



## SAFETY DATA SHEET

A18180/07/AUS

## ADVOCATE FOR DOGS

## SECTION 1 – IDENTIFICATION

Bayer Australia Ltd  
875 Pacific Highway  
Pymble NSW 2073

**Emergency Telephone Number**

1800 033 111  
24 hour Emergency Service Australia Wide, Toll Free

**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 SDS 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

25<sup>th</sup> June 2003

Revision Date

15 December 2015 (SDS is current for 5 years from this date)

<b>SECTION 2 – HAZARD IDENTIFICATION</b>	
Hazard Classification	<p><b>HAZARDOUS SUBSTANCE</b></p> <p>NOT CLASSIFIED AS DANGEROUS GOODS when transported by road or rail within Australia under Special Provision AU01 of the Australian Dangerous Goods Code, 7th Edition.</p> <p>CLASSIFIED AS DANGEROUS GOODS when transported by sea or air.</p>
GHS-Classification	<p><b>Acute toxicity, Oral, Category 4 (H302)</b>  <b>Acute toxicity, Inhalation, Category 4 (H332)</b>  <b>Eye irritation, Category 2 (H319)</b>  <b>Hazardous to the aquatic environment, Category 1 (H400)</b>  <b>Hazardous to the aquatic environment, Category 1 (H410)</b></p>
Signal Word	<b>WARNING</b>
Hazard Statements	<p><b>H302 + H332 Harmful if swallowed or if inhaled</b>  <b>H319 Causes serious eye irritation.</b>  <b>H410 Very toxic to aquatic life with long lasting effects.</b></p>
Precautionary statements	<p><b>Prevention:</b>  P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  P273 Avoid release to the environment.  P280 Wear protective gloves/ eye protection/ face protection.</p> <p><b>Response:</b>  P312 Call Poisons Information 131 126 or doctor/ physician if you feel unwell.  P337 + P313 If eye irritation persists: Get medical advice/ attention.  P391 Collect spillage.</p>

**SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS****Hazardous  
Components****Moxidectin**Concentration [Weight percent]  $\geq 0.25$  -  $< 2.5$ 

CAS-No.: 113507-06-5

CAS name: Milbemycin B, 5-O-demethyl-28-deoxy-25-[(1E)-1,3-dimethyl-1-butenyl]-6,28-epoxy-23-(methoxyimino)-,6R,23E,25S)-

GHS Classification:

Acute Tox. 3 H301

Acute Tox. 4 H332

Repr. 2 H361

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

**Imidacloprid**Concentration [Weight percent]  $\geq 2.5$  -  $< 10$ 

CAS-No.: 138261-41-3

CAS name: 2-Imidazolidinimine, 1-((6-chloro-3-pyridinyl)methyl)-N-nitro

GHS Classification:

Acute Tox. 4 H302

Aquatic Acute 1 H400

Aquatic Chronic 1 H410

**Also contains:****Benzyl alcohol**Concentration [Weight percent]  $\geq 50$  -  $\leq 100$ 

CAS-No.: 100-51-6

CAS name: Benzenemethanol

GHS Classification:

Acute Tox. 4 H332

Acute Tox. 4 H302

**Propylene carbonate**Concentration [Weight percent]  $\geq 10$  -  $< 20$ 

CAS-No.: 108-32-7

CAS name: 1,3-Dioxolan-2-one, 4-methyl-

GHS Classification:

Eye Irrit. 2 H319

**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.
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. 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.</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.</p>

**SECTION 5 – FIRE FIGHTING MEASURES**

Extinguishing Media	Sprayed water jet, foam, dry powder, CO <sub>2</sub> , 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

Use any personal protective equipment listed in Chapter 8.

Prevent spillage from spreading or entering soil, waterways and drains.

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.

Do not eat, drink or smoke during clean-up operation.

Do not breathe vapour/spray.

**SECTION 7 – HANDLING AND STORAGE**

## Safe Handling

During normal use the packaging ensures safe handling. Follow instructions on the product label. Suitable container materials: HDPE (high density polyethylene).

