



Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06
8.0	2024/09/28	1965398-00016	Date of first issue: 2017/09/20

1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name	:	Permethrin (5%) Formulation
Supplier's company name, ac Company name of supplier		
Address	:	Kumagaya, Saitama Prefecture , Xicheng 810 MSD Co., Ltd. Menuma factory
Telephone	:	048-588-8411
E-mail address	:	EHSDATASTEWARD@msd.com
Emergency telephone number	:	+1-908-423-6000

Recommended use of the chemical and restrictions on use

Recommended use	:	Veterinary product
Restrictions on use	:	Not applicable

2. HAZARDS IDENTIFICATION

GHS classification of chemical product

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. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	Prevention:



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		P272 Contamin the workplace. P273 Avoid rel	eathing mist or vapours. nated work clothing should not be allowed out of ease to the environment. otective gloves.
		CENTER/ doct P302 + P352 I P331 Do NOT P333 + P313 I vice/ attention.	F ON SKIN: Wash with plenty of water. induce vomiting. f skin irritation or rash occurs: Get medical ad- ake off contaminated clothing and wash it before
		Storage: P405 Store loc	ked up.
		Disposal:	

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

lines of the emergency assumed

Important symptoms and out- : 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)	ENCS No.
Paraffin oils (petroleum), catalytic	64742-71-8	>= 50 - <= 75	9-1692
dewaxed light			
Permethrin (ISO)	52645-53-1	5	3-4010

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	:	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
In case of skin contact	:	In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes.





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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 :			Get medical attention. 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. FIRE	5. FIREFIGHTING MEASURES						
Suitable extinguishing media		:	Water spray Alcohol-resistant t Carbon dioxide (C Dry chemical				
	Unsuitable extinguishing media		None known.				
	ecific hazards during fire- hting	:	Exposure to comb	pustion products may be a hazard to health.			
Ha uct	zardous combustion prod- ts	:	Chlorine compour Carbon oxides	nds			
Sp od	ecific extinguishing meth- s	:	cumstances and t Use water spray t	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			
	ecial protective equipment firefighters	:		e, wear self-contained breathing apparatus. ective equipment.			
6. ACC	IDENTAL RELEASE MEAS	SUR	ES				
tive	rsonal precautions, protec- e equipment and emer- ncy procedures	:		ective equipment. ing advice (see section 7) and personal pro- recommendations (see section 8).			





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		Prevent spread barriers). Retain and disp	leakage or spillage if safe to do so. ing over a wide area (e.g. by containment or oil ose of contaminated wash water. s should be advised if significant spillages ained.
Methods and materials for : containment and cleaning up		For large spills, ment to keep m be pumped, sto Clean up remain bent. Local or national posal of this ma employed in the mine which regu Sections 13 and	ert absorbent material. provide dyking or other appropriate contain- aterial from spreading. If dyked material can re recovered material in appropriate container. ning materials from spill with suitable absor- al regulations may apply to releases and dis- terial, 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.

7. HANDLING AND STORAGE

Handling		
Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation Advice on safe handling	::	Use only with adequate ventilation. 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.
Avoidance of contact Hygiene measures	:	Oxidizing agents If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.



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Stora	ige		
Conditions for safe storage		Store locked Keep tightly	•
Materials to avoid			with the following product types:
Pack	aging material	: Unsuitable n	naterial: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Threshold limit value and permissible exposure limits for each component in the work environment

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Concentra- tion standard / Permissible con- centration	Basis
Permethrin (ISO)	52645-53-1	TWA	80 µg/m3 (OEB 3)	Internal
		Wipe limit	800 µg/100 cm ²	Internal

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 con- tainment devices). Minimize open handling.
Personal protective equipment	

Respiratory protection Filter type Hand protection	:	If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection. Combined particulates and organic vapour type
Material	:	Chemical-resistant gloves
Remarks Eye protection Skin and body protection	:	Consider double gloving. Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols. Work uniform or laboratory coat.



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			task being perform posable suits) to a	arments should be used based upon the ned (e.g., sleevelets, apron, gauntlets, dis- avoid exposed skin surfaces. degowning techniques to remove potentially thing.
9. PHYSIC	CAL AND CHEMICAL P	ROF	PERTIES	
Physi	ical state	:	liquid	
Colou	ır	:	clear, amber	
Odou	ır	:	odourless	
Odou	ır Threshold	:	No data available	e
Meltir	ng point/freezing point	:	No data available	e
	ng point, initial boiling and boiling range	:	No data available	9
Flam	mability (solid, gas)	:	Not applicable	
Flam	mability (liquids)	:	No data available	e
U	er explosion limit and upp pper explosion limit / Up- er flammability limit			
	ower explosion limit / ower flammability limit	:	No data available	9
Flash	n point	:	No data available	e
Deco	mposition temperature	:	No data available	9
рН		:	No data available	9
Evap	oration rate	:	No data available	9
Auto-	ignition temperature	:	No data available	9
Visco Vi	osity scosity, dynamic	:	39 Pas	
Vi	scosity, kinematic	:	No data available	9
	bility(ies) /ater solubility	:	immiscible	
	ion coefficient: n- nol/water	:	Not applicable	



