



Version 6.0	Revision Date: 06.04.2024		S Number: 9565-00021	Date of last issue: 30.09.2023 Date of first issue: 18.01.2017
SECTION	N 1: Identification of	the s	ubstance/n	nixture and of the company/undertaking
I.1 Produ	ct identifier			
Trade	e name	: /	Abamectin Li	quid Formulation
.2 Releva	ant identified uses of	the su	bstance or r	nixture and uses advised against
	of the Sub- e/Mixture	: \	Veterinary pr	oduct
Reco on us	mmended restrictions e	: 1	Not applicabl	e
.3 Detail	s of the supplier of the	e safet	ty data shee	t
Comp	bany	2	MSD 20 Spartan R 1619 Sparta	oad n, South Africa
Telep	bhone	: -	+2711923930	00
respo	il address of person onsible for the SDS		EHSDATAST	EWARD@msd.com
respo - <b>.4 Emerg</b> +1-90 SECTION		ber catior	1	EWARD@msd.com
respo 1.4 Emerg +1-90 SECTION 2.1 Classi	onsible for the SDS gency telephone numb 08-423-6000 N 2: Hazards identifi	ber catior nce or	ו · mixture	
respo 1.4 Emerg +1-90 SECTION 2.1 Classi Class Acute Speci expos Short gory	ponsible for the SDS gency telephone numb 08-423-6000 <b>N 2: Hazards identifi</b> ification of the substa sification (REGULATIO e toxicity, Category 4 ific target organ toxicity sure, Category 2 -term (acute) aquatic has 1	ber cation nce or DN (EC - repea azard,	n mixture C) No 1272/2 H3 ated H3 lor Cate- H4	<b>008)</b> 332: Harmful if inhaled. 373: May cause damage to organs through pro- nged or repeated exposure. 400: Very toxic to aquatic life.
respo 1.4 Emerg +1-90 SECTION 2.1 Classi Acute Speci expos Short gory	ponsible for the SDS gency telephone numb 08-423-6000 N 2: Hazards identifi ification of the substa sification (REGULATIC e toxicity, Category 4 ific target organ toxicity sure, Category 2 -term (acute) aquatic has 1 -term (chronic) aquatic	ber cation nce or DN (EC - repea azard,	n mixture C) No 1272/2 H3 ated H3 lor Cate- H4 I, Cat- H4	<b>008)</b> 332: Harmful if inhaled. 373: May cause damage to organs through pro-
respo 1.4 Emerg +1-90 SECTION 2.1 Classi Class Acute Speci expos Short gory Long- egory	ponsible for the SDS gency telephone numb 08-423-6000 N 2: Hazards identifi ification of the substa sification (REGULATIC e toxicity, Category 4 ific target organ toxicity sure, Category 2 -term (acute) aquatic has 1 -term (chronic) aquatic	ber cation nce or DN (EC - repea azard,	n mixture C) No 1272/2 H3 ated H3 lor Cate- H4 I, Cat- H4	<b>008)</b> 332: Harmful if inhaled. 373: May cause damage to organs through pro- nged or repeated exposure. 400: Very toxic to aquatic life.
respondent 1.4 Emergen +1-90 SECTION 2.1 Classin Classin Classin Classin Classin Special Special Special Special Special Short gory Long- egory 2.2 Label Labe	A 2: Hazards identifi ification of the substa ification (REGULATIC e toxicity, Category 4 ific target organ toxicity sure, Category 2 -term (acute) aquatic ha 1 -term (chronic) aquatic y 1	ber catior nce or DN (EC - repea azard, hazard	n mixture C) No 1272/2 ated H3 lor Cate- H4 I, Cat- H4 eff	<b>008)</b> 332: Harmful if inhaled. 373: May cause damage to organs through pro- nged or repeated exposure. 400: Very toxic to aquatic life.
respo 1.4 Emerg +1-90 SECTION 2.1 Classi Class Acute Speci expos Short gory Long- egory 2.2 Label Haza	ponsible for the SDS gency telephone numbression 28-423-6000 N 2: Hazards identifi ification of the substance ification (REGULATION term (acute) aquatic have term (chronic) aquatic have term (chronic) aquatic have term (chronic) aquatic have telements Iling (REGULATION (E	ber cation nce or ON (EC - repea azard, hazard tazard	n mixture C) No 1272/2 ated H3 lor Cate- H4 I, Cat- H4 eff	<b>008)</b> 332: Harmful if inhaled. 373: May cause damage to organs through pro- nged or repeated exposure. 400: Very toxic to aquatic life.



