



SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND SUPPLIER

Product name:	MARATHON Injection
ACVM approval code:	A009926
Recommended use:	Injectable ectoparasiticide / endoparasiticide for treatment and control of internal parasites, nasal bot and itchmite in sheep.
Company name:	Alleva Animal Health Limited
Address:	15 Calman Place, Birkenhead, Auckland
Telephone:	0064-9-4181405
Emergency telephone number:	National Poisons Centre: 0800 764 766 (0800 POISON) Fire Service, Ambulance: Dial 111
Date of Preparation	10 April 2017
Restrictions of Use	Refer to Section 15

SECTION 2: HAZARDS IDENTIFICATION

This substance is hazardous according to the *HSNO (Minimum Degrees of Hazard) Regulations 2001*

EPA Approval Code: HSR007722

Pictograms



Toxic



Chronic



Ecotoxic

Signal Word: WARNING

HSNO Class.	Hazard Code	Hazard Statement	GHS Category
6.1D (oral)	H302	Harmful if swallowed.	Category 4
6.5B	H317	May cause an allergic skin reaction.	Category 1
6.8B	H361	Suspected of damaging fertility or the unborn child.	Category 2
6.8C	H362	May cause harm to breast-fed children.	-

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6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	Category 2
9.1A	H400	Very toxic to aquatic life.	Category 1
9.2B	H422	Toxic to the soil environment.	-
9.3C	H433	Harmful to terrestrial vertebrates.	-
9.4B	H442	Toxic to terrestrial invertebrates.	-

Prevention Code Prevention Statement

P102	Keep out of reach of children.
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe fumes, mist, vapours or spray.
P263	Avoid contact during pregnancy/while nursing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective clothing.
P281	Use personal protective equipment as required.

Response Code Response Statement

P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Storage Code Storage Statement

P405	Store locked up.
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Disposal Code Disposal Statement

P501	Dispose of according to Local Regulations or Authorities
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SECTION 3: COMPOSITION

Product Components:		
Name	CAS #	Concentration



Moxidectin	113507-06-5	2%
Benzyl alcohol	100-51-6	7%
Other non-hazardous ingredients	-	To 100%

SECTION 4: FIRST AID MEASURES

Necessary first aid measures:	<p>Self-Injection: Immediate medical advice should be sought on the management of all instances of accidental self-injection, particularly those near a joint or associated with bruising. Allow the wound to bleed freely and avoid squeezing the injection site to avoid spread of the product. Clean the wound thoroughly with soap and water, then keep it clean and dry.</p> <p>Skin Contact: Remove any contaminated clothing and wash the affected area immediately with soap and water. If symptoms develop seek medical advice immediately.</p> <p>Eye Contact: In case of contact, immediately flush eye with plenty of water for at least 15 minutes. Removal of contact lenses should be done with caution within 5 minutes of exposure. If symptoms develop seek medical advice immediately.</p> <p>Ingestion: DO NOT induce vomiting. If the patient is conscious wash mouth out with water. Do not give anything by mouth to an unconscious person. Seek medical advice immediately.</p> <p>Inhalation: In case of accidental overexposure, get to fresh air. If irritation occurs or persists, get medical attention.</p>
Hygiene Practices:	Avoid self-injection, ingestion, contact with skin and eyes, and inhalation of dusts, mists or vapours. Do not eat, drink or smoke while using this product. Wash hands and exposed skin before eating, drinking or smoking and after work. Wash any protective clothing after use.
Notes for Medical Personnel:	Accidental self-injection may lead to an inflammatory response and deep injections, particularly those near a joint or associated with bruising, should be treated medically or surgically.

SECTION 5: FIRE FIGHTING MEASURES

Type of hazard:	This product is non-flammable, non-combustible and non-explosive.
Fire hazard properties:	There is a slight risk of an explosion



	from this product if commercial quantities are involved in a fire. Fire decomposition products from this product may be toxic if inhaled. Do not allow fire water to enter waterways
Extinguishing media and methods:	Use dry chemical, foam, carbon dioxide or water to extinguish fires involving this product.
Hazchem code:	2X
Recommended protective clothing:	During large-scale fire-fighting operations wear approved positive pressure, self-contained breathing apparatus and full protective turn-out gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Personnel involved in clean-up should wear appropriate personal protective equipment to minimise exposure. This may include eye protection, chemically resistant gloves, boots and overalls.
Environmental Precautions:	Prevent material from entering surface water drains or waterways. If a significant quantity of material enters drains, advise emergency services.
Procedure for Spills:	<ol style="list-style-type: none">1. Non-essential personnel should be evacuated from the affected area.2. Stop leak and contain the source of spill if it is safe to do so. Reposition any leaking containers to minimise further leakage.3. Absorb the spill with an absorbent material (e.g. sand).4. Collect the spilled material into labelled containers for disposal, minimising dust generation.5. Decontaminate the spill area thoroughly with detergent and water, preventing runoff from entering drains.
Procedure for Disposal:	Contaminated material must be disposed of at an approved landfill or other approved facility in accordance with local, regional and national