## Storage

Keep out of reach of children.

Store away from food, drink or animal feeding stuffs.

To maintain product quality, store below 30°C.

Protect from temperatures below 0°C.

Keep away from heat or moisture.

**SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION**

## Exposure Limits

No exposure allocated for imidacloprid, moxidectin or other ingredients.

## Ventilation

No ventilation is required under normal conditions of use.

## Eye Protection

Avoid contact with eyes. No eye protection is required under normal conditions of use. Under other conditions of use wear safety goggles

## Skin Protection

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.

## Respirator

Do not inhale vapour. No respirator is required under normal conditions of use.

Protective Material  
Types

Rubber or latex gloves

## General Advice

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.

**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	No statements available.
Solubility in Water	Immiscible
pH	No statements available.
Flash Point	>100°C
Ignition Temperature	415°C
Explosive Limits	Benzyl Alcohol: upper: 13 %(V) lower: 1.3 %(V) Propylene carbonate: upper: 14.3 %(V) lower: 1.8 %(V)
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 1, 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	No statements available.
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	<p>Acute oral toxicity estimate (ATE) 1,105 mg/kg Dermal LD<sub>50</sub> (rat)</p> <p>Acute inhalation toxicity estimate (ATE) 14.25 mg/l vapour.</p> <p>Acute dermal toxicity:</p> <p>Benzyl Alcohol LD<sub>50</sub> rabbit: &gt; 2,000 mg/kg</p> <p>propylene carbonate LD<sub>50</sub> rabbit: &gt; 20,000 mg/kg</p> <p>The substance or mixture has no acute dermal toxicity</p> <p>Imidacloprid LD<sub>50</sub> rat: &gt; 5,000 mg/kg</p> <p>The substance or mixture has no acute dermal toxicity</p> <p>Moxidectin LD<sub>50</sub> rabbit: &gt; 2,000 mg/kg LD<sub>50</sub> rat: &gt; 2,000 mg/kg</p>
Local Effects	<p>Eye: irritating to the eye of rabbits</p> <p>Skin: Mildly irritating to the skin of rabbits. Did not cause sensitization on laboratory animals.</p>
Subacute, subchronic and prolonged toxicity:	<p>Benzyl Alcohol: NOEL 400 mg/kg, rat, Exposure time 90-day STOT - single exposure: No statements available.</p>
Reproductive Effects	<p>Did not show teratogenic effects in animal experiments.</p>
Mutagenicity	<p>In vitro tests did not show mutagenic effects.</p>
Carcinogenic Effects	<p>Animal testing did not show any carcinogenic effects.</p>

**SECTION 12 – ECOLOGICAL INFORMATION**

Ecotoxicology  
Assessment

**Imidacloprid:** Acute aquatic toxicity: Very toxic to aquatic life.  
Chronic aquatic toxicity: Very toxic to aquatic life with long lasting effects.

Toxicity

**Toxicity to fish:**

Benzyl alcohol

Acute Fish toxicity: LC50 10 mg/L Test species: *Lepomis macrochirus* (Bluegill) Duration of test: 96 h

Propylene carbonate

Static test: LC50 ca. 5,300 mg/l Test species: *Leuciscus idus* (Golden orfe) Duration of test: 96 h

Imidacloprid

Acute Fish toxicity: LC50 280 mg/L Test species: *Cyprinus carpio* (Carp) Duration of test: 96 h

Acute Fish toxicity: LC50 211 mg/L Test species: *Oncorhynchus mykiss* (rainbow trout) Duration of test: 96h

Acute Fish toxicity: LC50 237 mg/L Test species: *Leuciscus idus* (Golden orfe) Duration of test: 96 h

Moxidectin

Acute Fish toxicity: LC50 0,16 µg/L Test species: *Oncorhynchus mykiss* (rainbow trout) LC50 0,62 µg/L Test species: *Lepomis macrochirus* (Bluegill)

**Toxicity to daphnia and other aquatic invertebrates:**

Benzyl Alcohol EC50 55 mg/L Test species: *Daphnia magna* (Water flea) Duration of test: 24 h