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		repeated expo	ause damage to organs through prolonged or sure. oxic to aquatic life with long lasting effects.
Preca	utionary statements		nly outdoors or in a well-ventilated area. release to the environment.
		air and keep co CENTER/ doct P314 Get mo	- P312 IF INHALED: Remove person to fresh omfortable for breathing. Call a POISON for if you feel unwell. edical advice/ attention if you feel unwell.

Hazardous components which must be listed on the label: abamectin (combination of avermectin B1a and avermectin B1b) (ISO)

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### **SECTION 3: Composition/information on ingredients**

### 3.2 Mixtures

### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
abamectin (combination of avermec- tin B1a and avermectin B1b) (ISO)	71751-41-2 606-143-00-0	Acute Tox. 2; H300 Acute Tox. 1; H330 Acute Tox. 3; H311 Repr. 2; H361fd STOT RE 1; H372 (Central nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10.000 M-Factor (Chronic aquatic toxicity): 10.000	>= 1 - < 2,5

For explanation of abbreviations see section 16.



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		res	sures	I 4: First aid meas	SECTION
		sures	easure	ption of first aid me	4.1 Descri
	accident or if you feel unv ely. ns persist or in all cases o	vice immediate	:	ral advice	Gene
protective equipment	nders should pay attentic commended personal pro ntial for exposure exists (	and use the re	:	ction of first-aiders	Prote
tion.	ove to fresh air. g, give artificial respiratior difficult, give oxygen. tention.	If not breathing	:	aled	lf inha
shoes.		of water. Remove conta Get medical at Wash clothing	:	e of skin contact	In cas
	h water as a precaution. tention if irritation develop		:	e of eye contact	In cas
ng.	DO NOT induce vomiting. ttention. noroughly with water.	Get medical at	:	llowed	lf swa
	ute and delayed	and effects, both ac	ns and e	mportant symptom	4.2 Most i
h prolonged or repeated	•	: Harmful if inha			Risks
it needed	and special treatment n	medical attention	iate med	tion of any immedia	4.3 Indica
	natically and supportively.		:	-	Treati
า	and special treatmer	exposure. medical attention a : Treat symptom	:	-	Treati

Extinguishing meula		
Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	None known.





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5.2	Specific fighting		:	Exposure to comb	<b>xture</b> pustion products may be a hazard to health.
5.3		for firefighters	:	In the event of fire	, wear self-contained breathing apparatus.
	for firef			Use personal prot	
	Specific ods	c extinguishing meth-	:	cumstances and t Use water spray to	measures that are appropriate to local cir- he surrounding environment. o cool unopened containers. ged containers from fire area if it is safe to do

### **SECTION 6:** Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Follow safe handling advice (see section 7) and personal pro- tective equipment recommendations (see section 8).
6.2 Environmental precautions		
Environmental precautions	:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up	<ul> <li>Soak up with inert absorbent material.</li> <li>For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.</li> <li>Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.</li> <li>Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.</li> </ul>	

#### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.



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SECTION	7: Handling and st	orage	
7.1 Precau	itions for safe handlir	ng	
Techr	nical measures		eering measures under EXPOSURE S/PERSONAL PROTECTION section.
Local/	Total ventilation		ventilation is unavailable, use with local exhaust
	e on safe handling	: Do not bre Do not swa Avoid cont Avoid proto Wash skin Handle in a practice, ba sessment Keep conta Do not eat Take care environme	act with eyes. onged or repeated contact with skin. thoroughly after handling. accordance with good industrial hygiene and safety ased on the results of the workplace exposure as- ainer tightly closed. drink or smoke when using this product. to prevent spills, waste and minimize release to the
нудіе	ne measures	flushing sy place. Whe nated cloth The effecti engineerin appropriate industrial h	to chemical is likely during typical use, provide eye stems and safety showers close to the working en using do not eat, drink or smoke. Wash contami- ing before re-use. we operation of a facility should include review of g controls, proper personal protective equipment, e degowning and decontamination procedures, ygiene monitoring, medical surveillance and the inistrative controls.
7.2 Condit	ions for safe storage	including any i	ncompatibilities
	rements for storage and containers	Keep in a	operly labelled containers. Keep tightly closed. cool, well-ventilated place. Store in accordance with lar national regulations.
Advico	e on common storage	Strong oxid	
•	<b>ic end use(s)</b> fic use(s)	: No data av	ailable

