according to the Globally Harmonized System



# Permethrin (5%) Liquid Formulation

Version	Revision Date: 30.09.2023	SDS Number:	Date of last issue: 04.04.2023
1.4		10843966-00005	Date of first issue: 31.08.2022

#### **1. PRODUCT AND COMPANY IDENTIFICATION**

Product name	:	Permethrin (5%) Liquid Formulation						
Manufacturer or supplier's details								
Company	:	MSD						
Address	:	Briahnager - Off Pune Nagar Road Wagholi - Pune - India 412 207						
Telephone	:	+1-908-740-4000						
Emergency telephone number	:	+1-908-423-6000						
E-mail address	:	EHSDATASTEWARD@msd.com						
Recommended use of the chemical and restrictions on use								
Recommended use Restrictions on use	:	Veterinary product Not applicable						

#### 2. HAZARDS IDENTIFICATION

#### Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

#### Classification

Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

GHS Classification		
Skin sensitisation	•	Category 1
Aspiration hazard	:	Category 1
Short-term (acute) aquatic hazard	:	Category 1
Long-term (chronic) aquatic hazard	:	Category 1
GHS label elements		
Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H304 May be fatal if swallowed and enters airways. H317 May cause an allergic skin reaction.

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		H410 Very toxic	to aquatic life with long lasting effects.
Precaut	ionary statements	P272 Contamin the workplace.	athing mist or vapours. ated work clothing should not be allowed out of ease to the environment. tective gloves.
		immediately. P302 + P352 IF P331 Do NOT ii P333 + P317 If	skin irritation or rash occurs: Get medical help. ake off contaminated clothing and wash it before
		<b>Storage:</b> P405 Store lock	ked up.
		<b>Disposal:</b> P501 Dispose c disposal plant.	of contents/ container to an approved waste

#### Other hazards which do not result in classification

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	>= 90 - <= 100
Permethrin (ISO)	52645-53-1	>= 5 - < 10

#### 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical ad- vice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled In case of skin contact		If inhaled, remove to fresh air. Get medical attention if symptoms occur. In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention.

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	In case of eye contact If swallowed Most important symptoms and effects, both acute and delayed Protection of first-aiders Notes to physician		: : : :	Wash clothing before reuse. Thoroughly clean shoes before reuse. Flush eyes with water as a precaution. Get medical attention if irritation develops and persists. If swallowed, DO NOT induce vomiting. If vomiting occurs have person lean forward. Call a physician or poison control centre immediately. Never give anything by mouth to an unconscious person. May be fatal if swallowed and enters airways. May cause an allergic skin reaction. This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning. First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8). Treat symptomatically and supportively.			
5. FII	REFIGH	ITING MEASURES					
:	Suitable	e extinguishing media	:	Water spray Alcohol-resistant Carbon dioxide (C			
   	media Specific fighting	ble extinguishing c hazards during fire- ous combustion prod-	:	Dry chemical None known. Exposure to comb Carbon oxides Chlorine compour	pustion products may be a hazard to health.		
	ods	e extinguishing meth- protective equipment ghters	:	Use extinguishing cumstances and t Use water spray t Remove undamag so. Evacuate area. In the event of fire	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 e, wear self-contained breathing apparatus. rective equipment.		
6. AC		ITAL RELEASE MEAS	SUF	RES			
t	tive equ	al precautions, protec- upment and emer- procedures	:	Follow safe handl	ective equipment. ing advice (see section 7) and personal pro- recommendations (see section 8).		
	Environ	mental precautions	:	Avoid release to t	he 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.

#### Methods and materials for : Soak up with inert absorbent material.

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contai	nment and cleaning up	ment to keep may be pumped, store Clean up remaining bent. Local or national posal of this mate employed in the of mine which regul Sections 13 and	rovide dyking or other appropriate contain- terial from spreading. If dyked material can a recovered material in appropriate container. ng materials from spill with suitable absor- regulations may apply to releases and dis- erial, as well as those materials and items cleanup of releases. You will need to deter- ations are applicable. 15 of this SDS provide information regarding ational requirements.

