



Vers 9.0	ion	Revision Date: 06.07.2024		S Number: 4361-00025	Date of last issue: 06.04.2024 Date of first issue: 09.01.2017
SEC	TION 1	DENTIFICATION			
	Produc	t name	:	Ivermectin Liquid	Formulation
	Manufa	acturer or supplier's d	letai	ls	
	Compa		:		Pty Limited (trading as MSD Animal Health)
	Addres	S	:	91-105 Harpin St Bendigo 3550, V	
	Telepho	one	:	1 800 033 461	
	Emerge	ency telephone number	· :	Poisons Informat	ion Centre: Phone 13 11 26
	E-mail	address	:	EHSDATASTEW	/ARD@msd.com
	Recom	mended use of the ch	nemi	ical and restriction	ons on use
		mended use tions on use	:	Veterinary produce Not applicable	ct

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

GHS Classification Skin corrosion/irritation	:	Category 2
Serious eye damage/eye irri- tation	:	Category 2A
Reproductive toxicity	:	Category 1B
Specific target organ toxicity - single exposure (Oral)	:	Category 2 (Central nervous system)
Specific target organ toxicity - single exposure	:	Category 3
Specific target organ toxicity - repeated exposure (Oral)	:	Category 2 (Central nervous system)
GHS label elements Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H315 Causes skin irritation.





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		H335 May cau H360D May da H371 May cau swallowed. H373 May cau	serious eye irritation. se respiratory irritation. amage the unborn child. se damage to organs (Central nervous system) i se damage to organs (Central nervous system) ged or repeated exposure if swallowed.
Preca	autionary statements	P202 Do not h and understoo P260 Do not b P264 Wash sk P270 Do not e P271 Use only	reathe mist or vapours. in thoroughly after handling. at, drink or smoke when using this product. outdoors or in a well-ventilated area. ptective gloves/ protective clothing/ eye protec-
		P304 + P340 - and keep com doctor if you fe P305 + P351 - for several mir easy to do. Co P308 + P311 I CENTER/ doc P332 + P313 I tion.	<ul> <li>P338 IF IN EYES: Rinse cautiously with water nutes. Remove contact lenses, if present and ntinue rinsing.</li> <li>F exposed or concerned: Call a POISON</li> </ul>
		<b>Storage:</b> P405 Store loc	sked up.
		<b>Disposal:</b> P501 Dispose disposal plant.	of contents/ container to an approved waste
None	r hazards which do na known. 3. COMPOSITION/INI		

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Oils, sesame	8008-74-0	>= 60 -<= 100
N-Methyl-2-pyrrolidone	872-50-4	>= 10 -< 20





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Iverm	ectin		70288-86-7	>= 1 -< 10	
ECTION	4. FIRST AID MEASUR	ES			
Gene	ral advice	vice immediat	ely.	l unwell, seek medical ad- ses of doubt seek medical	
lf inha	aled		nove to fresh air.		
In cas	se of skin contact	: In case of con for at least 15 and shoes. Get medical a Wash clothing	tact, immediately flus minutes while remov	h skin with plenty of water ing contaminated clothing se.	
In cas	se of eye contact	: In case of con for at least 15	tact, immediately flus minutes. remove contact lens,	h eyes with plenty of water	
lf swa	llowed	: If swallowed, I Get medical a Rinse mouth t	DO NOT induce vomi ttention. horoughly with water.	-	
	important symptoms ffects, both acute and ed	: Causes skin ir Causes seriou May cause res May damage May cause da	ritation. us eye irritation. spiratory irritation. the unborn child. mage to organs if sw mage to organs throu		
	ction of first-aiders s to physician	: First Aid response and use the re- when the pote	onders should pay att		
	5. FIREFIGHTING MEA	• •		- ,	
Suitat	ole extinguishing media	: Water spray Alcohol-resist Carbon dioxid			
Unsui media	table extinguishing	Dry chemical : None known.			
	fic hazards during fire-	: Exposure to c	ombustion products n	nay be a hazard to health.	
	rdous combustion prod-	: Carbon oxides Nitrogen oxide			





