

# **Emamectin Formulation**

Versio 6.2	on	Revision Date: 28.09.2024		S Number: 002-00028	Date of last issue: 06.04.2024 Date of first issue: 23.10.2014
		<b>IDENTIFICATION</b>	:	Emamectin Form	ulation
Ν	lanufa	cturer or supplier's d	letai	ls	
С	Compa	ny	:	Intervet Australia	Pty Limited (trading as MSD Animal Health)
A	ddres	5	:	91-105 Harpin Si Bendigo 3550, \	
Т	elepho	one	:	1 800 033 461	
E	merge	ency telephone number	• :	Poisons Informat	ion Centre: Phone 13 11 26
E	-mail a	address	:	EHSDATASTEW	/ARD@msd.com
R	Recom	mended use of the ch mended use ions on use		<b>ical and restrictio</b> Veterinary produ Not applicable	

### **SECTION 2. HAZARDS IDENTIFICATION**

#### **GHS Classification**

Not a hazardous substance or mixture.

### **GHS** label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

### Other hazards which do not result in classification

Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin. May form explosive dust-air mixture during processing, handling or other means.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Starch	9005-25-8	>= 30 -< 60
Propylene glycol	57-55-6	< 10
Emamectin	137512-74-4	< 1

### **SECTION 4. FIRST AID MEASURES**

General advice

: In the case of accident or if you feel unwell, seek medical ad-



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In In If s Mo an de Pr	nhaled case of skin contact case of eye contact swallowed ost important symptoms d effects, both acute and layed otection of first-aiders ites to physician	: : : : : : : : : : : : : : : : : : : :	advice. If inhaled, remove Get medical atten Wash with water Get medical atten If in eyes, rinse w Get medical atten If swallowed, DO Get medical atten Rinse mouth thor Contact with dust the skin. Dust contact with No special precau	persist or in all cases of doubt seek medical e to fresh air. ation if symptoms occur. and soap. ation if symptoms occur.
SECTIO	ON 5. FIREFIGHTING MEA	SU	RES	
Su	itable extinguishing media	:	Water spray Alcohol-resistant Carbon dioxide (C Dry chemical	
	suitable extinguishing edia	:	None known.	
	ecific hazards during fire- hting	:	concentrations, a potential dust exp	dust; fine dust dispersed in air in sufficient nd in the presence of an ignition source is a plosion hazard. bustion products may be a hazard to health.
Ha uc	zardous combustion prod- ts	:	Carbon oxides	
Sp od	ecific extinguishing meth- s	:	cumstances and t Use water spray t	g measures that are appropriate to local cir- the surrounding environment. to cool unopened containers. ged containers from fire area if it is safe to do
	ecial protective equipment firefighters	:	essary.	ed breathing apparatus for firefighting if nec-
Ha	zchem Code	:	2Z	

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- : Follow safe handling advice (see section 7) and personal pro-



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	quipment and emer- y procedures	tective equipn	nent recommendations (see section 8).
Envir	onmental precautions	Prevent furthe Retain and dis	to the environment. er leakage or spillage if safe to do so. spose of contaminated wash water. ies should be advised if significant spillages ntained.
	ods and materials for inment and cleaning up	tainer for disp Avoid dispers with compress Dust deposits es, as these r leased into the Local or natio posal of this n employed in t mine which re Sections 13 a	al of dust in the air (i.e., clearing dust surfaces

### SECTION 7. HANDLING AND STORAGE

Technical measures	:	Static electricity may accumulate and ignite suspended dust causing an explosion. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Local/Total ventilation Advice on safe handling	:	Use only with adequate ventilation. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as- sessment Minimize dust generation and accumulation. Keep container closed when not in use. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment.
Hygiene measures	:	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.
Conditions for safe storage	:	Keep in properly labelled containers.