#### 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	Use only with adequate ventilation.
Advice on safe handling	:	Do not get on skin or clothing. Avoid breathing mist or vapours.
		Do not swallow.
		Avoid contact with eyes.
		Handle in accordance with good industrial hygiene and safety
		practice, based on the results of the workplace exposure as-
		sessment
		Keep container tightly closed.
		Take care to prevent spills, waste and minimize release to the environment.
Conditions for safe storage	:	Keep in properly labelled containers.
		Store locked up.
		Keep tightly closed.
		Store in accordance with the particular national regulations.
Materials to avoid	:	Do not store with the following product types:
		Strong oxidizing agents

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

:

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Distillates (petroleum), solvent- dewaxed heavy paraffinic	64742-65-0	TWA (Mist)	5 mg/m3	IN OEL
		STEL (Mist)	10 mg/m3	IN OEL
		TWA (Inhal- able particu- late matter)	5 mg/m3	ACGIH
Permethrin (ISO)	52645-53-1	TWA	80 µg/m3 (OEB 3)	Internal
		Wipe limit	800 µg/100 cm <sup>2</sup>	Internal

Engineering measures

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

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		design and o protect produ Containment are required	ng controls should be implemented by facility perated in accordance with GMP principles to acts, workers, and the environment. technologies suitable for controlling compounds to control at source and to prevent migration of d to uncontrolled areas (e.g., open-face contain- b).
Perso	onal protective equip	ment	
Fil	iratory protection ter type protection	sure assessr ommended g	ocal exhaust ventilation is not available or expo- nent demonstrates exposures outside the rec- uidelines, use respiratory protection. articulates and organic vapour type
Ma	aterial	: Chemical-res	istant gloves
	emarks protection	If the work er mists or aero Wear a faces	Ible gloving. glasses with side shields or goggles. hvironment or activity involves dusty conditions, sols, wear the appropriate goggles. shield or other full face protection if there is a direct contact to the face with dusts, mists, or
Skin a	and body protection	: Work uniform Additional bo being perform suits) to avoid	n or laboratory coat. dy garments should be used based upon the task ned (e.g., sleevelets, apron, gauntlets, disposable d exposed skin surfaces. ate degowning techniques to remove potentially d clothing.
Hygie	ene measures	: If exposure to flushing syste place. When using of Contaminate workplace. Wash contam The effective engineering of appropriate of industrial hyg	b chemical is likely during typical use, provide eye ems and safety showers close to the working do not eat, drink or smoke. d work clothing should not be allowed out of the hinated clothing before re-use. operation of a facility should include review of controls, proper personal protective equipment, legowning and decontamination procedures, iene monitoring, medical surveillance and the istrative controls.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	clear
		amber
Odour	:	odourless

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Vers 1.4	sion	Revision Date: 30.09.2023		S Number: 43966-00005	Date of last issue: 04.04.2023 Date of first issue: 31.08.2022
	Odour T	Threshold	:	No data available	)
	рН		:	No data available	)
	Melting	point/freezing point	:	No data available	
	Initial be range	oiling point and boiling	:	No data available	•
	Flash p	oint	:	151.7 °C	
	Evapora	ation rate	:	No data available	
	Flamma	ability (solid, gas)	:	Not applicable	
	Flamma	ability (liquids)	:	Ignitable (see flas	sh point)
		explosion limit / Upper bility limit	:	No data available	3
		explosion limit / Lower bility limit	:	No data available	3
	Vapour	pressure	:	< 2 mmHg (25 °C	;)
	Relative	e vapour density	:	No data available	)
	Relative	e density	:	0.876 (20 °C)	
	Density		:	No data available	9
	Solubili Wate	ty(ies) er solubility	:	immiscible	
	Solu	bility in other solvents	:	completely miscil Solvent: Kerosine	
				completely miscil Solvent: Xylene	ble
	Partition octanol	n coefficient: n-	:	Not applicable	
		nition temperature	:	No data available	)
	Decom	position temperature	:	No data available	
	Viscosit Visc	ty osity, kinematic	:	39 mm2/s	
	Explosi	ve properties	:	Not explosive	