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for fi	cial protective equipment refighters chem Code	:	so. Evacuate area. In the event of t	naged containers from fire area if it is safe to de fire, wear self-contained breathing apparatus. rotective equipment.
SECTION	16. ACCIDENTAL RELE	AS	E MEASURES	
tive e	onal precautions, protec- equipment and emer- cy procedures	:	Follow safe har	rotective equipment. Indling advice (see section 7) and personal pro- ent recommendations (see section 8).
Envi	ronmental precautions	:	Prevent further Prevent spread barriers). Retain and disp	o the environment. leakage or spillage if safe to do so. ing over a wide area (e.g. by containment or of pose of contaminated wash water. s should be advised if significant spillages ained.
	nods and materials for ainment and cleaning up	:	For large spills, ment to keep m be pumped, sto Clean up remai bent. Local or nationa posal of this ma employed in the mine which reg Sections 13 and	ert absorbent material. provide dyking or other appropriate contain- naterial from spreading. If dyked material can pre recovered material in appropriate container, ning materials from spill with suitable absor- al regulations may apply to releases and dis- aterial, as well as those materials and items e cleanup of releases. You will need to deter- ulations are applicable. d 15 of this SDS provide information regarding national requirements.
SECTION	7. HANDLING AND ST	OR	AGE	
Tech	nnical measures	:		g measures under EXPOSURE
Loca	l/Total ventilation	:	If sufficient ven	ERSONAL PROTECTION section. tilation is unavailable, use with local exhaust
Advi	ce on safe handling	:	Do not swallow Do not get in ey Wash skin thore	mist or vapours.



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Hygie	ene measures	tory irritants or Do not eat, drin Take care to pr environment. : If exposure to c	their physician regarding working with respira- sensitisers. In or smoke when using this product. revent spills, waste and minimize release to the chemical is likely during typical use, provide eye as and safety showers close to the working
Conc	litions for safe storage	When using do Wash contamir The effective of engineering co appropriate deg industrial hygie use of administ : Keep in proper Store locked up Keep tightly clo	ly labelled containers.
Mate	rials to avoid	Store in accord	ance with the particular national regulations. th the following product types:

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Oils, sesame	8008-74-0	TWA (Mist)	10 mg/m3	AU OEL
N-Methyl-2-pyrrolidone	872-50-4	TWA	25 ppm 103 mg/m3	AU OEL
	Further information: Skin absorption			
		STEL	75 ppm 309 mg/m3	AU OEL
	Further information: Skin absorption			
Ivermectin	70288-86-7	TWA	30 µg/m3 (OEB 3)	Internal
	Further inform	ation: Skin	· · · · ·	
		Wipe limit	300 µg/100 cm2	Internal

### **Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sam- pling time	Permissible concentra- tion	Basis
N-Methyl-2-pyrrolidone	872-50-4	5-Hydroxy- N-methyl-2- pyrrolidone	Urine	End of shift (As soon as possible after	100 mg/l	ACGIH BEI





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			exposure ceases)
_	neering measures	technolog less quic All engine design ar protect p Containm are requi the comp tainment Minimize	ropriate engineering controls and manufacturing gies to control airborne concentrations (e.g., drip- k connections). eering controls should be implemented by facility nd operated in accordance with GMP principles to roducts, workers, and the environment. nent technologies suitable for controlling compounds ired to control at source and to prevent migration of bound to uncontrolled areas (e.g., open-face con- devices). e open handling.
Perso	onal protective equip	ment	
Fil	iratory protection Iter type protection	sure asse ommend	ate local exhaust ventilation is not available or expo- essment demonstrates exposures outside the rec- ed guidelines, use respiratory protection. ed particulates and organic vapour type
Ma	aterial	: Chemica	I-resistant gloves
	emarks protection	: Wear saf If the wor mists or a Wear a fa	r double gloving. fety glasses with side shields or goggles. rk environment or activity involves dusty conditions, aerosols, wear the appropriate goggles. aceshield or other full face protection if there is a for direct contact to the face with dusts, mists, or
Skin a	and body protection	: Work uni Additiona task bein posable s Use appr	iform or laboratory coat. al body garments should be used based upon the ng performed (e.g., sleevelets, apron, gauntlets, dis- suits) to avoid exposed skin surfaces. ropriate degowning techniques to remove potentially nated clothing.
SECTION	9. PHYSICAL AND C	HEMICAL PRO	PERTIES
Appe	arance	: liquid	
Colou	ır	: light yell	low
Odou	r	: characte	eristic
Odou	r Threshold	: No data	available