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	Store in accordance with the particular national regulations.
Materials to avoid	: Do not store with the following product types:
	Strong oxidizing agents

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workpl	ace control param	eters
Componente	CAS No	

Components	CAS-No.	Value type (Form of	Control parame- ters / Permissible	Basis
		exposure)	concentration	
Starch	9005-25-8	TWA	10 mg/m3	AU OEL
		TWA	10 mg/m3	ACGIH
Propylene glycol	57-55-6	TWA (partic-	10 mg/m3	AU OEL
		ulate)		
		TWA (Total	150 ppm	AU OEL
		(vapour and	474 mg/m3	
		particles))		
Emamectin	137512-74-4	TWA	15 µg/m3 (OEB 3)	Internal
	Further information: Skin			
		Wipe limit	150 µg/100 cm2	Internal

Engineering measures :	All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face con- tainment devices). Minimize open handling.
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# Personal protective equipment

Respiratory protection : Filter type : Hand protection	If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection. Particulates type
Material :	Chemical-resistant gloves
Remarks : Eye protection :	Consider double gloving. Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.
Skin and body protection :	Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, dis- posable suits) to avoid exposed skin surfaces.



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Use appropriate degowning techniques to remove potentially contaminated clothing.

ECTION 9. PHYSICAL AND CHEMICAL PROPERTIES				
Appearance	:	powder		
Colour	:	white		
Odour	:	No data available		
Odour Threshold	:	No data available		
рН	:	No data available		
Melting point/freezing point	:	No data available		
Initial boiling point and boiling range	:	No data available		
Flash point	:	No data available		
Evaporation rate	:	No data available		
Flammability (solid, gas)	:	May form explosive dust-air mixture during processing, han- dling or other means.		
Flammability (liquids)	:	No data available		
Upper explosion limit / Upper flammability limit	:	No data available		
Lower explosion limit / Lower flammability limit	:	No data available		
Vapour pressure	:	No data available		
Relative vapour density	:	No data available		
Relative density	:	No data available		
Solubility(ies) Water solubility	:	soluble		
Partition coefficient: n- octanol/water	:	No data available		
Auto-ignition temperature	:	No data available		
Decomposition temperature	:	No data available		
Viscosity Viscosity, kinematic	:	No data available		

# SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES



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Explo	sive properties	:	Not explosive	
Oxidiz	zing properties	:	The substance	or mixture is not classified as oxidizing.
Molec	cular weight	:	No data availab	le
	le characteristics le size	:	No data availab	le
ECTION	10. STABILITY AND R	EAC	ΤΙVITY	
React		:		s a reactivity hazard.
	nical stability	:		rmal conditions.
Possi tions	bility of hazardous reac-	:	May form explo dling or other m	sive dust-air mixture during processing, han-
lions			•	strong oxidizing agents.
Condi	itions to avoid		Heat, flames an	d sparks
Conta		•	Avoid dust form	
	patible materials	:	Oxidizing agent	S
Hazaı produ	rdous decomposition	: No hazardous decomposition products are known.		
	11. TOXICOLOGICAL	NFC	RMATION	
Ever	sure routes		Inhalation	
		•	Skin contact	
⊏xpos	Sule loules			
⊏xpos	Sure routes		Ingestion	
⊏xpos				
	e toxicity		Ingestion	
Acute		ıble i	Ingestion Eye contact	
Acute	e toxicity assified based on availa	ble i	Ingestion Eye contact	
Acute Not cl <u>Prode</u>	e toxicity assified based on availa		Ingestion Eye contact nformation. Acute toxicity es	timate: > 2,000 mg/kg
Acute Not cl <u>Prode</u>	e toxicity assified based on availa uct:		Ingestion Eye contact nformation.	
Acute Not cl <u>Produ</u> Acute	e toxicity assified based on availa uct: oral toxicity		Ingestion Eye contact nformation. Acute toxicity es Method: Calcula	tion method
Acute Not cl <u>Produ</u> Acute	e toxicity assified based on availa uct:		Ingestion Eye contact nformation. Acute toxicity es Method: Calcula Acute toxicity es	tion method timate: > 5 mg/l
Acute Not cl <u>Produ</u> Acute	e toxicity assified based on availa uct: oral toxicity		Ingestion Eye contact nformation. Acute toxicity es Method: Calcula Acute toxicity es Exposure time: 4 Test atmosphere	tion method timate: > 5 mg/l l h e: dust/mist
Acute Not cl <u>Produ</u> Acute	e toxicity assified based on availa uct: oral toxicity		Ingestion Eye contact nformation. Acute toxicity es Method: Calcula Acute toxicity es Exposure time: 4	tion method timate: > 5 mg/l l h e: dust/mist
Acute Not cl <u>Produ</u> Acute	e toxicity assified based on availa uct: oral toxicity		Ingestion Eye contact nformation. Acute toxicity es Method: Calcula Acute toxicity es Exposure time: 4 Test atmosphere	tion method timate: > 5 mg/l l h e: dust/mist
Acute Not cl <u>Produ</u> Acute	e toxicity assified based on availa uct: oral toxicity inhalation toxicity		Ingestion Eye contact nformation. Acute toxicity es Method: Calcula Acute toxicity es Exposure time: 4 Test atmosphere	tion method timate: > 5 mg/l l h e: dust/mist
Acute Not cl Produ Acute Acute	e toxicity assified based on availa uct: oral toxicity inhalation toxicity		Ingestion Eye contact nformation. Acute toxicity es Method: Calcula Acute toxicity es Exposure time: 4 Test atmosphere	tion method timate: > 5 mg/l k h e: dust/mist tion method
Acute Not cl Produ Acute Acute Starc Acute	<b>e toxicity</b> assified based on availa <u>uct:</u> oral toxicity inhalation toxicity <u>conents:</u> h:		Ingestion Eye contact nformation. Acute toxicity es Method: Calcula Acute toxicity es Exposure time: 4 Test atmosphere Method: Calcula	tion method timate: > 5 mg/l h c dust/mist tion method
Acute Not cl Produ Acute Acute Starc Acute Acute	<b>e toxicity</b> assified based on availa <u>uct:</u> oral toxicity inhalation toxicity <b><u>conents:</u></b> <b>h:</b> oral toxicity		Ingestion Eye contact nformation. Acute toxicity es Method: Calcula Acute toxicity es Exposure time: 4 Test atmosphere Method: Calcula	tion method timate: > 5 mg/l h c dust/mist tion method



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ersion 2	Revision Date: 28.09.2024		902-00028	Date of last issue: 06.04.2024 Date of first issue: 23.10.2014
Acute	e oral toxicity	:	LD50 (Rat): 22,0	00 mg/kg
Acute	e inhalation toxicity	:	LC50 (Rat): > 44 Exposure time: 4 Test atmosphere	l h
Acute	e dermal toxicity	:	LD50 (Rabbit): > Assessment: The toxicity	2,000 mg/kg e substance or mixture has no acute dermal
Emar	mectin:			
Acute	e oral toxicity	:	LD50 (Rat): 76 - Symptoms: Irrita	78 mg/kg bility, Salivation, Lachrymation, Tremors
			LD50 (Mouse): 2 Symptoms: Trem	
			TDLo (Rat): 0.5 - Target Organs: 0 system	- 25 mg/kg Central nervous system, Peripheral nervous
Acute	e inhalation toxicity	:	LC50 (Rat, male Exposure time: 4 Test atmosphere	
Acute	e dermal toxicity	:	LD50 (Rat): > 2,0	000 mg/kg
			system	0 - 1,000 mg/kg Peripheral nervous system, Central nervous nors, Dilatation of the pupil
-	corrosion/irritation lassified based on ava	ailable	information.	
Com				

# Components:

# Propylene glycol:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

### Emamectin:

Species	:	Rabbit
Result	:	Mild skin irritation

# Serious eye damage/eye irritation

Not classified based on available information.



