealable containers. Clean affected area with aqueous detergent and a small amount of water. Absorb this detergent/water with absorbent material. Place cleaning materials into the same container.</p> <p>Do not eat, drink or smoke during clean-up operation.</p> <p>Do not breathe vapour/spray.</p>
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SECTION 7 – HANDLING AND STORAGE

Safe Handling	<p>During normal use the packaging ensures safe handling. Follow instructions on the product label. Suitable container materials: HDPE (high density polyethylene).</p>
Storage	<p>Keep out of reach of children.</p> <p>Store away from food, drink or animal feeding stuffs.</p> <p>To maintain product quality, store below 30°C.</p> <p>Protect from temperatures below 0°C.</p> <p>Keep away from heat or moisture.</p> <p>This material is a Schedule 6 poison and must be stored, handled and used in accordance with the relevant regulations.</p>

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits	<p>No exposure allocated for imidacloprid or moxidectin.</p> <p>No exposure allocated for other ingredients.</p>
Ventilation	<p>No ventilation is required under normal conditions of use.</p>
Eye Protection	<p>Avoid contact with eyes. No eye protection is required under normal conditions of use. Under other conditions of use wear safety goggles</p>
Skin Protection	<p>Avoid contact with skin. No skin protection is required under normal conditions of use. Under other conditions of use wear rubber gloves. Wash hands before breaks and at end of work.</p>
Respirator	<p>Do not inhale vapour. No respirator is required under normal conditions of use.</p>
Protective Material Types	<p>Rubber, latex.</p>
General Advice	<p>Avoid contact with eyes or skin. Clean working clothes and protective equipment with soap and water. Change badly soiled or soaked clothing. Wash hands before breaks and at the end of work. If product is splashed on skin, immediately wash area with soap and water. When using do not eat, drink, or smoke.</p>

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Physical State	Liquid
Colour	Clear, yellow to brownish
Odour	Weak characteristic odour
Boiling Point	207°C at 1013 hPa
Solidifying Range	Not available
Density	Approx. 1.098 kg/L at 20°C
Vapour Pressure	2 hPa at 20°C 9 hPa at 50°C 11 hPa at 55°C
Viscosity	approx 29 s (DIN EN ISO 2431)
Solubility in Water	Miscible
pH	Not available
Flash Point	>100°C
Ignition Temperature	415°C
Explosive Limits	Not available
Other Information	The product is packaged in individual, single dose tubes of 0.4 to 4.0 ml capacity. The tubes are packed in blister pack trays of 3 or 6 tubes per tray. The product is therefore well protected from accidental release.

SECTION 10 – STABILITY & REACTIVITY

Chemical Stability	Product is stable. No hazardous reactions.
Conditions to Avoid	Avoid strong oxidising agents.
Incompatible Materials	None
Hazardous Decomposition	Thermal decomposition products include hydrogen chloride, hydrogen cyanide, carbon monoxide, and nitrogen oxides.
Hazardous Reactions	Will not polymerise.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity	Oral LD ₅₀ (rat) >1,000 - <1500 mg/kg (of formulation) Dermal LD ₅₀ (rat) >2000 mg/kg (of formulation)
Local Effects	Eye: irritating to the eye of rabbits Skin: capable of causing skin sensitisation.
Reproductive Effects	None of the ingredients of the formulation have been shown to produce reproductive or teratogenic effects.

Mutagenicity	None of the ingredients of the formulation have been shown to produce mutagenic effects.
Carcinogenic Effects	Imidacloprid and moxidectin have been shown in animal tests to have no carcinogenic potential. Other ingredients are not classified as carcinogens.

SECTION 12 – ECOLOGICAL INFORMATION

Octanol/Water Partition Co-efficient	K_{ow} logP = 0.57 at 21°C (imidacloprid)
Ecotoxicity	<p>Fish toxicity Imidacloprid LC₅₀ 237 mg/L (96h) Golden orfe (<i>Leuciscus idus</i>) LC₅₀ 211 mg/L (96h) Rainbow trout (<i>Oncorhynchus mykiss</i>) LC₅₀ 280 mg/L (96h) Carp (<i>Cyprinus carpio</i>)</p> <p>benzyl alcohol LC₅₀ 646 mg/L (48h) Golden orfe (<i>Leuciscus idus</i>) LC₅₀ 460 mg/L (96h) <i>Pimephales promelas</i></p> <p>Daphnia toxicity Imidacloprid EC₅₀ 0.055 mg/L (48h) <i>Hyaella azteca</i> EC₅₀ 85 mg/L (48h) Water flea (<i>Daphnia magna</i>)</p> <p>benzyl alcohol EC₅₀ 400 mg/L Water flea (<i>Daphnia magna</i>)</p> <p>Algal toxicity benzyl alcohol EC₅₀ 640 mg/L (96h) Green algae (<i>Scenedesmus subspicatus</i>)</p> <p>Bacterial toxicity benzyl alcohol EC₁₀ ca 658 mg/L <i>Pseudomonas putida</i></p> <p>No data for moxidectin</p>
Abiotic Degradation	Imidacloprid t _{1/2} >1 yr at pH 5 (25°C) t _{1/2} >1 yr @ pH 7 (25°C) t _{1/2} approx 1 yr @ pH 9 (25°C)

SECTION 13 – DISPOSAL INFORMATION

After Intended Use	Dispose of used applicators by wrapping in paper and placing in garbage
After spill or accident	Dispose of sealed containers at an approved local waste disposal site.

SECTION 14 – TRANSPORT INFORMATION

UN No	Not classified
UN Proper Shipping Name	Not classified
Class & Subsidiary Risk	Not classified
Packaging Group	Not classified
Hazchem Code	Not classified

SECTION 15 – REGULATORY INFORMATION

Poisons Schedule	Schedule 6
APVMA Registration	The products are registered by the APVMA.
Registration Numbers	55320, 55321, 55322, 55323
Labelling	All necessary directions, precautions and warnings for normal use of the product are included on the product label.

SECTION 16 – OTHER INFORMATION

Summary of Changes from Last Edition	Correction of combustibility statement.
Acronyms	<p>ADG Code Australian Code for the Transport of Dangerous Goods by Road and Rail</p> <p>APVMA Australian Pesticides and Veterinary Medicines Authority</p> <p>CAS Chemical Abstracts Service Registry Number</p> <p>HDPE High density polyethylene</p> <p>LDPE Low density polyethylene</p> <p>NOHSC National Occupational Health & Safety Commission</p> <p>SUSDP Standard for the Uniform Scheduling of Drugs and Poisons</p> <p>UN Number United Nations number</p>

Disclaimer	<p>This Material Safety Data Sheet has been developed according to the NOHSC National Code of Practice for the Preparation of MSDS [NOHSC:2011(2003)].</p> <p>The data, information and recommendations herein ("information") are represented in good faith and believed to be correct as of the date hereof.</p> <p>The purpose of this Material Safety Data Sheet is to describe product in terms of their safety requirements.</p> <p>Bayer Australia Limited make no representation of merchantability, fitness for a particular purpose or application, or of any other nature with respect to the information or the product to which the information refers ("the product").</p> <p>The information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use of the product.</p> <p>The physical data shown herein are typical values based on material tested. These values should not be construed as a guaranteed analysis of any specific lot or as guaranteed specification for the product or specific lots thereof.</p> <p>Due care should be taken to make sure that the use or disposal of this product and / or its packaging is in compliance with relevant Federal, State and Local Government regulations.</p>
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END OF MSDS