Bimectin®
(ivermectin)

Injection for Cattle and Swine
1% Sterile Solution

A Parasiticide for the Treatment and Control of Internal and External Parasites of Cattle and Swine.
Consult your veterinarian for assistance in the diagnosis, treatment, and control of parasitism.

INTRODUCTION
Bimectin (ivermectin) is an injectable parasiticide for cattle and swine. One low-volume dose effectively treats and controls the following internal and external parasites that may impair the health of cattle and swine: gastrointestinal roundworms (including inhibited *Ostertagia ostertagi* in cattle), lungworms, grubs, sucking lice, and mange mites of cattle; and gastrointestinal roundworms, lungworms, lice and mange mites of swine.

PRODUCT DESCRIPTION
Ivermectin is derived from the avermectins, a family of potent, broadspectrum antiparasitic agents isolated from fermentation of *Streptomyces avermitilis.*

Bimectin Injection is a clear, ready-to-use, sterile solution containing 1% ivermectin, 40% glycerol formal, and propylene glycol, q.s. ad 100%. Bimectin Injection is formulated to deliver the recommended dose level of 200 mcg ivermectin/kilogram of body weight in cattle when given subcutaneously at the rate of 1mL/110 lb (50 kg). In Swine, Bimectin Injection is formulated to deliver the recommended dose level of 300 mcg ivermectin/kilogram body weight when given subcutaneously in the neck at the rate of 1 mL per 75 lb (33 kg).

MODE OF ACTION
Ivermectin is a member of the macrocyclic lactone class of endectocides which have a unique mode of action. Compounds of the class bind selectively and with high affinity to glutamate-gated chloride ion channels which occur in invertebrate nerve and muscle cells. This leads to an increase in the permeability of the cell membrane to chloride ions with hyperpolarization of the nerve or muscle cell, resulting in paralysis and death of the parasite. Compounds of this class may also interact with other ligand-gated chloride channels, such as those gated by the neurotransmitter gamma-aminobutyric acid (GABA).

The margin of safety for compounds of this class is attributable to the fact that mammals do not have glutamate-gated chloride channels, the macrocyclic lactones have a low affinity for other mammalian ligand-gated chloride channels and they do not readily cross the blood-brain barrier.

INDICATIONS
Cattle: Bimectin Injection is indicated for the effective treatment and control of the following harmful species of gastrointestinal roundworms, lungworms, grubs, sucking lice, and mange mites in cattle:
Gastrointestinal Roundworms (adults and fourth-stage larvae): *Ostertagia* ostertagi (including inhibited *O. ostertagi), O. lyrata, Haemonchus placei, Trichostrongylus axei, T. colubriformis, Cooperia oncophora, C. punctata, C. pectinata, Oesophagostomum radiatum, Bunostomum phlebotomum, Nematodirus helvetianus* (adults only), *N. spathiger* (adults only)
Lungworms (adults and fourth-stage larvae): *Dictyocaulus viviparus*
Cattle Grubs (parasitic stages): *Hypoderma bovis, H. lineatum*
Sucking Lice: *Linognathus vituli, Haematopinus eurysternus, Solenopotes capillatus*
Mites (scabies): *Psoroptes ovis* (syn. P. *communis* var. *bovis*), *Sarcoptes scabiei* var. *bovis*

Persistent Activity
Ivermectin injection has been proved to effectively control infections and to protect cattle from reinfection with *Dictyocaulus viviparus* and *Oesophagostomum radiatum* for 28 days after treatment; *Ostertagia ostertagi, Trichostrongylus axei* and *Cooperia punctata* for 21 days after treatment; *Haemonchus placei* and *Cooperia oncophora* for 14 days after treatment.

Swine: Bimectin Injection is indicated for the effective treatment and control of the following harmful species of gastrointestinal roundworms, lungworms, lice, and mange mites in swine:
Gastrointestinal Roundworms: Large roundworm, *Ascaris suum* (adults and fourth-stage larvae), Red stomach worm, *Hyostrongylus rubidus* (adults and fourth-stage larvae), Nodular worm, *Oesophagostomum* spp. (adults and fourth-stage larvae) Threadworm, *Strongyloides ransomi* (adults)
Somatic Roundworm Larvae: Threadworm, *Strongyloides ransomi* (somatic larvae). Sows must be treated at least seven days before farrowing to prevent infection in piglets.