- pH : No data available
- Melting point/freezing point : No data available
- Initial boiling point and boiling : No data available

### SAFETY DATA SHEET



# **Ivermectin Liquid Formulation**

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	range				
	Flash p	point	:	> 100 °C	
	Evapor	ation rate	:	No data available	9
	Flamma	ability (solid, gas)	:	Not applicable	
	Flamma	ability (liquids)	:	No data available	9
		explosion limit / Upper bility limit	:	No data available	9
		explosion limit / Lower bility limit	:	No data available	9
	Vapour	pressure	:	No data available	9
	Relative	e vapour density	:	No data available	9
	Relative	e density	:	No data available	9
	Density	/	:	0.90 - 0.92 g/cm <sup>3</sup>	3
	Solubili Wat	ity(ies) er solubility	:	insoluble	
		n coefficient: n-	:	Not applicable	
	octanol Auto-ig	nition temperature	:	No data available	9
	Decom	position temperature	:	No data available	9
	Viscosi Visc	ty cosity, kinematic	:	No data available	9
	Explosi	ve properties	:	Not explosive	
	Oxidiziı	ng properties	:	The substance o	r mixture is not classified as oxidizing.
	Molecu	lar weight	:	No data available	9
	Particle Particle	e characteristics e size	:	Not applicable	

### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.