	requirements. Avoid contamination of any water supply with product or empty container.
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SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	<ul style="list-style-type: none"> • Read label before use. • Obtain special instructions before use. • Keep exposure to this product to a minimum and minimise the quantities kept in work areas. • Avoid self-injection, ingestion, contact with skin and eyes. • Do not handle until all safety precautions have been read and understood. • Do not breathe fumes, mist, vapours or spray. • Avoid contact during pregnancy/while nursing. • Wash hands thoroughly after handling. • Do not eat, drink or smoke when using this product. • Contaminated work clothing should not be allowed out of the workplace. • Avoid release to the environment. • Wear protective clothing. • Use personal protective equipment as required.
Approved handlers:	Not required
Conditions for safe storage:	<ul style="list-style-type: none"> • Keep out of reach of children. • Store below 30°C (Room Temperature). • Protect contents from light • Store in a well ventilated area in the original container, tightly closed, away from foodstuffs • Keep away from incompatible materials listed in Section 10.
Store Site Requirements:	A requirement for an emergency management plan, secondary containment and signage is applicable



Packaging:	<p>when quantities of 100 L or more are stored.</p> <p>Packaging Schedule 3 (UN Packing Group III) for quantities > 5 L (Hazardous Substances Packaging Regulations 2001). Store in the original container, away from foodstuffs.</p>
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SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm mg/m ³	STEL ppm mg/m ³
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No substance has exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). *The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute average exposure standard.* Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply.

Engineering controls:	Engineering controls should be used as the primary means to control exposures. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
Personal protection:	<p>Respiratory protection: Respiratory protection is not normally required; however, if the product is being handled in dusty or confined conditions, use of a mask or respirator may be preferred. Consult AS/NZS 1715 for guidance.</p> <p>Hand protection: Impervious protective gloves should be worn when handling this product to prevent irritation.</p> <p>Eye protection: Safety glasses are recommended if there is a potential for direct eye contact.</p>
General Hygiene:	Change work clothes regularly. Avoid self-injection, ingestion, contact with skin and eyes, and inhalation of dusts,



	mists or vapours. Do not eat, drink or smoke while handling this product. Wash hands and exposed skin before eating, drinking or smoking and after work. Wash any protective clothing after use.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light yellow coloured liquid
Odour	Alcohol-like odour
Odour Threshold	Not applicable
pH	Not applicable
Boiling Point	109°C at 100 kPa
Freezing/Melting Point	Approximately -44°C
Flash Point	127°C (cc)
Flammability	Not applicable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	0.92 kPa at 20°C
Vapour Density	Not applicable
Specific Gravity /Density	0.933
Solubilities	Insoluble
Partition Coefficient:	Not applicable
Auto-ignition Temperature	307°C
Volatiles	Completely volatile at 100°C
Kinematic Viscosity	Not applicable
Particle Characteristics	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Stability of the substance:	This product is unlikely to react or decompose under normal storage conditions.
Conditions to avoid:	Store as recommended. No specific conditions to avoid.
Material to avoid:	Strong oxidising agents.
Hazardous decomposition products:	This product is unlikely to spontaneously decompose.



SECTION 11: TOXICOLOGICAL INFORMATION

Acute effects:	
Swallowed	Harmful if swallowed.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Not applicable.
Skin	May cause an allergic skin reaction.
Chronic and long-term effects:	
Reproductive	Suspected of damaging fertility or the unborn child.
Systemic	
Carcinogenicity	Not applicable.
Germ Cell Mutagenicity	May cause harm to breast-fed children.
STOT/RE	May cause target organ damage from repeated oral exposure at high doses.