Rev. 9/21 M-23-0433

Bimectin®
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Lungworms: *Metastrongylus* spp. (adults)
Lice: *Haematopinus suis*
Mange Mites: *Sarcoptes scabiei* var. *suis*

DOSAGE

Cattle: Bimectin Injection should be given only by subcutaneous injection under the loose skin in front of or behind the shoulder at the recommended dose level of 200 mcg of ivermectin per kilogram of body weight. Each mL of Bimectin contains 10 mg of ivermectin, sufficient to treat 110 lb (50 kg) of body weight (maximum 10 mL per injection site).

Body Weight (lb)	Dose Volume (mL)
220	2
330	3
440	4
550	5
660	6
770	7
880	8
990	9
1100	10

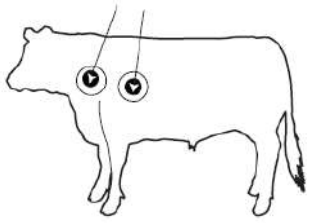
Swine: Bimectin Injection should be given only by subcutaneous injection in the neck of swine at the recommended dose level of 300 mcg of ivermectin per kilogram (2.2 lb) of body weight. Each mL of Bimectin contains 10 mg of ivermectin, sufficient to treat 75 lb of body weight.

	Body Weight (lb)	Dose Volume (mL)
Growing Pigs	19	1/4
	38	1/2
	75	1
	150	2
Breeding Animals (Sows, Gilts, and Boars)	225	3
	300	4
	375	5
	450	6

Do not underdose. Ensure each animal receives a complete dose based on a current body weight. Underdosing may result in ineffective treatment and encourage the development of parasite resistance.

ADMINISTRATION

Cattle: Bimectin Injection is to be given subcutaneously only, to reduce risk of potentially fatal clostridial infection of the injection site. Animals should be appropriately restrained to achieve the proper route of administration. Use of a 16-gauge, ½ to ¾" needle is suggested. Inject under the loose skin in front of or behind the shoulder (see illustration).



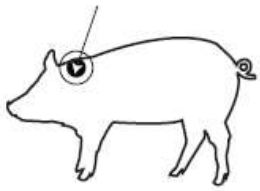
When using the 50 mL, 250 mL, 500 mL, or 1000 mL package size, use only automatic syringe equipment. Use sterile equipment and sanitize the injection site by applying a suitable disinfectant. Clean, properly disinfected needles should be used to reduce the potential for injection site infections. No special handling or protective clothing is necessary.

Rev. 9/21 M-23-0433

Bimectin®
(ivermectin)

Injection for Cattle and Swine
1% Sterile Solution

Swine: Bimectin (ivermectin) Injection is to be given subcutaneously in the neck. Animals should be appropriately restrained to achieve the proper route of administration. Use of a 16- or 18-gauge needle is suggested for sows and boars, while an 18- or 20-gauge needle may be appropriate for young animals. Inject under the skin, immediately behind the ear (see illustration).



When using the 50 mL, 250 mL, 500 mL or 1000 mL package size, use only automatic syringe equipment. As with any injection, sterile equipment should be used. The injection site should be cleaned and disinfected with alcohol before injection. The rubber stopper should also be disinfected with alcohol to prevent contamination of the contents. Mild and transient pain reactions may be seen in some swine following subcutaneous administration.

RECOMMENDED TREATMENT PROGRAM

Swine: At the time of initiating any parasite control program, it is important to treat all breeding animals in the herd. After the initial treatment, use Bimectin (ivermectin) Injection regularly as follows:

BREEDING ANIMALS

Sows: Treat prior to farrowing, preferably 7-14 days before, to minimize infection of piglets.

Gilts: Treat 7-14 days prior to breeding.

Treat 7-14 days prior to farrowing.

Boars: Frequency and need for treatments are dependent upon exposure. Treat at least two times a year.

FEEDER PIGS

(Weaners/Growers/Finishers)

All weaner/feeder pigs should be treated before placement in clean quarters. Pigs exposed to contaminated soil or pasture may need retreatment if reinfection occurs.

NOTE:

1) Bimectin Injection has a persistent drug level sufficient to control mite infestations throughout the egg to adult life cycle. However, since the ivermectin effect is not immediate, care must be taken to prevent reinfestation from exposure to untreated animals or contaminated facilities. Generally, pigs should not be moved to clean quarters or exposed to uninfested pigs for approximately one week after treatment. Sows should be treated at least one week before farrowing to minimize transfer of mites to newborn baby pigs.