# **SECTION 8: Exposure controls/personal protection**

## 8.1 Control parameters

### **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
abamectin (combi-	71751-41-2	TWA	15 μg/m3 (OEB 3)	Internal



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tin B1	n of avermec- 1a and aver- in B1b) (ISO)			
		Wipe limit	150 µg/100 cm <sup>2</sup>	Internal

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health ef- fects	Value
Glycerides, mixed decanoyl and oc- tanoyl	Workers	Inhalation	Long-term systemic effects	177,79 mg/m3
	Workers	Skin contact	Long-term systemic effects	25,21 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	43,84 mg/m3
	Consumers	Skin contact	Long-term systemic effects	12,61 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	12,61 mg/kg bw/day

## Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Glycerides, mixed decanoyl and octanoyl	Oral (Secondary Poisoning)	0,03 mg/kg food

### 8.2 Exposure controls

### Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).

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 containment devices).

Minimize open handling.

#### Personal protective equipment

Eye/face protection	:	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.	
Hand protection			
Material	:	Chemical-resistant gloves	
Remarks Skin and body protection	:	Consider double gloving. Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially contaminated clothing.	



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Resp	iratory protection	sure assessme	al exhaust ventilation is not available or expo- nt demonstrates exposures outside the rec- delines, use respiratory protection.
Fi	lter type		iculates and organic vapour type (A-P)

# **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

3.1	mormation on basic physical	an	a chemical properties
	Appearance	:	liquid
	Colour	:	light yellow
	Odour	:	characteristic
	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)	:	Not applicable
	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
	Density	:	0,90 - 0,94 g/cm <sup>3</sup>
	Solubility(ies)		
	Water solubility		insoluble
	Partition coefficient: n-	:	Not applicable
	octanol/water		
	Auto-ignition temperature	:	No data available
	Decomposition temperature	:	No data available
	Viscosity		
	Viscosity, kinematic	:	No data available
	,,	-	
	Explosive properties	:	Not explosive
	Oxidizing properties	:	The substance or mixture is not classified as oxidizing.



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9.2 Other	information			
Flam	mability (liquids)	:	No data available	•
Mole	cular weight	:	No data available	
Partic	cle size	:	Not applicable	
SECTION	N 10: Stability and rea	ctiv	vity	
1 <b>0.1 Reac</b> Not c	t <b>ivity</b> lassified as a reactivity ha	azai	rd.	
	nical stability e under normal condition	s.		
	ibility of hazardous rea	ctic		
Haza	rdous reactions	:	Can react with st	rong oxidizing agents.
10.4 Cond	litions to avoid			
Cond	itions to avoid	:	None known.	
10.5 Incoi	mpatible materials			
	rials to avoid	:	Oxidizing agents	
	rdous decomposition p			
SECTION	N 11: Toxicological in	for	mation	
11.1 Infor	mation on toxicologica	eff	ects	
11.1 Infor	mation on toxicological nation on likely routes of	eff		
11.1 Infor Inforr expos Acute	mation on toxicological nation on likely routes of	eff	ects Inhalation Skin contact Ingestion	
11.1 Infor Inforr expos Acute Harm <u>Prod</u>	mation on toxicological nation on likely routes of sure e toxicity iful if inhaled.	eff	ects Inhalation Skin contact Ingestion Eye contact	mate: > 2.000 mg/kg on method
11.1 Infor Inforr expos Acute Harm <u>Prod</u> Acute	mation on toxicological nation on likely routes of sure e toxicity ful if inhaled. <u>uct:</u>	eff :	<b>fects</b> Inhalation Skin contact Ingestion Eye contact Acute toxicity estin	on method mate: 2,3 mg/l n dust/mist