Possibility of hazardous reations Conditions to avoid Incompatible materials Hazardous decomposition products <b>SECTION 11. TOXICOLOGICA</b> Exposure routes <b>Acute toxicity</b> Not classified based on ava <u>Product:</u> Acute oral toxicity Acute dermal toxicity <b>Components:</b> Oils, sesame: Acute oral toxicity Acute dermal toxicity Acute dermal toxicity Acute oral toxicity Acute oral toxicity Acute inhalation toxicity Acute inhalation toxicity <b>Ivermectin:</b> Acute oral toxicity		5 Date of first issue: 09.01.2017
Exposure routesAcute toxicityNot classified based on availProduct:Acute oral toxicityAcute dermal toxicityComponents:Oils, sesame:Acute oral toxicityAcute dermal toxicityAcute oral toxicityAcute dermal toxicityAcute oral toxicityAcute dermal toxicityAcute oral	: None know : Oxidizing a	
Acute toxicityNot classified based on availProduct:Acute oral toxicityAcute dermal toxicityComponents:Oils, sesame:Acute oral toxicityAcute dermal toxicityAcute dermal toxicityAcute oral toxicityAcute dermal toxicityAcute oral toxicityAcute o	L INFORMATION	
<ul> <li>Not classified based on available</li> <li>Product: Acute oral toxicity</li> <li>Acute dermal toxicity</li> <li>Components: Oils, sesame: Acute oral toxicity</li> <li>Acute dermal toxicity</li> <li>Acute dermal toxicity</li> <li>Acute oral toxicity</li> <li>Acute oral toxicity</li> <li>Acute inhalation toxicity</li> <li>Acute dermal toxicity</li> <li>Acute dermal toxicity</li> </ul>	: Inhalation Skin contact Ingestion Eye contact	
Product:Acute oral toxicityAcute dermal toxicityComponents:Oils, sesame:Acute oral toxicityAcute dermal toxicityAcute dermal toxicityAcute oral toxicity	- 11 - 11 - 11 - 11 - 11 - 11 - 11 - 1	
Acute oral toxicityAcute dermal toxicityComponents:Oils, sesame:Acute oral toxicityAcute dermal toxicityAcute dermal toxicityAcute oral toxicityAcute oral toxicityAcute inhalation toxicityAcute dermal toxicityAcute inhalation toxicityAcute dermal toxicity	allable information.	
Components: Oils, sesame: Acute oral toxicity Acute dermal toxicity Acute dermal toxicity Acute oral toxicity Acute inhalation toxicity Acute dermal toxicity Ivermectin:		ty estimate: > 2,000 mg/kg Iculation method
Oils, sesame: Acute oral toxicityAcute oral toxicityAcute dermal toxicityN-Methyl-2-pyrrolidone: Acute oral toxicityAcute oral toxicityAcute inhalation toxicityAcute dermal toxicityAcute dermal toxicityIvermectin:		ty estimate: > 2,000 mg/kg Iculation method
Acute oral toxicity Acute dermal toxicity N-Methyl-2-pyrrolidone: Acute oral toxicity Acute inhalation toxicity Acute dermal toxicity Ivermectin:		
Acute dermal toxicity          N-Methyl-2-pyrrolidone:         Acute oral toxicity         Acute inhalation toxicity         Acute dermal toxicity         Ivermectin:		
N-Methyl-2-pyrrolidone: Acute oral toxicity Acute inhalation toxicity Acute dermal toxicity Ivermectin:	: LD50 (Rat): Remarks: Ba	> 2,000 mg/kg ased on data from similar materials
Acute oral toxicity Acute inhalation toxicity Acute dermal toxicity Ivermectin:	: LD50 (Rabb	bit): > 2,000 mg/kg
Acute oral toxicity Acute inhalation toxicity Acute dermal toxicity Ivermectin:		
Acute dermal toxicity	: LD50 (Rat):	4,150 mg/kg
Ivermectin:		
	: LD50 (Rat):	> 5,000 mg/kg
	: LD50 (Rat):	50 mg/kg
	LD50 (Mous	se): 25 mg/kg
	LD50 (Monk Target Orga Symptoms:	key): > 24 mg/kg ans: Central nervous system Vomiting, Dilatation of the pupil lo mortality observed at this dose.

### SAFETY DATA SHEET



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rsion )	Revision Date: 06.07.2024		OS Number: 04361-00025	Date of last issue: 06.04.2024 Date of first issue: 09.01.2017
Acute	inhalation toxicity		LC50 (Rat): 5.1 <sup>-</sup>	1 ma/l
	,		Exposure time: Test atmosphere	1 h
Acute	dermal toxicity	:	LD50 (Rabbit): 4	106 mg/kg
			LD50 (Rat): > 60	60 mg/kg
-	corrosion/irritation es skin irritation.			
<u>Comp</u>	oonents:			
Oils,	sesame:			
Speci Resul		:	Rabbit No skin irritation	
	thyl-2-pyrrolidone:			
Resul	t	:	Skin irritation	
lverm	ectin:			
Speci Resul		:	Rabbit No skin irritation	
Resul		•	NO SKIII IIItation	
	us eye damage/eye i		on	
	es serious eye irritation	n.		
<u>Comp</u>	oonents:			
Oils,	sesame:			
Speci Resul		:	Rabbit No eye irritation	
N-Me	thyl-2-pyrrolidone:			
Speci		:	Rabbit	
Resul	τ	:	irritation to eyes	, reversing within 21 days
lverm	ectin:			
Speci		:	Rabbit	
Resul	t	:	Mild eye irritatio	n
Resp	iratory or skin sensit	tisatio	n	
-	sensitisation			

Not classified based on available information.