2) Louse eggs are unaffected by Bimectin Injection and may require up to three weeks to hatch. Louse infestations developing from hatching eggs may require retreatment.

3) Consult a veterinarian for aid in the diagnosis and control of internal and external parasites of swine.

SPECIAL MINOR USE

Reindeer: For the treatment and control of warbles (*Oedemagena tarandi*) in reindeer, inject 200 micrograms ivermectin per kilogram of body weight, subcutaneously. Follow use directions for cattle as described under ADMINISTRATION.

American Bison: For the treatment and control of grubs (*Hypoderma bovis*) in American bison, inject 200 micrograms ivermectin per kilogram of body weight, subcutaneously. Follow use directions for cattle as described under ADMINISTRATION.

RESIDUE WARNING: Do not treat reindeer or American bison within 8 weeks (56 days) of slaughter.

Rev. 9/21 M-23-0433

Bimectin®
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Injection for Cattle and Swine
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WARNINGS
NOT FOR USE IN HUMANS. Keep this and all drugs out of the reach of children.

The Safety Data Sheet (SDS) contains more detailed occupational safety information. To report suspected adverse drug events, for technical assistance or to obtain a copy of the SDS, contact Bimeda, Inc. at 1-888-524-6332. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at www.fda.gov/reportanimalae.

RESIDUE WARNING: Do not treat cattle within 35 days of slaughter. Because a withdrawal time in milk has not been established, do not use in female dairy cattle of breeding age. A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal. Do not treat swine within 18 days of slaughter.

PRECAUTIONS
Transitory discomfort has been observed in some cattle following subcutaneous administration. A low incidence of soft tissue swelling at the injection site has been observed. These reactions have disappeared without treatment. For cattle, divide doses greater than 10 mL between two injection sites to reduce occasional discomfort or site reaction. Use sterile equipment and sanitize the injection site by applying a suitable disinfectant. Clean, properly disinfected needles should be used to reduce the potential for injection site infections. Observe cattle for injection site reactions. Reactions may be due to clostridial infection and should be aggressively treated with appropriate antibiotics. If injection site infections are suspected, consult your veterinarian.
This product is not for intravenous or intramuscular use.
Protect product from light.
Bimectin Injection for Cattle and Swine has been developed specifically for use in cattle, swine, reindeer, and American bison **only**. This product should not be used in other animal species as severe adverse reactions, including fatalities in dogs, may result.
Restricted Drug (California) – Use Only as Directed.

WHEN TO TREAT CATTLE WITH GRUBS
Bimectin effectively controls all stages of cattle grubs. However, proper timing of treatment is important. For most effective results, cattle should be treated as soon as possible after the end of the heel fly (warble fly) season. Destruction of *Hypoderma* larvae (cattle grubs) at the period when these grubs are in vital areas may cause undesirable host-parasite reactions including the possibility of fatalities. Killing *Hypoderma lineatum* when it is in the tissue surrounding the esophagus (gullet) may cause salivation and bloat; killing *H. bovis* when it is in the vertebral canal may cause staggering or paralysis. These reactions are not specific to treatment with Bimectin but can occur with any successful treatment of grubs. Cattle should be treated either before or after these stages of grub development. Consult your veterinarian concerning the proper time for treatment. Cattle treated with Bimectin after the end of the heel fly season may be retreated with Bimectin during the winter for internal parasites, mange mites, or sucking lice without danger of grub-related reactions. A planned parasite control program is recommended.

OTHER WARNINGS:
Parasite resistance may develop to any dewormer and has been reported for most classes of dewormers.

Treatment with a dewormer used in conjunction with parasite management practices appropriate to the geographic area and the animal(s) to be treated may slow the development of parasite resistance.

Fecal examinations or other diagnostic tests and parasite management history should be used to determine if the product is appropriate for the herd/flock, prior to the use of any dewormer. Following the use of any dewormer, effectiveness of treatment should be monitored (for example, with the use of a fecal egg count reduction test or another appropriate method).

A decrease in a drug's effectiveness over time as calculated by fecal egg count reduction tests may indicate the development of resistance to the dewormer administered. Your parasite management plan should be adjusted accordingly based on regular monitoring.