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ersion .4	Revision Date: 30.09.2023		S Number: 343966-00005	Date of last issue: 04.04.2023 Date of first issue: 31.08.2022
Oxidiz	zing properties	:	The substance o	r mixture is not classified as oxidizing.
Molec	cular weight	:	No data available	)
Partic	le size	:	Not applicable	
0. STABI	LITY AND REACTIVITY	,		
React Cherr	ivity ical stability	:	Not classified as Stable under nor	a reactivity hazard. mal conditions.
Possi tions	bility of hazardous reac-	:	Can react with st	rong oxidizing agents.
Incom	itions to avoid patible materials dous decomposition cts	:	None known. Oxidizing agents No hazardous de	composition products are known.
1. TOXIC	OLOGICAL INFORMAT	101		
Inforn expos	nation on likely routes of sure	:	Inhalation Skin contact Ingestion Eye contact	
	e toxicity assified based on availa	ble	nformation.	
Produ	uct:			
Acute	oral toxicity	:	Acute toxicity esti Method: Calculati	mate: > 5,000 mg/kg on method
Acute	inhalation toxicity	:	Acute toxicity esti Exposure time: 4 Test atmosphere: Method: Calculati	h dust/mist
<u>Comp</u>	oonents:			
	<u>ponents:</u> lates (petroleum), solve	ent-	dewaxed heavy p	araffinic:
Distil			LD50 (Rat): > 5,0 Method: OECD T	00 mg/kg
<b>Distil</b> Acute	lates (petroleum), solv		LD50 (Rat): > 5,0 Method: OECD T Remarks: Based LC50 (Rat): > 5.5 Exposure time: 4 Test atmosphere: Method: OECD T Assessment: The tion toxicity	00 mg/kg est Guideline 401 on data from similar materials 3 mg/l h dust/mist

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ersion 4	Revision Date: 30.09.2023		S Number: 843966-00005	Date of last issue: 04.04.2023 Date of first issue: 31.08.2022
			Remarks: Based	d on data from similar materials
	ethrin (ISO):			
Acute	e oral toxicity	:	LD50 (Rat): 480	- 554 mg/kg
Acute	inhalation toxicity	:	LC50 (Rat): 2.3 Exposure time: Test atmosphere	4 h
Acute	e dermal toxicity	:	LD50 (Rabbit): >	> 2,000 mg/kg
-	corrosion/irritation			
	lassified based on ava	allable	information.	
	ponents:			
	llates (petroleum), so	olvent	-	paraffinic:
Speci Resu		:	Rabbit No skin irritation	
Rema		:		rom similar materials
Perm	ethrin (ISO):			
Speci		:	Rabbit	
Resu	п		No skin irritation	
	<b>ous eye damage/eye</b> i lassified based on ava			
_	ponents:		mormation.	
Distil	llates (petroleum), so	olvent	dewaxed heavy	paraffinic:
Speci		:	Rabbit	
Metho		:	OECD Test Gui	
Resu Rema		:	No eye irritation Based on data f	rom similar materials
Perm	ethrin (ISO):			
Speci		:	Rabbit	
Resu	lt	:	No eye irritation	
Resp	iratory or skin sensi	tisatio	n	
-	sensitisation			
May o	cause an allergic skin	reactio	on.	
-	iratory sensitisation			
Not c	lassified based on ava	ailable	information.	