rsion	Revision Date: 06.07.2024	-	0S Number: 04361-00025	Date of last issue: 06.04.2024 Date of first issue: 09.01.2017
Rosni	iratory sensitisatior	•		
-	assified based on av		information	
		allable	information.	
Comp	oonents:			
Oils, s	sesame:			
Test 7		:		nsult patch test (HRIPT)
Expos Resul	sure routes	:	Skin contact	
Resul	l	·	negative	
N-Me	thyl-2-pyrrolidone:			
Test 7	Гуре	:	Local lymph no	de assay (LLNA)
	sure routes	:	Skin contact	
Speci		:	Mouse	
Metho Resul		:	OECD Test Gu negative	Ideline 429
Rema		:		from similar materials
lverm	ectin:			
	sure routes	:	Dermal	
Speci Resul		:	Humans	akin constitution
Resul	l	•	Does not cause	skin sensitisation.
Chro	nic toxicity			
Germ	cell mutagenicity			
Not cl	assified based on av	ailable	information.	
Comp	oonents:			
Oils,	sesame:			
	toxicity in vitro	:	Test Type: Bac	terial reverse mutation assay (AMES)
	······	-	Result: negative	
NI 84-1	(h)) 0 m·····			
	thyl-2-pyrrolidone: toxicity in vitro	:	Test Type: Rac	terial reverse mutation assay (AMES)
Geno		•		Test Guideline 471
			Result: negative	
			Ū	
				tro mammalian cell gene mutation test Test Guideline 476
			Result: negative	
			-	
				A damage and repair, unscheduled DNA sy
			Result: negative	nalian cells (in vitro)
			Result. negative	
Geno	toxicity in vivo	:		nmalian erythrocyte micronucleus test (in v
			cytogenetic ass	av)
			Species: Mouse	