Acute Effects:

Moxidectin:

Moxidectin is a macrocyclic lactone, structurally similar to ivermectin, abamectin and milbemycin. Moxidectin is an acute oral toxin with nervous system effects [LD50 (oral, mice) 42 mg/kg, LD50 (dermal) is >2000 mg/kg]. Only mild signs of skin irritation were seen (rabbit, exposure for up to 72 hrs). Moderate eye irritation was noted (rabbit), but signs resolved 48-72 hrs after treatment.

Benzyl alcohol;

Benzyl alcohol is an acute toxin [LD50 (oral, rabbit) 1040 mg/kg, LD50 (dermal, rabbit) 2000 mg/kg], an eye irritant and a contact sensitiser.

Chronic Exposure:

Moxidectin: Laboratory rodent reproductive studies reported foetal malformations, decreased number of live births, reduced pup weights and neonatal & lactational deaths [lowest NOEL 0.4 mg/kg/day]. A chronic feeding study (90 days; 0 to 1.6 mg/kg/d) induced toxicity in dogs. At the highest dose lacrimation, tremors, salivation, slight ataxia and a languid appearance were reported. Dose dependant reductions in absolute body weight and food consumption were noted [NOEL 0.3 mg/kg]. In a second study (52 weeks; 0-1.15 mg/kg/d), no signs of toxicity occurred and body weights remained comparable to controls throughout the study [NOEL 1.15 mg/kg]. Moxidectin is not mutagenic or carcinogenic.

SECTION 12: ENVIRONMENTAL INFORMATION



Ecotoxicity effects:

HSNO Classes: 9.1A = Very toxic to aquatic life.
9.2B = Toxic to soil environment.
9.3C = Harmful to terrestrial vertebrates.
9.4B = Toxic to terrestrial invertebrates.

Moxidectin: Moxidectin is very toxic to aquatic life [Bluegill sunfish LC50 (96 hrs) 0.62 ppb; Rainbow trout LC50 (96 hrs) 0.16 ppb; Daphnia magna EC50 (48 hrs) 30 ppt; bioaccumulative] and soil life [Dung beetle EC50's are 2.5677 mg/kg; 0.4693 mg/kg & 0.134 mg/kg. Soil DT50 > 30 days]. Moxidectin is also very toxic to terrestrial vertebrates [LD50 (mice) = 42 mg/kg] and bees [LD50 (oral) = 0.46 ug/bee; LD50 (contact) 0.025 ug/bee].

Benzyl alcohol: Benzyl alcohol is an aquatic toxin [Lepomis macrochirus LC50 (96 hrs) 10 mg/L; Daphnia magna EC50 (24 hrs) 55 mg/L], but does not bioaccumulate or persist. Also a soil toxin [Photobacterium phosphoreum EC50 (5 min) 50 mg/L] and a terrestrial vertebrate toxin based on the lowest acute oral LD50 [LD50 (oral, rabbit) 1040 mg/kg].

Do not allow to enter waterways.

SECTION 13: DISPOSAL CONSIDERATIONS

Product disposal:

Preferably dispose of product by use in accordance with label directions.

Otherwise dispose of product at an approved landfill, or other approved facility in accordance with local, regional and national regulations. Avoid contamination of any water supply with product. Ensure containers holding waste product or contaminated spill media are labelled "Hazardous Waste - Ecotoxic"

Dispose of empty containers by wrapping in paper and putting in garbage for disposal at an approved landfill, or other approved facility in accordance with local, regional and national regulations. Avoid contamination of any water supply with empty container. Used needles and syringes should immediately be placed in a designated and appropriately labelled "sharps" container.

SECTION 14: TRANSPORT INFORMATION



This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012

Road and Rail Transport

UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Moxidectin 2%)

Air Transport

UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Moxidectin 2%)

Marine Transport

UN No: 3082
Class-primary 9
Packing Group III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Moxidectin 2%)

SECTION 15: REGULATORY INFORMATION

Regulatory status:	Registered pursuant to the ACVM Act 1997, A009926 See www.nzfsa.govt.nz/acvm for registration conditions. Approved pursuant to the HSNO Act, EPA Approval Code HSR007722 See www.epa.govt.nz for approval conditions.
HSNO controls:	Trigger Quantity
Approved Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100L/Kg (9.1A)
Emergency Response Plan	100L/Kg (9.1A)
Secondary Containment	100L/Kg
Restriction of Use	None



SECTION 16: OTHER INFORMATION

This Safety Data Sheet 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. ALLEVA Animal Health Limited makes no warranty with respect hereto and disclaims all liability from reliance thereon.

Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

PLEASE READ ALL LABELS CAREFULLY BEFORE USING PRODUCT.

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