Version 3.0	Revision Date: 2024/09/28		Number: 398-00016	Date of last issue: 2024/04/06 Date of first issue: 2017/09/20	
Dens	ur pressure ity and / or relative dens elative density	ity	< 2 mmHg (25 °C).876 (20 °C)	2)	
De	ensity	: 1	No data available	2	
Relat	ive vapour density	: 1	No data available	9	
Explo	sive properties	: 1	Not explosive		
Oxidi	zing properties	: 1	The substance o	r mixture is not classified as oxidizing.	
Moleo	cular weight	: 1	No data available	9	
	cle characteristics article size	: 1	Not applicable		
I 0. STAB			lot classified as	a reactivity hazard.	
Chem Possi tions Cond Incom	nical stability ibility of hazardous reac- itions to avoid npatible materials rdous decomposition	2 : 0 : 0 : 1 : 0	Stable under nor Can react with st None known. Dxidizing agents		
1. TOXIC	OLOGICAL INFORMA	TION			
Inforn expos	nation on likely routes of sure	S Ir	halation kin contact gestion ye contact		
	e toxicity lassified based on availa	able inf	ormation.		
Prod	uct:				
Acute	e oral toxicity		Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method		
Acute	inhalation toxicity	E T	cute toxicity esti xposure time: 4 est atmosphere: lethod: Calculati	h dust/mist	



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<u>Com</u>	oonents:			
Paraf	fin oils (petroleum),	cataly	tic dewaxed lig/	ht:
Acute	oral toxicity	:	LD50 (Rat): > 5 Method: OECD	,000 mg/kg Test Guideline 401
Acute	inhalation toxicity	:	LC50 (Rat): > 5 Exposure time: Test atmospher Method: OECD	4 h
Acute	e dermal toxicity	:	LD50 (Rabbit): : Method: OECD	> 5,000 mg/kg Test Guideline 402
Perm	ethrin (ISO):			
Acute	oral toxicity	:	LD50 (Rat): 480) - 554 mg/kg
Acute	inhalation toxicity	:	LC50 (Rat): 2.3 Exposure time: Test atmospher	4 h
Acute	e dermal toxicity	:	LD50 (Rabbit): :	> 2,000 mg/kg
II Skin	corrosion/irritation			
-	assified based on ava	ailable	information.	
	oonents:			
	fin oils (petroleum),	cataly		nt:
Speci Resu		:	Rabbit No skin irritatior	1
Perm	ethrin (ISO):			
Speci	es	:	Rabbit	
Resu	lt	:	No skin irritation	1
Serio	us eye damage/eye i	irritati	ion	
	assified based on ava			

Paraffin oils (petroleum), catalytic dewaxed light:

Species Result	:	Rabbit
Result	:	No eye irritation

Permethrin (ISO):

Species Result	:	Rabbit
Result	:	No eye irritation





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Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

Paraffin oils (petroleum), catalytic dewaxed light:

Test Type	: Buehler Test
Exposure routes	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
Test Type Exposure routes Species Method Result	: negative

Permethrin (ISO):

Exposure routes Species	:	Buehler Test Skin contact Guinea pig positive
Assessment	:	Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity

Not classified based on available information.

Components:

Paraffin oils (petroleum), catalytic dewaxed light:

Genotoxicity in vitro	:	Test Type: Chromosome aberration test in vitro Result: negative
		Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative
Permethrin (ISO):		
Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
		Test Type: In vitro mammalian cell gene mutation test Result: negative





sion	Revision Date: 2024/09/28	SDS Number: 1965398-00016	Date of last issue: 2024/04/06 Date of first issue: 2017/09/20
		Result: negative Test Type: DNA thesis in mamm Result: negative Test Type: Chro Result: positive	damage and repair, unscheduled DNA syn alian cells (in vitro) e omosome aberration test in vitro
Genotoxicity in vivo		cytogenetic ass Species: Mouse Result: negative Test Type: Muta	agenicity (in vivo mammalian bone-marrow , chromosomal analysis)
		Test Type: Rod Species: Mouse Result: negative	
		cytogenetic ass Species: Rat	te: Intraperitoneal injection
	cell mutagenicity -	: Weight of evide cell mutagen.	nce does not support classification as a ger

Not classified based on available information.