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<u>Comp</u>	oonents:		
Starc	h:		
Speci		: Rabbit	
Resul	t	: No eye irritatior	]
Propy	/lene glycol:		
Speci		: Rabbit	
Resul		: No eye irritation	
Metho	Dd	: OECD Test Gu	Ideline 405
Eman	nectin:		
Speci		: Rabbit	
Resul	t	: Irreversible effe	ects on the eye
Resp	iratory or skin sens	itisation	
Skin s	sensitisation		
Not cl	assified based on av	ailable information.	
Resp	iratory sensitisatior	ı	
Not cl	assified based on av	ailable information.	
Comp	oonents:		
Starc	h:		
Test 7	Гуре	: Maximisation T	est
	sure routes	: Skin contact	
Speci		: Guinea pig	
Resul	t	: negative	
Propy	/lene glycol:		
Test 7		: Maximisation T	est
	sure routes	: Skin contact	
Speci		: Guinea pig	
Resul	t	: negative	
Eman	nectin:		
Test 1			de assay (LLNA)
	sure routes	: Skin contact	
Speci		: Mouse	
			e skin sensitisation.
Asses	t	· nonativo	
	t	: negative	

# Germ cell mutagenicity

Not classified based on available information.



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<u>Comp</u>	onents:		
Starch	1:		
Genote	oxicity in vitro		Type: Bacterial reverse mutation assay (AMES) It: negative
Propy	lene glycol:		
Genote	oxicity in vitro		Type: Bacterial reverse mutation assay (AMES) It: negative
		Meth	Type: Chromosome aberration test in vitro od: OECD Test Guideline 473 lt: negative
Genoto	oxicity in vivo	cytog Spec Appli	Type: Mammalian erythrocyte micronucleus test (in viv jenetic assay) ies: Mouse cation Route: Intraperitoneal injection ilt: negative
Emam	ectin:		
Genote	oxicity in vitro		Type: Bacterial reverse mutation assay (AMES) It: negative
		Test	Type: In vitro mammalian cell gene mutation test system: Chinese hamster lung cells It: negative
		Test	Type: Chromosomal aberration system: Chinese hamster ovary cells lt: negative
		Test	Type: Alkaline elution assay system: rat hepatocytes llt: negative
Genoto	oxicity in vivo	Spec Cell t	Type: in vivo assay ies: Mouse ype: Bone marrow ilt: negative
	ogenicity assified based on av	ailable inform	ation
	onents:		
Propv	lene glycol:		
Specie Applica		: Rat : Inges : 2 Yea	
Result		: nega	



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Emar	nectin:		
	cation Route sure time	: Mouse : Oral : 79 weeks : 0.5 - 7.5 mg/k : negative	g body weight
	cation Route sure time	: Rat : Oral : 105 weeks	′kg body weight
-	oductive toxicity lassified based on ava	ilable information.	
Com	ponents:		
Prop	ylene glycol:		
Effec	ts on fertility	Species: Mou	oute: Ingestion
Effec ment	ts on foetal develop-	Species: Mou	oute: Ingestion
Emar	nectin:		
	ts on fertility	Species: Rat, Application Re General Toxic Fertility: NOA Early Embryo weight Symptoms: E Effects on F1	
Effec ment	ts on foetal develop-	General Toxic Developmenta Result: No ter	evelopment bit oute: Oral ngle Treatment: 12 d city Maternal: NOAEL: 3 mg/kg body weight al Toxicity: NOAEL F1: 6 mg/kg body weight atogenic effects, Embryotoxic effects and ad- on the offspring were detected only at high ma-



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Test Type: Development Species: Rat Application Route: Oral Duration of Single Treatment: 13 d Developmental Toxicity: NOAEL F1: 4 mg/kg body weight Result: No teratogenic effects, Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses

### STOT - single exposure

Not classified based on available information.

#### **Components:**

#### Emamectin:

Exposure routes	:	Ingestion, Skin contact
Target Organs	:	Peripheral nervous system, Central nervous system
Assessment	:	Causes damage to organs.

### STOT - repeated exposure

Not classified based on available information.