#### Components:

#### Distillates (petroleum), solvent-dewaxed heavy paraffinic:

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rsion 1	Revision Date: 30.09.2023	SDS Number: 10843966-00005	Date of last issue: 04.04.2023 Date of first issue: 31.08.2022
Test T Expos Specie Metho Result Rema	sure routes es od t	<ul> <li>Buehler Test</li> <li>Skin contact</li> <li>Guinea pig</li> <li>OECD Test Guid</li> <li>negative</li> <li>Based on data fill</li> </ul>	deline 406 rom similar materials
Perme	ethrin (ISO):		
Test T Expos Specie Result	sure routes es	: Buehler Test : Skin contact : Guinea pig : positive	
Asses	sment	: Probability or ev	idence of skin sensitisation in humans
Not cla	cell mutagenicity assified based on ava	ailable information.	
Distill	ates (petroleum), so	olvent-dewaxed heavy	paraffinic:
	toxicity in vitro	: Test Type: Bact Method: OECD Result: negative	erial reverse mutation assay (AMES) Test Guideline 471
Genot	toxicity in vivo	cytogenetic assa Species: Mouse Application Rou Method: OECD Result: negative	te: Intraperitoneal injection Test Guideline 474
Perm	ethrin (ISO):		
	toxicity in vitro	: Test Type: Bactor Result: negative	erial reverse mutation assay (AMES)
		Test Type: In vit Result: negative	ro mammalian cell gene mutation test
		Test Type: Chro Result: negative	mosome aberration test in vitro
			damage and repair, unscheduled DNA syn alian cells (in vitro)
		Test Type: Chro Result: positive	mosome aberration test in vitro
Genot	toxicity in vivo	: Test Type: Mam	malian erythrocyte micronucleus test (in viv

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sion	Revision Date: 30.09.2023	SDS Number: 10843966-00005	Date of last issue: 04.04.2023 Date of first issue: 31.08.2022
		cytogenetic ass Species: Mouse Result: negative	
		Test Type: Rod Species: Mouse Result: negative	
		cytogenetic ass Species: Rat	ite: Intraperitoneal injection
			ite: Ingestion
Germ	cell mutagenicity -	: Weight of evide cell mutagen.	nce does not support classification as a germ

Not classified based on available information.

#### **Components:**

#### Distillates (petroleum), solvent-dewaxed heavy paraffinic:

:	Mouse
:	Skin contact
:	78 weeks
:	OECD Test Guideline 451
:	negative
	:

#### Permethrin (ISO):

Species Result	:	Rat negative
Species Result	-	Mouse negative

#### **Reproductive toxicity**

Not classified based on available information.

#### **Components:**

Distillates (petroleum), solvent-dewaxed heavy paraffinic:

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Versic 1.4		Revision Date: 30.09.2023		S Number: 843966-00005	Date of last issue: 04.04.2023 Date of first issue: 31.08.2022
E	Effects c	on fertility	:	test Species: Rat Application Route Result: negative	duction/Developmental toxicity screening e: Ingestion on data from similar materials
	Effects c nent	on foetal develop-	:	Species: Rat Application Route Method: OECD T Result: negative	vo-foetal development e: Skin contact est Guideline 414 on data from similar materials
Р	Permeth	nrin (ISO):			
		on fertility	:	Test Type: Two-g Species: Rat Application Route Result: negative	eneration reproduction toxicity study
	Effects c nent	on foetal develop-	:		ined repeated dose toxicity study with the elopmental toxicity screening test e: Ingestion
s	STOT - s	single exposure			
		sified based on availa	ble	information.	
S	STOT - I	repeated exposure			
		sified based on availa	ble	information.	
R	Repeate	ed dose toxicity			
C	Compor	nents:			
			o m 4	doweyed because	ovoffinio.
		es (petroleum), solv	ent-		barannic:
	Species		:	Rabbit 1,000 mg/kg	
		on Route	÷	Skin contact	
E	Exposur		:	4 Weeks	
	Method	_	:	OECD Test Guide	
R	Remarks	6	:	Based on data fro	om similar materials
	Species		:	Rat	
	NOAEL		:	> 980 mg/m3	
	Applicati Exposur	on Route	÷	inhalation (dust/m 4 Weeks	list/fume)
	Remarks		:		om similar materials
_	_				
		nrin (ISO):		Pat	
3	Species		•	Rat	

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	cation Route sure time	: Inhalation : 90 Days	
		: Rat : 175 mg/kg : Ingestion : 90 Days	

#### Aspiration toxicity

May be fatal if swallowed and enters airways.