Propylene carbonate

Static test EC50 > 500 mg/l Test species: *Daphnia magna* (Water flea) Duration of test: 48 h

Imidacloprid

EC50 0.055 mg/L Test species: *Hyalella azteca* Duration of test: 96 h

Moxidectin

EC50 30.2 ng/L Test species: *Daphnia magna* (Water flea)



**SECTION 12 – ECOLOGICAL INFORMATION (cont.)**

Persistence and degradability	<b>Toxicity to algae</b>
	Benzyl Alcohol IC50 > 100 mg/L Duration of test: 72 h
	Propylene carbonate Static test > 500 mg/L Test species: <i>Desmodesmus subspicatus</i> (green algae) Duration of test: 72 h
	Imidacloprid EC50 > 100 mg/L Test species: <i>Pseudokirchneriella subcapitata</i> (green algae) Duration of test: 72 h EC50 > 10 mg/l Test species: <i>Desmodesmus subspicatus</i> (green algae) Duration of test: 72 h
	Moxidectin EC50 > 86.9 µg/L
	<b>Toxicity to bacteria</b>
	Benzyl alcohol EC50 71.4 mg/L Test species: <i>Photobacterium phosphoreum</i> Duration of test: 0.5 h
	Propylene carbonate EC20 > 800 mg/L Test species: activated sludge micro-organism Duration of test: 0.5 h
	Imidacloprid EC50 > 10,000 mg/L Test species: activated sludge micro-organism
	Partition coefficient (n-octanol/water):
Benzyl Alcohol log Pow: 1.05	
Propylene carbonate log Pow: -0.48 at 25 °C	
Imidacloprid log Pow: 0.57 at 21 °C OECD Test Guideline 107	

**SECTION 13 – DISPOSAL CONSIDERATIONS**

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	3082
UN Proper Shipping Name	Environmentally Hazardous Substance, Liquid, N.O.S., (Imidacloprid, Moxidectin)
Class & Subsidiary Risk	9
Packaging Group	III
Hazchem Code	3Z
Special Note	NOT CLASSIFIED AS DANGEROUS GOODS when transported by road or rail within Australia under Special Provision AU01 of the Australian Dangerous Goods Code, 7th Edition.  CLASSIFIED AS DANGEROUS GOODS when transported by sea or air.

**SECTION 15 – REGULATORY INFORMATION**

Poisons Schedule	Schedule 5: 55320, 55321 Schedule 6: 55322, 55323
APVMA Registration	The products are registered by the APVMA.
Registration No.	55320, 55321, 55322, 55323
Labelling	All necessary directions, precautions and warnings for normal use of the product are included on the product label.

<b>SECTION 16 – OTHER INFORMATION</b>	
Summary of Changes Acronyms	<p>Update to GHS Format.</p> <p><b>ADG</b> Code Australian Code for the Transport of Dangerous Goods by Road and Rail</p> <p><b>APVMA</b> Australian Pesticides and Veterinary Medicines Authority</p> <p><b>CAS</b> Chemical Abstracts Service Registry Number</p> <p><b>GHS</b> Globally Harmonized System of Classification and Labelling of Chemicals</p> <p><b>HDPE</b> High density polyethylene</p> <p><b>LDPE</b> Low density polyethylene</p> <p><b>OECD</b> Organisation for Economic Co-operation and Development</p> <p><b>STOT</b> Specific Target Organ Toxicity</p> <p><b>SUSDP</b> Standard for the Uniform Scheduling of Drugs and Poisons</p> <p><b>TWA</b> Time Weighted Average – average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.</p> <p><b>UN Number</b> United Nations number</p>
Disclaimer	<p>This Safety Data Sheet has been developed according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Third revised edition. United Nations, 2009. The data, information and recommendations herein ("information") are represented in good faith and believed to be correct as of the date hereof. The purpose of this Safety Data Sheet is to describe product in terms of their safety requirements. Bayer Australia Limited makes 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"). 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. 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. 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>

**END OF SDS**