ENVIRONMENTAL SAFETY
Studies indicate that when ivermectin comes in contact with soil, it readily and tightly binds to the soil and becomes inactive over time. Free ivermectin may adversely affect fish and certain aquatic organisms. Do not permit water runoff from feedlots or production sites to

Rev. 9/21 M-23-0433

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enter lakes, streams or ponds. Do not contaminate water by direct application or by the improper disposal of drug containers. Dispose of containers in an approved landfill or by incineration.

As with other avermectins, ivermectin is excreted in the dung of treated animals and can inhibit the reproduction and growth of pest and beneficial insects that use dung as a source of food and for reproduction. The magnitude and duration of such effects are species and life-cycle specific. When used according to label directions, the product is not expected to have an adverse impact on populations of dung-dependent insects.

HOW SUPPLIED
Bimectin Injection for Cattle and Swine is available in four ready-to-use sizes:

The 50 mL plastic bottle suitable for use with automatic syringe equipment. Each bottle contains sufficient solution to treat 10 head of 550 lb (250 kg) cattle or 100 head of 38 lb (17.3 kg) swine.

The 250 mL plastic bottle suitable for use with automatic syringe equipment. Each bottle contains sufficient solution to treat 50 head of 550 lb (250 kg) cattle or 500 head of 38 lb (17.3 kg) swine.

The 500 mL plastic bottle suitable for use with automatic syringe equipment. Each bottle contains sufficient solutions to treat 100 head of 550 lb (250 kg) cattle or 1000 head of 38 lb (17.3 kg) swine.

The 1000 mL plastic bottle suitable for use with automatic syringe equipment. Each bottle contains sufficient solution to treat 200 head of 550 lb (250 kg) cattle or 2000 head of 38 lb (17.3 kg) swine.

STORAGE
Store at 20° C to 25° C (68° F to 77° F). Protect from light.

Approved by FDA under ANADA # 200-447

List Number	Pack Size	Case Size
1BIM025	50 mL	12
1BIM017	250 mL	12
1BIM018	500 mL	12
1BIM020	1000 mL	12

MANUFACTURED FOR:
Bimeda, Inc.
Le Sueur, MN 56058
www.bimeda.com

N.A. CORP. ADDRESS:
Bimeda, Inc.
One Tower Lane
Oakbrook Terrace, IL 61081

For further information and queries, contact Bimeda at (888) 524-6332 or US-info@Bimeda.com

Rev. 9/21 M-23-0433

Bimectin Injection for Cattle and Swine (Ivermectin 1% Injection)

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 10/28/2015 Date of issue: 10/28/2015 Supersedes Date: 10/01/2011 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Bimectin Injection for Cattle and Swine (Ivermectin 1% Injection)

1.2. Intended Use of the Product

Use of the substance/mixture: Veterinary Parasiticide

1.3. Name, Address, and Telephone of the Responsible Party

Company

Bimeda Inc.
One Tower Lane
Oakbrook Terrace Tower
Oakbrook Terrace, IL 60181
www.bimedaus.com
T 630.928.0361
F 630.928.0362

1.4. Emergency Telephone Number

Emergency Number : 519-654-8055
800-424-9300 CHEMTREC (in US); +1 703-527-3887 CHEMTREC (International and Maritime)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US classification

Flam. Liq. 4	H227
Acute Tox. 4 (Oral)	H302
Eye Irrit. 2A	H319
Repr. 2	H361
STOT RE 2	H373
Aquatic Acute 3	H402

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS07 GHS08

Signal Word (GHS-US) : Warning

Hazard Statements (GHS-US) : H227 - Combustible liquid.
H302 - Harmful if swallowed.
H319 - Causes serious eye irritation.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs (central nervous system) through prolonged or repeated exposure.
H402 - Harmful to aquatic life.