# Abamectin Liquid Formulation

ersion D	Revision Date: 06.04.2024	SDS Number: 1219565-0002	
<u>Com</u>	oonents:		
abam	ectin (combination	of avermectin B1a	a and avermectin B1b) (ISO):
Acute	oral toxicity	: LD50 (Rat)	: 24 mg/kg
		LD50 (Mou	se): 10 mg/kg
			key): 24 mg/kg Dilatation of the pupil
Acute	inhalation toxicity	: LC50 (Rat) Exposure ti Test atmos	
Acute	e dermal toxicity	: LD50 (Rat)	: 330 mg/kg
		LD50 (Rab	bit): 2.000 mg/kg
	corrosion/irritation lassified based on ava	ailable information.	
Com	oonents:		
abam	ectin (combination	of avermectin B1a	a and avermectin B1b) (ISO):
Speci	es	: Rabbit	a and avermectin B1b) (ISO):
Speci Resu	es It	: Rabbit : No skin irrit	
Speci Resu <b>Serio</b>	es It <b>us eye damage/eye</b>	: Rabbit : No skin irrit irritation	tation
Speci Resu Serio Not cl	es It <b>us eye damage/eye</b> lassified based on ava	: Rabbit : No skin irrit irritation	tation
Speci Resul Serio Not cl	es It <b>us eye damage/eye</b> lassified based on ava <b>conents:</b>	: Rabbit : No skin irrit irritation ailable information.	tation
Speci Result Serio Not cl <u>Comp</u> abam	es It <b>us eye damage/eye</b> lassified based on ava <u>conents:</u> lectin (combination of es	: Rabbit : No skin irrit irritation ailable information.	tation
Speci Resul Serio Not cl <u>Com</u> abam	es It <b>us eye damage/eye</b> lassified based on ava <u>conents:</u> lectin (combination of es	: Rabbit : No skin irrit irritation ailable information.	a and avermectin B1b) (ISO):
Speci Resul Serio Not cl <u>Com</u> abam Speci Resul	es It <b>us eye damage/eye</b> lassified based on ava <u>conents:</u> lectin (combination of es	: Rabbit : No skin irrit irritation ailable information. of avermectin B1a : Rabbit : Mild eye irr	a and avermectin B1b) (ISO):
Speci Result Serio Not cl Com abam Speci Result Resp Skin	es It us eye damage/eye lassified based on ava <u>ponents:</u> lectin (combination of es It iratory or skin sensi sensitisation	: Rabbit : No skin irrit irritation ailable information. of avermectin B1a : Rabbit : Mild eye irr tisation	a and avermectin B1b) (ISO):
Speci Result Serio Not cl Comp abam Speci Result Result Skin Not cl	es It us eye damage/eye lassified based on ava <u>ponents:</u> lectin (combination of es It iratory or skin sensi sensitisation lassified based on ava	: Rabbit : No skin irrit irritation ailable information. of avermectin B1a : Rabbit : Rabbit : Mild eye irr tisation	a and avermectin B1b) (ISO):
Speci Result Serio Not cl Comp abam Speci Result Resp Skin Not cl Resp	es It us eye damage/eye lassified based on ava <u>ponents:</u> lectin (combination of es It iratory or skin sensi sensitisation	: Rabbit : No skin irrit irritation ailable information. of avermectin B1a : Rabbit : Mild eye irr tisation ailable information.	a and avermectin B1b) (ISO): itation
Speci Result Serio Not cl Comp abam Speci Result Resp Skin Not cl Resp Not cl	es It us eye damage/eye lassified based on ava <u>conents:</u> ectin (combination of es It iratory or skin sensi sensitisation lassified based on ava iratory sensitisation	: Rabbit : No skin irrit irritation ailable information. of avermectin B1a : Rabbit : Mild eye irr tisation ailable information.	a and avermectin B1b) (ISO): itation
Speci Result Serio Not cl Com Speci Result Result Not cl Resp Not cl Com	es It us eye damage/eye lassified based on ava <u>conents:</u> ectin (combination of es It iratory or skin sensi sensitisation lassified based on ava iratory sensitisation lassified based on ava conents:	: Rabbit : No skin irrit irritation ailable information. of avermectin B1a : Rabbit : Mild eye irr tisation ailable information.	tation a and avermectin B1b) (ISO): itation
Speci Resul Serio Not cl Com abam Speci Resul Resp Skin Not cl Resp Not cl Com abam	es It us eye damage/eye lassified based on ava <u>conents:</u> ectin (combination of es It iratory or skin sensi sensitisation lassified based on ava iratory sensitisation lassified based on ava conents: ectin (combination of	: Rabbit : No skin irrit irritation ailable information. of avermectin B1a : Rabbit : Mild eye irr tisation ailable information.	a and avermectin B1b) (ISO): itation