#### **Components:**

#### **Emamectin:**

Target Organs	:	Peripheral nervous system, Central nervous system
Assessment	:	Causes damage to organs through prolonged or repeated
		exposure.

#### Repeated dose toxicity

#### **Components:**

#### Starch:

Species NOAEL Application Route Exposure time Method		Rat >= 2,000 mg/kg Skin contact 28 Days OECD Test Guideline 410
Propylene glycol: Species NOAEL Application Route Exposure time	:	Rat, male >= 1,700 mg/kg Ingestion 2 yr
Emamectin: Species NOAEL	:	Rat 0.25 mg/kg

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LOAEL:1 mg/kgApplication Route:OralExposure time:105 WeeksTarget Organs:Central nervous systemSpecies:MouseNOAEL:2.5 mg/kgLOAEL:12.5 mg/kgApplication Route:OralExposure time:79 WeeksTarget Organs:Peripheral nervous system
Application Route:OralExposure time:105 WeeksTarget Organs:Central nervous systemSpecies:MouseNOAEL:2.5 mg/kgLOAEL:12.5 mg/kgApplication Route:OralExposure time:79 WeeksTarget Organs:Peripheral nervous system
Application Route:OralExposure time:105 WeeksTarget Organs:Central nervous systemSpecies:MouseNOAEL:2.5 mg/kgLOAEL:12.5 mg/kgApplication Route:OralExposure time:79 WeeksTarget Organs:Peripheral nervous system
Exposure time:105 WeeksTarget Organs:Central nervous systemSpecies:MouseNOAEL:2.5 mg/kgLOAEL:12.5 mg/kgApplication Route:OralExposure time:79 WeeksTarget Organs:Peripheral nervous system
Target Organs:Central nervous systemSpecies:MouseNOAEL:2.5 mg/kgLOAEL:12.5 mg/kgApplication Route:OralExposure time:79 WeeksTarget Organs:Peripheral nervous system
Species:MouseNOAEL:2.5 mg/kgLOAEL:12.5 mg/kgApplication Route:OralExposure time:79 WeeksTarget Organs:Peripheral nervous system
NOAEL:2.5 mg/kgLOAEL:12.5 mg/kgApplication Route:OralExposure time:79 WeeksTarget Organs:Peripheral nervous system
LOAEL:12.5 mg/kgApplication Route:OralExposure time:79 WeeksTarget Organs:Peripheral nervous system
Application Route:OralExposure time:79 WeeksTarget Organs:Peripheral nervous system
Exposure time:79 WeeksTarget Organs:Peripheral nervous system
Target Organs : Peripheral nervous system
Symptoms : Tremors, Fatality
Species : Dog
NOAEL : 0.25 mg/kg
LOAEL : 0.5 mg/kg
Application Route : Oral
Exposure time : 53 Weeks
Target Organs : Peripheral nervous system, Central nervous system
Symptoms : Tremors, Dilatation of the pupil
Emamectin:
Emanecun.
Eye contact : Symptoms: Severe irritation
Eye contact : Symptoms: Severe irritation
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION   Ecotoxicity
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION   Ecotoxicity   Components:   Propylene glycol:   Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,61
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION   Ecotoxicity   Components:   Propylene glycol:   Toxicity to fish   : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,61 Exposure time: 96 h
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION   Ecotoxicity   Components:   Propylene glycol:   Toxicity to fish   : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,61 Exposure time: 96 h   Toxicity to daphnia and other :   EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION   Ecotoxicity   Components:   Propylene glycol:   Toxicity to fish   : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,61 Exposure time: 96 h
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION   Ecotoxicity   Components:   Propylene glycol:   Toxicity to fish :   LC50 (Oncorhynchus mykiss (rainbow trout)): 40,61 Exposure time: 96 h   Toxicity to daphnia and other aquatic invertebrates :   EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg Exposure time: 48 h   Toxicity to algae/aquatic :   ErC50 (Skeletonema costatum (marine diatom)): 19
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION   Ecotoxicity   Components:   Propylene glycol:   Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,61 Exposure time: 96 h   Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg Exposure time: 48 h   Toxicity to algae/aquatic plants : ErC50 (Skeletonema costatum (marine diatom)): 19 Exposure time: 72 h
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION   Ecotoxicity   Components:   Propylene glycol:   Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,61 Exposure time: 96 h   Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg Exposure time: 48 h   Toxicity to algae/aquatic : ErC50 (Skeletonema costatum (marine diatom)): 19
Eye contact : Symptoms: Severe irritation Remarks: Based on Animal Evidence   Ingestion : Target Organs: Gastro-intestinal system Symptoms: Nausea, Vomiting, Abdominal pain, con   CTION 12. ECOLOGICAL INFORMATION   Ecotoxicity   Components:   Propylene glycol:   Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,61 Exposure time: 96 h   Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg Exposure time: 48 h   Toxicity to algae/aquatic plants : ErC50 (Skeletonema costatum (marine diatom)): 19 Exposure time: 72 h