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		Application Rou Method: OECD Result: negative	Test Guideline 474
		cytogenetic tes Species: Hams Application Rou	ute: Ingestion • Test Guideline 475
-	nectin:		
Geno	toxicity in vitro	: Test Type: Bac Result: negative	terial reverse mutation assay (AMES) e
		thesis in mamm	A damage and repair, unscheduled DNA syn- nalian cells (in vitro) uman diploid fibroblasts e
		Test Type: Mou	use Lymphoma
		Result: negative	e
	i <b>nogenicity</b> lassified based on av	Result: negative	e
Not c		Result: negative	e
Not c <u>Com</u>	lassified based on av	Result: negative	e
Not c <u>Com</u> N-Me Speci Applie	lassified based on av ponents: hthyl-2-pyrrolidone: ies cation Route sure time	Result: negative	e
Not c <u>Com</u> N-Me Speci Applie Expos Resu	lassified based on av ponents: hthyl-2-pyrrolidone: ies cation Route sure time It	Result: negative vailable information. : Rat : Ingestion : 2 Years	e
Not c Com N-Me Speci Applie Resu Speci Applie	lassified based on av ponents: ethyl-2-pyrrolidone: ies cation Route sure time It ies cation Route	Result: negative vailable information. : Rat : Ingestion : 2 Years : negative : Rat : inhalation (vapo	
Not c Com N-Me Speci Applie Resu Speci Applie	lassified based on av ponents: ethyl-2-pyrrolidone: ies cation Route sure time It ies cation Route sure time	Result: negative vailable information. : Rat : Ingestion : 2 Years : negative : Rat	
Not c <u>Com</u> N-Me Speci Applie Expo: Resu Speci Applie Expo: Resu	lassified based on av ponents: ethyl-2-pyrrolidone: ies cation Route sure time It ies cation Route sure time	Result: negative railable information. : Rat : Ingestion : 2 Years : negative : Rat : inhalation (vapo : 2 Years	
Not c <u>Com</u> N-Me Speci Applie Expos Resu Speci Applie Expos Resu Iverm Speci	lassified based on av ponents: athyl-2-pyrrolidone: ies cation Route sure time lt ies cation Route sure time lt hectin: ies	Result: negative vailable information. : Rat : Ingestion : 2 Years : negative : Rat : inhalation (vapo : 2 Years : negative : negative : Rat	
Not c <u>Com</u> N-Me Speci Applie Expo: Resu Speci Applie Expo: Resu Iverm Speci Applie	lassified based on av ponents: athyl-2-pyrrolidone: ies cation Route sure time It ies cation Route sure time It hectin: ies cation Route	Result: negative vailable information. : Rat : Ingestion : 2 Years : negative : Rat : inhalation (vapo : 2 Years : negative : Rat : negative : Rat : Oral	our)
Not c <u>Com</u> N-Me Speci Applie Expo: Resu Speci Applie Expo: Resu Iverm Speci Applie NOAI	lassified based on av ponents: athyl-2-pyrrolidone: ies cation Route sure time lt ies cation Route sure time lt hectin: ies cation Route EL	Result: negative vailable information. : Rat : Ingestion : 2 Years : negative : Rat : inhalation (vapo : 2 Years : negative : Rat : negative : Rat : Oral : 1.5 mg/kg body	our)
Not c <u>Com</u> N-Me Speci Applie Expo: Resu Speci Applie Expo: Resu Iverm Speci Applie	lassified based on av ponents: hthyl-2-pyrrolidone: ies cation Route sure time It ies cation Route sure time It hectin: ies cation Route EL It	Result: negative vailable information. : Rat : Ingestion : 2 Years : negative : Rat : inhalation (vapo : 2 Years : negative : Rat : Oral : 1.5 mg/kg body : negative	our)
Not c <u>Com</u> N-Me Speci Applie Expo: Resu Speci Applie Expo: Resu Iverm Speci Applie Expo: Resu Speci Speci Applie Expo: Resu Speci Speci Applie Expo: Resu Speci Speci Applie Expo: Resu Speci Spe	lassified based on av ponents: athyl-2-pyrrolidone: ies cation Route sure time It ies cation Route sure time It nectin: ies cation Route EL It arks ies	Result: negative vailable information. : Rat : Ingestion : 2 Years : negative : Rat : inhalation (vapo : 2 Years : negative : Rat : Oral : 1.5 mg/kg body : negative : Based on data : Mouse	our)
Not c <u>Com</u> N-Me Speci Applie Expo: Resu Speci Applie Expo: Resu Iverm Speci Applie Expo: Resu Speci Applie Expo: Resu Speci Applie Expo: Resu Speci Applie Expo: Resu Speci Applie Expo: Resu Speci Applie Expo: Resu Speci Applie Expo: Resu Speci Applie Expo: Resu Speci Applie Expo: Resu Speci Applie Expo: Resu Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Resu Speci Applie Resu Speci Applie Resu Speci Applie Resu Speci Applie Resu Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie Speci Applie	lassified based on av ponents: athyl-2-pyrrolidone: ies cation Route sure time It ies cation Route sure time It nectin: ies cation Route EL It arks ies cation Route	Result: negative vailable information. : Rat : Ingestion : 2 Years : negative : Rat : inhalation (vapo : 2 Years : negative : Rat : Oral : 1.5 mg/kg body : negative : Based on data : Mouse : Oral	our) / weight from similar materials
Not c <u>Com</u> N-Me Speci Applie Expo: Resu Speci Applie Expo: Resu Iverm Speci Applie Expo: Resu Speci Speci Applie Expo: Resu Speci Speci Applie Expo: Resu Speci Speci Applie Expo: Resu Speci Spe	lassified based on av ponents: athyl-2-pyrrolidone: ies cation Route sure time It ies cation Route sure time It nectin: ies cation Route EL It arks ies cation Route EL	Result: negative vailable information. : Rat : Ingestion : 2 Years : negative : Rat : inhalation (vapo : 2 Years : negative : Rat : Oral : 1.5 mg/kg body : negative : Based on data : Mouse	our) / weight from similar materials