## Germ cell mutagenicity

Not classified based on available information.



ersion .0	Revision Date: 06.04.2024		S Number: 19565-00021	Date of last issue: 30.09.2023 Date of first issue: 18.01.2017
<u>Comp</u>	oonents:			
aham	ectin (combination	of ave	mectin B1a an	d avermectin B1b) (ISO):
	toxicity in vitro			terial reverse mutation assay (AMES)
Cento		•	Result: negativ	
			ricean negativ	- -
			Test Type: In v	itro mammalian cell gene mutation test
				hinese hamster lung cells
			Result: negativ	e
			Test Type: Alk	aline elution assay
			Result: negativ	
			rtooun: nogunv	0
Geno	toxicity in vivo	:	Test Type: Mut	agenicity (in vivo mammalian bone-marrov
				t, chromosomal analysis)
			Species: Mous	
			Result: negativ	ute: Intraperitoneal injection
			Result. negativ	
II Carai	nononioitu			
	nogenicity	oiloblo	information	
NOT CI	assified based on ava	allable	information.	
<u>Comp</u>	ponents:			
abam	ectin (combination	of ave	mectin B1a an	d avermectin B1b) (ISO):
Speci		:	Rat	
	cation Route	:	Oral	
	sure time	:	105 weeks	
Resul	τ		negative	
Speci	es	:	Mouse	
	cation Route	:	Oral	
	sure time	:	93 weeks	
Resul	t	:	negative	
_				
•	oductive toxicity		· • ·	
Not cl	assified based on ava	allable	information.	
Comp	oonents:			
abam	ectin (combination	of ave	mectin B1a an	d avermectin B1b) (ISO):
Effect	s on fertility	:	Test Type: Fer	ility
	<b>,</b>		Species: Rat, r	
			Application Ro	
			Result: Effects	on fertility
			Toot Turoo: Tur	apportation reproduction toxicity study
			Species: Rat	p-generation reproduction toxicity study
			Application Ro	ite: Oral
				c Development: NOAEL: 0,12 mg/kg body
			weight	
			Result: Fetotox	icity
				,
Fffect	s on foetal develop-			bryo-foetal development



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ment			Developmental To Result: Cleft palat Remarks: Adverse Test Type: Embry Species: Rabbit Application Route Developmental To Result: Cleft palat survival Remarks: Adverse Test Type: Develo Species: Rat Application Route Developmental To	Maternal: NOAEL: 0,05 mg/kg body weight oxicity: NOAEL: 0,2 mg/kg body weight e developmental effects were observed ro-foetal development : Oral oxicity: LOAEL: 2 mg/kg body weight re, Teratogenic effects, Reduced embryonic e developmental effects were observed opment : Oral oxicity: LOAEL: 1,6 mg/kg body weight
Reproo sessm	ductive toxicity - As- ent	:	fertility, based on	f adverse effects on sexual function and animal experiments., Some evidence of n development, based on animal experi-

## STOT - single exposure

Not classified based on available information.

## STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

### Components:

Exposure routes Target Organs	: Ingestion
Target Organs	: Central nervous system
Assessment	: Causes damage to organs through prolonged or repeated
11	exposure.