#### **Components:**

#### Distillates (petroleum), solvent-dewaxed heavy paraffinic:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

#### **12. ECOLOGICAL INFORMATION**

#### Ecotoxicity

#### **Components:**

Distillates (petroleum), solvent	-dewaxed heavy paraffinic:
Toxicity to fish :	LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other : aquatic invertebrates	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic : plants	EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to microorganisms :	NOEC: > 1.93 mg/l Exposure time: 10 min Method: DIN 38 412 Part 8 Remarks: Based on data from similar materials
Toxicity to daphnia and other : aquatic invertebrates (Chron- ic toxicity)	NOEC: 10 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

#### Permethrin (ISO):

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Toxicity	r to fish	:	LC50 (Lepomis m Exposure time: 96	acrochirus (Bluegill sunfish)): 0.00079 mg/l 5 h
	to daphnia and other invertebrates	:	EC50 (Daphnia m Exposure time: 48	agna (Water flea)): 0.0001 mg/l s h
Toxicity plants	to algae/aquatic	:	ErC50 ( Pseudoki 1.13 mg/l Exposure time: 72	rchneriella subcapitata (green algae)): > ? h
			EC10 ( Pseudokin 0.0023 mg/l Exposure time: 72	chneriella subcapitata (green algae)): ? h
M-Facto icity)	or (Acute aquatic tox-	:	10,000	
Toxicity	to microorganisms	:	EC50: > 1,000 mg Exposure time: 3	
Toxicity icity)	v to fish (Chronic tox-	:	NOEC: 0.00041 m Exposure time: 35 Species: Danio re Method: OECD Te	i d rio (zebra fish)
	to daphnia and other invertebrates (Chron- ty)	:	NOEC: 0.0047 µg Exposure time: 21 Species: Daphnia Method: OECD Te	d magna (Water flea)
M-Factor toxicity)	or (Chronic aquatic	:	10,000	
Persist	ence and degradabili	ty		
<u>Compo</u>	onents:			
Distilla	tes (petroleum), solve	ent-	dewaxed heavy n	araffinic
	radability	:	Result: Not readily Biodegradation: 2 Exposure time: 28	/ biodegradable. 2 - 8 %
	t <b>hrin (ISO):</b> radability	:	Result: Not readily Method: OECD Te	/ biodegradable. est Guideline 301F
Bioacc	umulative potential			
<u>Compc</u>	onents:			
	t <b>hrin (ISO):</b> umulation	:	Species: Lepomis	macrochirus (Bluegill sunfish)