Components:

Paraffin oils (petroleum), catalytic dewaxed light:

Species Application Route Exposure time Result	: Mouse
Application Route	: Skin contact
Exposure time	: 78 weeks
Result	: negative



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Perm	ethrin (ISO):					
Speci Resul	ies	:	Rat negative			
Speci Resul		:	Mouse negative			
Not cl	oductive toxicity lassified based on avai ponents:	lable	information.			
Perm	ethrin (ISO):					
Effect	ts on fertility	:	Test Type: Two- Species: Rat Application Rou Result: negative			
Effect ment	ts on foetal develop-	:				
	- single exposure lassified based on avai	lable	information.			
	- repeated exposure					
	Not classified based on available information.					
Repe	ated dose toxicity					
<u>Com</u>	ponents:					
Paraf	fin oils (petroleum), c	ataly	tic dewaxed light	nt:		

			Ŭ
Species NOAEL Application Exposure Method		:	Rat
NOAEL		:	>= 2,000 mg/kg
Application	n Route	:	Skin contact
Exposure	time	:	90 Days
Method		:	OECD Test Guideline 411

Permethrin (ISO):

Species	: Rat
NOAEL	: 0.2201 mg/l
Application Route	: Inhalation
Exposure time	: 90 Days
Species	: Rat
NOAEL	: 175 mg/kg
Application Route	: Ingestion
Exposure time	: 90 Days



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Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Paraffin oils (petroleum), catalytic dewaxed light:

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:

Paraffin oils (petroleum), catalytic dewaxed light:

Toxicity to fish	:	LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201
		NOELR (Pseudokirchneriella subcapitata (green algae)): 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOELR (Daphnia (water flea)): 10 mg/l Exposure time: 21 d Test substance: Water Accommodated Fraction
Toxicity to microorganisms	:	NOEC: > 2.17 mg/l Exposure time: 10 min
Permethrin (ISO):		
Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.00079 mg/l Exposure time: 96 h
Toxicity to daphnia and other	:	EC50 (Daphnia magna (Water flea)): 0.0001 mg/l

SAFETY DATA SHEET



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aquat	ic invertebrates		Exposure time:	48 h
Toxici plants	ity to algae/aquatic	:	ErC50 (Pseudol mg/l Exposure time: 7	kirchneriella subcapitata (green algae)): > 1.1 72 h
			EC10 (Pseudoki mg/l Exposure time: 7	irchneriella subcapitata (green algae)): 0.002 72 h
	ctor (Acute aquatic tox-	:	10,000	
icity) Toxici icity)	ity to fish (Chronic tox-	:	Exposure time: 3	erio (zebra fish)): 0.00041 mg/l 35 d Test Guideline 210
	ity to daphnia and other ic invertebrates (Chron- icity)	:	Exposure time: 2	i magna (Water flea)): 0.0047 μg/l 21 d Test Guideline 211
	ctor (Chronic aquatic	:	10,000	
toxicit Toxici	y) ity to microorganisms	:	EC50: > 1,000 n Exposure time: 3	
II Persi	stence and degradabili	ty		
Comp	oonents:			
	fin oils (petroleum), ca	taly	-	
Biode	gradability	:	Biodegradation: Exposure time: 2	
II Perm	ethrin (ISO):			
	gradability	:		ily biodegradable. Test Guideline 301F
Bioac	cumulative potential			
<u>Comp</u>	oonents:			
Perm	ethrin (ISO):			
			Species: Lepom	is macrochirus (Bluegill sunfish)
	cumulation	•	Bioconcentration	n factor (BCF): 570