Precautionary Statements (GHS-US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking.
P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms, and exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, protective gloves.
P301+P312 - If swallowed: Call a POISON CENTER, a doctor if you feel unwell.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P330 - Rinse mouth.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P370+P378 - In case of fire: Use carbon dioxide (CO2), dry extinguishing powder, alcohol resistant foam to extinguish.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards
Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Not applicable

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
1,2-Propylene glycol	(CAS No) 57-55-6	59	Not classified
1,3-Dioxolan-4-ylmethanol	(CAS No) 5464-28-8	40	Eye Irrit. 2A, H319
Ivermectin	(CAS No) 70288-86-7	1	Acute Tox. 2 (Oral), H300 Acute Tox. 3 (Dermal), H311 Repr. 2, H361 STOT RE 2, H373 Aquatic Acute 1, H400

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures
First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.
First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.
First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.
First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/Injuries: Causes serious eye irritation. Harmful if swallowed. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.
Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.
Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.
Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts.
Chronic Symptoms: Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed
If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media
Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO_2). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Combustible liquid.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not breathe vapor, mist or spray. Avoid all contact with skin, eyes, or clothing.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Eliminate ignition sources.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take precautionary measures against static discharge. Use only non-sparking tools. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do NOT breathe (vapor, mist, spray).

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Products: Strong acids, strong bases, strong oxidizers.

Storage Temperature: < 30 °C (< 86 °F)

7.3. Specific End Use(s)

Veterinary Parasiticide

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

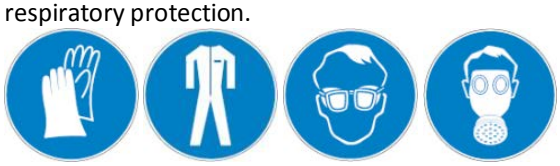
For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

1,2-Propylene glycol (57-55-6)		
USA AIHA	WEEL TWA (mg/m³)	10 mg/m³

8.2. Exposure Controls

Appropriate Engineering Controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

Personal Protective Equipment : Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing : Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection : Wear protective gloves.

Eye Protection : Chemical safety goggles.

Skin and Body Protection : Wear suitable protective clothing.

Respiratory Protection : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information : When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State : Liquid

Appearance : Colorless to yellow

Odor : Practically odorless

Odor Threshold : No data available

pH : No data available

Evaporation Rate : No data available

Melting Point : No data available

Freezing Point : No data available

Boiling Point : 185 °C (365 °F)

Flash Point : 81 °C (177.8 °F)

Auto-ignition Temperature : 371 °C (699.8 °F)

Decomposition Temperature : No data available

Flammability (solid, gas) : No data available

Vapor Pressure : 0.1 hPa at 20 °C (68 °F):

Relative Vapor Density at 20 °C : No data available

Relative Density : No data available

Solubility : No data available

Partition Coefficient: N-Octanol/Water : No data available

Viscosity : No data available

Lower Flammable Limit : 2.6 %

Upper Flammable Limit : 12.6 %

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

10.2. Chemical Stability: Combustible liquid. May form flammable or explosive vapor-air mixture.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products: Carbon oxides (CO, CO_2).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Oral: Harmful if swallowed.

Bimectin Injection for Cattle and Swine (Ivermectin 1% Injection)	
ATE (Oral)	1,000.00 mg/kg body weight

1,2-Propylene glycol (57-55-6)	
LD50 Oral Rat	20 g/kg
LD50 Dermal Rabbit	20800 mg/kg

Ivermectin (70288-86-7)	
LD50 Oral Rat	10 mg/kg

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs (central nervous system) through prolonged or repeated exposure.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts.

Chronic Symptoms: Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Harmful to aquatic life.

1,2-Propylene glycol (57-55-6)	
LC50 Fish 1	51600 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	10000 mg/l (Exposure time: 24 h - Species: Daphnia magna)
LC 50 Fish 2	41 - 47 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 2	1000 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

12.2. Persistence and Degradability

Bimectin Injection for Cattle and Swine (Ivermectin 1% Injection)	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

Bimectin Injection for Cattle and Swine (Ivermectin 1% Injection)	
Bioaccumulative Potential	Not established.

1,2-Propylene glycol (57-55-6)	
BCF fish 1	< 1
Log Pow	-0.92

12.4. Mobility in Soil No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology – Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

Bimectin Injection for Cattle and Swine (Ivermectin 1% Injection)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

1,2-Propylene glycol (57-55-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	Y2 - Y2 - indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

15.2 US State Regulations

1,2-Propylene glycol (57-55-6)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 10/28/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 4	Flammable liquids Category 4
Repr. 2	Reproductive toxicity Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H227	Combustible liquid
H300	Fatal if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

H400	Very toxic to aquatic life
H402	Harmful to aquatic life

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)