Dama	- lunding tourisity.			
May d	oductive toxicity lamage the unborn chil ponents:	d.		
N-Me	thyl-2-pyrrolidone:			
	s on fertility	:	Species: Rat Application Rout	Test Guideline 416
Effect ment	s on foetal develop-	:	Species: Rat Application Rout	ryo-foetal development te: Ingestion Test Guideline 414
			Species: Rat	lity/early embryonic development te: inhalation (vapour)
			Test Type: Embr Species: Rabbit Application Rout Result: positive	ryo-foetal development te: Ingestion
Repro sessm	oductive toxicity - As- nent	:	Clear evidence o animal experime	of adverse effects on development, based o ents.
lverm	ectin:			
Effect	s on fertility	:		
Effect ment	s on foetal develop-	:	Result: Teratoge	
			Test Type: Deve Species: Rat Application Rout Developmental T	





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		spring were	he mechanism or mode of action may not be rele-
		Species: Ra Application Result: Tera	
May	<b>F - single exposure</b> cause respiratory irritati cause damage to organ		s system) if swallowed.
Com	ponents:		
N-Me	thyl-2-pyrrolidone:		
Asse	ssment	: May cause	respiratory irritation.
lvern	nectin:		
	et Organs ssment		vous system nage to organs.
May	<b>F - repeated exposure</b> cause damage to organ allowed.	s (Central nervou	s system) through prolonged or repeated exposure
Com	ponents:		
lvern	nectin:		
	et Organs ssment		ous system nage to organs through prolonged or repeated
Repe	ated dose toxicity		
-	ponents:		
N-Me	thyl-2-pyrrolidone:		
Spec NOA LOAE Appli	ies EL EL cation Route sure time	: Rat, male : 169 mg/kg : 433 mg/kg : Ingestion : 90 Days : OECD Test	Guideline 408
Spec NOA LOAE	EL	: Rat : 0.5 mg/l : 1 mg/l	



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	ication Route	: inhalation (du	st/mist/fume)					
Expo Meth	osure time	: 96 Days · OFCD Test G	uideline 413					
Weth	lou	. OLOD Test O	: OECD Test Guideline 413					
Spec		: Rabbit						
NOA LOAI		: 826 mg/kg						
	⊏∟ ication Route	: 1,653 mg/kg : Skin contact						
	osure time	: 20 Days						
lverr	nectin:							
Spec		: Dog						
NOA LOAI		: 0.5 mg/kg						
	ication Route	: 1 mg/kg : Oral						
	sure time	: 14 Weeks						
	et Organs	: Central nervo						
Sym	ptoms	: Dilatation of the	ne pupil, Tremors, Lack of coordination, anorexia					
Spec		: Monkey						
NOA	EL ication Route	: 1.2 mg/kg : Oral						
	sure time	: 2 Weeks						
Rem			: No significant adverse effects were reported					
Spec		: Rat						
NOA		: 0.4 mg/kg						
LOA	EL ication Route	:    0.8 mg/kg :    Oral						
	sure time	: 3 Months						
	et Organs		marrow, Kidney					
-	ration toxicity							
	classified based on av							
-	erience with human e	exposure						
	ponents:							
	ethyl-2-pyrrolidone:	: Symptoms: SI	kin irritation					
-		. Cympionis. Si						
	nectin:							
	contact contact	: Remarks: Car : Remarks: May	n be absorbed through skin.					
Inges			rowsiness, Dilatation of the pupil, Tremors, Vom-					