### Repeated dose toxicity

### **Components:**

#### abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Species	:	Rat
NOAEL	:	1,5 mg/kg
Application Route	:	Oral
Exposure time	:	24 Months
Target Organs	:	Central nervous system
Species NOAEL Application Route Exposure time Target Organs Symptoms	:	Tremors, ataxia
Species	:	Mouse
NOAEL	:	4,0 mg/kg
Species NOAEL Application Route	:	Oral



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	sure time et Organs toms	: 24 Months : Central nervous : Tremors, ataxia	system
Expos Targe Symp Rema Speci NOAE Applic Expos	EL EL cation Route sure time et Organs toms trks es	<ul> <li>Dog</li> <li>0,25 mg/kg</li> <li>0,5 mg/kg</li> <li>Oral</li> <li>53 Weeks</li> <li>Central nervous</li> <li>Tremors, weight</li> <li>mortality observed</li> <li>Monkey</li> <li>1,0 mg/kg</li> <li>Oral</li> <li>14 Weeks</li> <li>Central nervous</li> </ul>	ed
Not cl Expe	ation toxicity assified based on ava rience with human e ponents:		
abam Inges	•	: Symptoms: May	avermectin B1b) (ISO): cause, Tremors, Diarrhoea, central nervous Salivation, tearing

# **SECTION 12: Ecological information**

### 12.1 Toxicity

Components:

# abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Toxicity to fish :	LC50 (Oncorhynchus mykiss (rainbow trout)): 3,2 µg/l Exposure time: 96 h
	LC50 (Lepomis macrochirus (Bluegill sunfish)): 9,6 µg/l Exposure time: 96 h
	LC50 (Ictalurus punctatus (channel catfish)): 24 µg/l Exposure time: 96 h
	LC50 (Cyprinus carpio (Carp)): 42 µg/l Exposure time: 96 h
	LC50 (Cyprinodon variegatus (sheepshead minnow)): 15 µg/l Exposure time: 96 h
Toxicity to daphnia and other : aquatic invertebrates	EC50 (Americamysis): 0,022 μg/l Exposure time: 96 h



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				EC50 (Daphnia m Exposure time: 48	nagna (Water flea)): 0,34 μg/l 3 h		
	Toxicit <u>;</u> plants	y to algae/aquatic	•	EC50 (Pseudokiro mg/l Exposure time: 72	chneriella subcapitata (green algae)): 100 2 h		
	M-Fact icity)	or (Acute aquatic tox-	:	10.000			
	Toxicit	y to microorganisms	:	EC50 : > 1.000 m Exposure time: 3 Test Type: Respir	ĥ		
	Toxicit <u>;</u> icity)	y to fish (Chronic tox-	:	NOEC: 0,52 µg/l Exposure time: 32 Species: Pimepha	2 d ales promelas (fathead minnow)		
		y to daphnia and other c invertebrates (Chron- ity)	:	NOEC: 0,03 µg/l Exposure time: 2′ Species: Daphnia	1 d i magna (Water flea)		
				NOEC: 0,0035 µg Exposure time: 28 Species: Mysidop			
	M-Fact toxicity	or (Chronic aquatic	:	10.000			
12.2 Persistence and degradability							
	Comp	onents:					
		•	ave		avermectin B1b) (ISO):		
		y in water	:	Hydrolysis: 50 %(	(< 12 h)		
		cumulative potential					
	Comp	onents:					
	abame	ectin (combination of a	ave	rmectin B1a and a	avermectin B1b) (ISO):		
	Bioacc	umulation	:	Bioconcentration	factor (BCF): 52		
ĺ	Partitio octano	n coefficient: n- I/water	:	log Pow: 4			
12.4	12.4 Mobility in soil						
	Components:						
	Distrib		ave :	rmectin B1a and a log Koc: > 3,6	avermectin B1b) (ISO):		
12.5	Result	s of PBT and vPvB as	sse	ssment			
	<u>Produ</u>	<u>ct:</u>					



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Assessment		:	: This substance/mixture contains no components consid to be either persistent, bioaccumulative and toxic (PBT) very persistent and very bioaccumulative (vPvB) at leve 0.1% or higher.			
12.6 Othe	r adverse effects					
Produ	uct:					
Endocrine disrupting poten- tial		:	<ul> <li>The substance/mixture does not contain components contend to have endocrine disrupting properties according REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/6 levels of 0.1% or higher.</li> </ul>			