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	aquatic invertebrates (Chron- ic toxicity) Toxicity to microorganisms			Exposure time: 7	ť
			:	NOEC (Pseudomo Exposure time: 18	onas putida): > 20,000 mg/l h
Eı	mamed	tin:			
Тс	Toxicity to fish		:	LC50 (Oncorhync Exposure time: 96	hus mykiss (rainbow trout)): 0.174 mg/l h
				LC50 (Cyprinodor mg/l Exposure time: 96	variegatus (sheepshead minnow)): 1.34 h
				LC50 (Lepomis m Exposure time: 96	acrochirus (Bluegill sunfish)): 0.18 mg/l h
		o daphnia and other nvertebrates	:	EC50 (Daphnia m Exposure time: 48	agna (Water flea)): 0.00099 mg/l h
				EC50 (Americamy Exposure time: 48	rsis): 0.000043 mg/l h
Pe	ersiste	nce and degradabili	ty		
<u>C</u>	ompon	ents:			
		<b>ne glycol:</b> dability	:	Result: Readily bid Biodegradation: 9 Exposure time: 28 Method: OECD Te	18.3 <sup>°</sup> %
Bi	ioaccu	mulative potential			
<u>C</u>	ompon	ents:			
		ne glycol:			
	artition ctanol/w	coefficient: n- vater	:	log Pow: -1.07 Method: Regulatio	on (EC) No. 440/2008, Annex, A.8
Eı	mamed	tin:			
Bi	ioaccur	nulation	:	Species: Lepomis Bioconcentration f	macrochirus (Bluegill sunfish) actor (BCF): 80
	artition ctanol/w	coefficient: n- vater	:	log Pow: 5	
	<b>obility</b> o data a	<b>in soil</b> available			



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# Other adverse effects

No data available

### **SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods		
Waste from residues	:	Do not dispose of waste into sewer.
		Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste han- dling site for recycling or disposal.
		If not otherwise specified: Dispose of as unused product.

### **SECTION 14. TRANSPORT INFORMATION**

### International Regulations

UNRTDG		
UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Emamectin)
Class	:	9
Packing group	:	
Labels	:	9
Environmentally hazardous	:	yes
IATA-DGR		
UN/ID No.	:	UN 3077
Proper shipping name	:	Environmentally hazardous substance, solid, n.o.s. (Emamectin)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	956
Packing instruction (passen- ger aircraft)	:	956
Environmentally hazardous	:	yes
IMDG-Code		
UN number	:	UN 3077
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
		(Emamectin)
Class	:	9
Packing group	:	
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable for product as supplied.