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ECTION	12. ECOLOGICAL INFO	ORN	IATION	
Ecoto	oxicity			
<u>Com</u>	oonents:			
N-Me	thyl-2-pyrrolidone:			
Toxic	ity to fish	:	LC50 (Oncorhyne Exposure time: 9	chus mykiss (rainbow trout)): > 500 mg/l 6 h
	ity to daphnia and other ic invertebrates	:	EC50 (Daphnia r Exposure time: 2 Method: DIN 384	
Toxic plants	ity to algae/aquatic	:	ErC50 (Desmode Exposure time: 7	esmus subspicatus (green algae)): 600.5 mg 2 h
			EC10 (Desmode Exposure time: 7	smus subspicatus (green algae)): 92.6 mg/l 2 h
	ity to daphnia and other ic invertebrates (Chron- icity)	:	Exposure time: 2	magna (Water flea)): 12.5 mg/l 1 d est Guideline 211
Toxic	ity to microorganisms	:	EC50: > 600 mg/ Exposure time: 3 Method: ISO 819	0 min
lverm	nectin:			
	ity to fish	:	LC50 (Oncorhyne Exposure time: 9	chus mykiss (rainbow trout)): 0.003 mg/l 6 h
			LC50 (Lepomis n Exposure time: 9	nacrochirus (Bluegill sunfish)): 0.0048 mg/l 6 h
	ity to daphnia and other ic invertebrates	:	EC50 (Daphnia n Exposure time: 4	nagna (Water flea)): 0.000025 mg/l 8 h
Toxic plants	ity to algae/aquatic	:	mg/l Exposure time: 7	chneriella subcapitata (green algae)): > 9.1 2 h est Guideline 201
			mg/l Exposure time: 7	rchneriella subcapitata (green algae)): 9.1 2 h

Method: OECD Test Guideline 201





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Persi	stence and degrada	bility		
<u>Comp</u>	oonents:			
Oils,	sesame:			
Biode	gradability	:	Result: Readily	biodegradable.
N-Me	thyl-2-pyrrolidone:			
	gradability	:		biodegradable.
			Biodegradation Exposure time:	28 d
			Method: OECD	Test Guideline 301C
lverm	ectin:			
Biode	gradability	:	Result: Not rea Biodegradation	dily biodegradable.
			Exposure time:	
Bioad	cumulative potentia	al		
	ponents:			
	thyl-2-pyrrolidone:			
	on coefficient: n-	:	log Pow: -0.46	
octan	ol/water		Method: OECD	Test Guideline 107
lverm	ectin:			
Bioac	cumulation	:	Bioconcentratio	on factor (BCF): 74
	on coefficient: n- ol/water	:	log Pow: 3.22	
	l <b>ity in soil</b> Ita available			
	r <b>adverse effects</b> ata 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.





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

### International Regulations

UNRTDG		
UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ivermectin)
Class	:	9
Packing group	:	III
Labels	:	9
Environmentally hazardous	:	yes
IATA-DGR		
UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Ivermectin)
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passen- ger aircraft)	:	964
Environmentally hazardous	:	yes
IMDG-Code		
UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
		(Ivermectin)
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.

### **National Regulations**

<b>ADG</b> UN number Proper shipping name	:	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ivermectin)
Class	:	9
Packing group	:	
Labels	:	9
Hazchem Code	:	•3Z
Environmentally hazardous	:	yes



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#### 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	Schedule 7 (Please use the original publication to check for specific uses, specific conditions or threshold limits that might apply for this chemical)			
Prohibition/Licensing Requirements		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 determined			
IECSC :	not determined			

### SECTION 16: ANY OTHER RELEVANT INFORMATION

#### Further information

Revision Date	:	06.07.2024
Sources of key data used to	:	Internal technical data, data from raw material SDSs, OECD
compile the Safety Data		eChem Portal search results and European Chemicals Agen-
Sheet		cy, http://echa.europa.eu/

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

Date format	:	dd.mm.yyyy	
Full text of other abbreviations			
		ACGIH - Biological Exposure Indices (BEI)	
AU OEL	•	Australia. Workplace Exposure Standards for Airborne Con- taminants.	
AU OEL / TWA AU OEL / STEL	:	Exposure standard - time weighted average Exposure standard - short term exposure limit	

### SAFETY DATA SHEET



### Ivermectin Liquid Formulation

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AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant: DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials 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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