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/ersion .4	Revision Date: 30.09.2023	SDS Number: 10843966-00005	Date of last issue: 04.04.2023 Date of first issue: 31.08.2022
		Bioconcentratio	n factor (BCF): 570
		Dioconcentratio	
	on coefficient: n- ol/water	: log Pow: 4.67	
	i <b>ty in soil</b> Ita available		
Other	adverse effects		
No da	ita available		
3. DISPO	SAL CONSIDERATIO	NS	
Dispo	osal methods		
Waste	e from residues		of waste into sewer.
Conta	minated packaging	: Empty containe dling site for red	cordance with local regulations. rs should be taken to an approved waste han- cycling or disposal. specified: Dispose of as unused product.
4. TRAN	SPORT INFORMATION	1	
Interr	national Regulations		
UNRT	ſDG		
	umber	: UN 3082	
Prope	er shipping name	: ENVIRONMEN N.O.S. (Permethrin (IS	TALLY HAZARDOUS SUBSTANCE, LIQUID,
Class		: 9	
	ng group	: !!!	
Label	S	: 9	
Label Enviro	s onmentally hazardous		
Label Enviro IATA-	s onmentally hazardous • <b>DGR</b>	: 9 : yes	
Label Enviro <b>IATA</b> - UN/ID	s onmentally hazardous • <b>DGR</b>	: 9 : yes : UN 3082	/ hazardous substance, liquid, n.o.s. O))
Label Enviro IATA- UN/IE Prope Class	s onmentally hazardous • <b>DGR</b> • No. •r shipping name	<ul> <li>9</li> <li>yes</li> <li>UN 3082</li> <li>Environmentally (Permethrin (IS)</li> <li>9</li> </ul>	
Label: Enviro IATA- UN/ID Prope Class Packi	s onmentally hazardous • <b>DGR</b> • No. •r shipping name ng group	: 9 : yes : UN 3082 : Environmentally (Permethrin (IS : 9 : III	
Label Enviro IATA- UN/ID Prope Class Packi Label Packi	s onmentally hazardous •DGR 0 No. er shipping name ng group s ng instruction (cargo	<ul> <li>9</li> <li>yes</li> <li>UN 3082</li> <li>Environmentally (Permethrin (IS)</li> <li>9</li> </ul>	
Label Enviro IATA- UN/IE Prope Class Packi Label Packi aircra Packi	s onmentally hazardous • <b>DGR</b> 9 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen-	<ul> <li>: 9</li> <li>: yes</li> <li>: UN 3082</li> <li>: Environmentally (Permethrin (IS)</li> <li>: 9</li> <li>: III</li> <li>: Miscellaneous</li> </ul>	
Label Enviro IATA- UN/ID Prope Class Packi Label Packi aircra Packi ger ai	s onmentally hazardous •DGR 0 No. er shipping name ng group s ng instruction (cargo ft)	<ul> <li>9</li> <li>yes</li> <li>UN 3082</li> <li>Environmentally (Permethrin (IS)</li> <li>9</li> <li>III</li> <li>Miscellaneous</li> <li>964</li> </ul>	
Label Enviro IATA- UN/IE Prope Class Packi Label Packi aircra Packi ger ai Enviro	s onmentally hazardous •DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen- rcraft) onmentally hazardous •-Code	<ul> <li>9</li> <li>yes</li> <li>UN 3082</li> <li>Environmentally (Permethrin (IS)</li> <li>9</li> <li>III</li> <li>Miscellaneous</li> <li>964</li> <li>964</li> <li>yes</li> </ul>	
Label Enviro IATA- UN/IE Prope Class Packi Label Packi aircra Packi ger ai Enviro IMDG UN nu	s onmentally hazardous •DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen- rcraft) onmentally hazardous •-Code umber	<ul> <li>9</li> <li>yes</li> <li>UN 3082</li> <li>Environmentally (Permethrin (IS)</li> <li>9</li> <li>III</li> <li>Miscellaneous</li> <li>964</li> <li>964</li> <li>yes</li> <li>UN 3082</li> </ul>	SO))
Label Enviro IATA- UN/IE Prope Class Packi Label Packi aircra Packi ger ai Enviro IMDG UN nu	s onmentally hazardous •DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen- rcraft) onmentally hazardous •-Code	<ul> <li>9</li> <li>yes</li> <li>UN 3082</li> <li>Environmentally (Permethrin (IS)</li> <li>9</li> <li>III</li> <li>Miscellaneous</li> <li>964</li> <li>964</li> <li>yes</li> <li>UN 3082</li> <li>ENVIRONMEN N.O.S.</li> </ul>	O)) TALLY HAZARDOUS SUBSTANCE, LIQUID
Label Enviro IATA- UN/IE Prope Class Packi Label Packi aircra Packi ger ai Enviro IMDG UN nu	s onmentally hazardous •DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen- rcraft) onmentally hazardous •-Code umber er shipping name	<ul> <li>9</li> <li>yes</li> <li>UN 3082</li> <li>Environmentally (Permethrin (IS)</li> <li>9</li> <li>III</li> <li>Miscellaneous</li> <li>964</li> <li>964</li> <li>yes</li> <li>UN 3082</li> <li>ENVIRONMEN</li> </ul>	O)) TALLY HAZARDOUS SUBSTANCE, LIQUID

according to the Globally Harmonized System



### Permethrin (5%) Liquid Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04.04.2023
1.4	30.09.2023	10843966-00005	Date of first issue: 31.08.2022

Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

#### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

#### 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.

#### 15. REGULATORY INFORMATION

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

#### The components of this product are reported in the following inventories:

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

#### **16. OTHER INFORMATION**

Revision Date		30.09.2023		
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/		
Date format	:	dd.mm.yyyy		
Full text of other abbreviations				
ACGIH IN OEL	:	USA. ACGIH Threshold Limit Values (TLV) India. Permissible levels of certain chemical substances in work environment.		
ACGIH / TWA IN OEL / TWA IN OEL / STEL	::	8-hour, time-weighted average Time-Weighted Average Concentration (TWA) (8 hrs.) Short-term exposure Limit STEL (15 min)		

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

according to the Globally Harmonized System



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- 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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