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Natio	onal Regulations		
	umber er shipping name	: UN 3077 : ENVIRONME N.O.S. (Emamectin)	NTALLY HAZARDOUS SUBSTANCE, SOLID,
~		(=	

		•
Class	:	9
Packing group	:	
Labels	:	9
Hazchem Code	:	2Z
Environmentally hazardous	:	yes

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### **SECTION 15. REGULATORY INFORMATION**

# Safety, health and environmental regulations/legislation specific for the substance or mix-ture

Therapeutic Goods (Poisons : Standard) Instrument		ber allocated (Please use the original pecific uses, specific conditions or t apply for this chemical)		
Prohibition/Licensing Requiremer	its :	There is no applicable prohibition, authorisation and restricted use requirements, including for carcino- gens referred to in Schedule 10 of the model WHS Act and Regula- tions.		
The components of this product are reported in the following inventories:				
AICS :	not determined			

DSL : not deter
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IECSC

### SECTION 16: ANY OTHER RELEVANT INFORMATION

#### **Further information**

Revision Date Sources of key data used to compile the Safety Data Sheet	:	28.09.2024 Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen- cy, http://echa.europa.eu/		
Date format	:	dd.mm.yyyy		
Full text of other abbreviations				

: not determined



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ACGIH AU OEL			Threshold Limit Values (TLV) splace Exposure Standards for Airborne Con-
	H / TWA EL / TWA		eighted average dard - time weighted average
Land o Carcin Standa x% res ENCS x% gro tem; G - Inter Equipr centra cal Su Maritin ganisa centra Lethal n.o.s. Conce Loadin Zealar ment; lative a es; (C 1907/2 tion, A peratu portati stance menda	of Brazil; ASTM - Ame ogen, Mutagen or Re ardisation; DSL - Dome sponse; ELx - Loading - Existing and New C owth rate response; EF GLP - Good Laboratory national Air Transpor ment of Ships carrying tion; ICAO - Internation bstances in China; IM ne Organization; ISHL tion for Standardization tion to 50 % of a test p Dose); MARPOL - In - Not Otherwise Specir ntration; NO(A)EL - N ng Rate; NOM - Officia and Inventory of Chemic OPPTS - Office of Che and Toxic substance; F Q)SAR - (Quantitative 2006 of the European authorisation and Restu- re; SDS - Safety Data on of Dangerous Good as Control Act (United	rican Society for the eproductive Toxican estic Substances List g rate associated with chemical Substances RG - Emergency Res Practice; IARC - Inter t Association; IBC Dangerous Chemic Dangerous Chemic IDG - International N - Industrial Safety at on; KECI - Korea Ex population; LD50 - L thernational Convent fied; Nch - Chilean N o Observed (Advers I Mexican Norm; NT cals; OECD - Organi emical Safety and Po PICCS - Philippines I ) Structure Activity Parliament and of th riction of Chemicals; Sheet; TCSI - Taiwa ds; TECI - Thailand E States); UN - United t of Dangerous Good	als; ANTT - National Agency for Transport by a Testing of Materials; bw - Body weight; CMR - t; DIN - Standard of the German Institute for t (Canada); ECx - Concentration associated with ith x% response; EmS - Emergency Schedule; a (Japan); ErCx - Concentration associated with sponse Guide; GHS - Globally Harmonized Sys- ernational Agency for Research on Cancer; IATA - International Code for the Construction and cals in Bulk; IC50 - Half maximal inhibitory con- ganization; IECSC - Inventory of Existing Chemi- Maritime Dangerous Goods; IMO - International and Health Law (Japan); ISO - International Or- isting Chemicals Inventory; LC50 - Lethal Con- tethal Dose to 50% of a test population (Median ion for the Prevention of Pollution from Ships; Norm; NO(A)EC - No Observed (Adverse) Effect e) Effect Level; NOELR - No Observable Effect TP - National Toxicology Program; NZIoC - New zation for Economic Co-operation and Develop- Ilution Prevention; PBT - Persistent, Bioaccumu- Inventory of Chemicals and Chemical Substanc- Relationship; REACH - Regulation (EC) No the Council concerning the Registration, Evalua- SADT - Self-Accelerating Decomposition Tem- an Chemical Substance Inventory; TDG - Trans- Existing Chemicals Inventory; TSCA - Toxic Sub- ed Nations; UNRTDG - United Nations Recom- ds; vPvB - Very Persistent and Very Bioaccumu- Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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