## **SECTION 13: Disposal considerations**

13.1 Waste treatment methods	
Product	<ul> <li>Dispose of in accordance with local regulations.</li> <li>According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.</li> <li>Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.</li> <li>Do not dispose of waste into sewer.</li> </ul>
Contaminated packaging	<ul> <li>Empty containers should be taken to an approved waste han- dling site for recycling or disposal.</li> <li>If not otherwise specified: Dispose of as unused product.</li> </ul>

## **SECTION 14: Transport information**

14.1 UN number
----------------

ADN	:	UN 3082
ADR	:	UN 3082
RID	:	UN 3082
IMDG	:	UN 3082
ΙΑΤΑ	:	UN 3082

## 14.2 UN proper shipping name

ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQ N.O.S. (abamectin (combination of avermectin B1a and avermed B1b) (ISO))	
ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQ N.O.S. (abamectin (combination of avermectin B1a and avermed B1b) (ISO))	,
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQ N.O.S. (abamectin (combination of avermectin B1a and avermed	,



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			B1b) (ISO))	
IMDG		:	N.O.S.	ALLY HAZARDOUS SUBSTANCE, LIQUID bination of avermectin B1a and avermectin
ΙΑΤΑ		:	Environmentally	hazardous substance, liquid, n.o.s. bination of avermectin B1a and avermectin
4.3 Transp	oort hazard class(es)			
			Class	Subsidiary risks
ADN		:	9	
ADR		:	9	
RID		:	9	
IMDG		:	9	
ΙΑΤΑ		:	9	
4.4 Packin	g group			
Classifi Hazard Labels Packing Classifi Hazard Labels Tunnel <b>RID</b> Packing Classifi	cation Code Identification Number restriction code g group cation Code Identification Number		III M6 90 9 III M6 90 9 (-) III M6 90 9 9 (-) III M6 90 9 1 9	
EmS C IATA (( Packing aircraft) Packing Packing Labels IATA (I	Cargo) g instruction (cargo g instruction (LQ) g group Passenger) g instruction (passen-	: : : : : : : : : : : : : : : : : : : :	F-A, S-F 964 Y964 III Miscellaneous 964	



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	Packin Labels	g group	:	III Miscellaneous	
14.5	i Enviro	onmental hazards			
	<b>ADN</b> Enviror	nmentally hazardous	:	yes	
	<b>ADR</b> Enviror	nmentally hazardous	:	yes	
	<b>RID</b> Enviror	nmentally hazardous	:	yes	
	<b>IMDG</b> Marine	pollutant	:	yes	
	•	Passenger) nmentally hazardous	:	yes	
		Cargo) nmentally hazardous	:	yes	

### 14.6 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.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

: Not applicable for product as supplied.

### **SECTION 15: Regulatory information**

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The components of this	product are reported in	the following inventories:
	preddet die reperted in	

AICS	:	not determined
DSL	:	not determined
IECSC	:	not determined

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

### **SECTION 16: Other information**

Other information	:	Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.
Full text of H-Statements		
H300	:	Fatal if swallowed.
H311	:	Toxic in contact with skin.



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H330 H361fc	1	: Sus	al if inhaled. pected of dan orn child.	naging fertility. Suspected of damaging the			
H372		: Causes damage to organs through prolonged or repeated exposure if swallowed.					
H400		: Ver	: Very toxic to aquatic life.				
H410		: Very toxic to aquatic life with long lasting effects.					
Full text of other abbreviations							
	c Acute c Chronic	: Sho : Lon : Rep	<ul> <li>Acute toxicity</li> <li>Short-term (acute) aquatic hazard</li> <li>Long-term (chronic) aquatic hazard</li> <li>Reproductive toxicity</li> <li>Specific target organ toxicity - repeated exposure</li> </ul>				

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

### Further information

Sources of key data used to				
compile the Safety Data				
Sheet				

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

### **Classification of the mixture:**

**Classification procedure:** 



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Acute	Tox. 4	H332	Calculation method
STOT	RE 2	H373	Calculation method
Aquat	tic Acute 1	H400	Calculation method
Aquat	tic Chronic 1	H410	Calculation method

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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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