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Mobil	lity in soil		
	ita available		
	rdous to the ozone lay	/er	
	adverse effects		
3. DISPO	SAL CONSIDERATIO	NS	
Diene	osal methods		
•	e from residues		accordance with local regulations.
Conta	minated packaging	 Do not dispose of waste into sewer. 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. 	
4. TRAN	SPORT INFORMATIO	N	
Interr	national Regulations		
UNR			
	umber	: UN 3082	
	er shipping name	: ENVIRONMEN N.O.S.	NTALLY HAZARDOUS SUBSTANCE, LIQUID
Prope		: ENVIRONMEI N.O.S. (Permethrin (I	
Prope		: ENVIRONMEI N.O.S. (Permethrin (I : 9	
Prope	ng group	: ENVIRONMEI N.O.S. (Permethrin (I	
Prope Class Packi Label	ng group	: ENVIRONMEI N.O.S. (Permethrin (I : 9 : III	
Prope Class Packi Label	ng group s onmentally hazardous	: ENVIRONMEN N.O.S. (Permethrin (I : 9 : III : 9	
Prope Class Packi Label Enviro IATA	ng group s onmentally hazardous - DGR) No.	 ENVIRONMENN.O.S. (Permethrin (I 9 III 9 yes UN 3082 	SO))
Prope Class Packi Label Enviro IATA UN/IE Prope	ng group s onmentally hazardous -DGR) No. er shipping name	 ENVIRONMENN.O.S. (Permethrin (I) 9 III 9 yes UN 3082 Environmental (Permethrin (I) 	SO)) ly hazardous substance, liquid, n.o.s.
Prope Class Packi Label Enviro IATA UN/IE Prope	ng group s onmentally hazardous -DGR 0 No. er shipping name	 : ENVIRONMEN N.O.S. (Permethrin (I) : 9 : III : 9 : yes : UN 3082 : Environmental (Permethrin (I) : 9 	SO)) ly hazardous substance, liquid, n.o.s.
Prope Class Packi Label Enviro IATA UN/IE Prope Class Packi	ng group s onmentally hazardous -DGR 0 No. er shipping name ng group	 ENVIRONMENN.O.S. (Permethrin (I) 9 III 9 yes UN 3082 Environmental (Permethrin (I) 9 III 	SO)) ly hazardous substance, liquid, n.o.s. SO))
Prope Class Packi Label Enviro IATA UN/IE Prope Class Packi Label Packi aircra	ng group s onmentally hazardous -DGR) No. er shipping name ng group s ng instruction (cargo ft)	 ENVIRONMENN.O.S. (Permethrin (I) 9 III 9 yes UN 3082 Environmental (Permethrin (I) 9 III Miscellaneous 964 	SO)) ly hazardous substance, liquid, n.o.s. SO))
Prope Class Packi Label Enviro IATA UN/IE Prope Class Packi Label Packi aircra Packi ger ai	ng group s onmentally hazardous -DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen- rcraft)	 ENVIRONMENN.O.S. (Permethrin (I) 9 III 9 yes UN 3082 Environmental (Permethrin (I) 9 III Miscellaneous 964 964 	SO)) ly hazardous substance, liquid, n.o.s. SO))
Prope Class Packi Label Enviro IATA UN/IE Prope Class Packi Label Packi aircra Packi ger ai	ng group s onmentally hazardous -DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen-	 ENVIRONMENN.O.S. (Permethrin (I) 9 III 9 yes UN 3082 Environmental (Permethrin (I) 9 III Miscellaneous 964 	SO)) ly hazardous substance, liquid, n.o.s. SO))
Prope Class Packi Label Enviro IATA UN/IE Prope Class Packi Label Packi aircra Packi ger ai Enviro	ng group s onmentally hazardous -DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen- rcraft) onmentally hazardous -Code	 ENVIRONMENN.O.S. (Permethrin (I) 9 III 9 yes UN 3082 Environmental (Permethrin (I) 9 III Miscellaneous 964 964 yes 	SO)) ly hazardous substance, liquid, n.o.s. SO))
Prope Class Packi Label Enviro UN/IE Prope Class Packi Label Packi aircra Packi ger ai Enviro IMDG	ng group s onmentally hazardous -DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen- rcraft) onmentally hazardous	 ENVIRONMENN.O.S. (Permethrin (I) 9 III 9 yes UN 3082 Environmental (Permethrin (I) 9 III Miscellaneous 964 964 yes UN 3082 ENVIRONMENN.O.S. 	SO)) ly hazardous substance, liquid, n.o.s. SO))
Prope Class Packi Label Enviro IATA UN/IE Prope Class Packi Label Packi aircra Packi ger ai Enviro IMDG UN nu Prope	ng group s onmentally hazardous -DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen- rcraft) onmentally hazardous i-Code umber er shipping name	 ENVIRONMENN.O.S. (Permethrin (I) 9 III 9 yes UN 3082 Environmental (Permethrin (I) 9 III Miscellaneous 964 964 yes UN 3082 ENVIRONMENN.O.S. (Permethrin (I) 	SO)) ly hazardous substance, liquid, n.o.s. SO))
Prope Class Packi Label Enviro IATA UN/IE Prope Class Packi Label Packi ger ai Enviro IMDG UN no Prope	ng group s onmentally hazardous -DGR 0 No. er shipping name ng group s ng instruction (cargo ft) ng instruction (passen- rcraft) onmentally hazardous i-Code umber er shipping name	 ENVIRONMENN.O.S. (Permethrin (I) 9 III 9 yes UN 3082 Environmental (Permethrin (I) 9 III Miscellaneous 964 964 yes UN 3082 ENVIRONMENN.O.S. 	SO)) ly hazardous substance, liquid, n.o.s. SO))





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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

Refer to section 15 for specific national regulation.

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.

ERG Code : 171

15. REGULATORY INFORMATION

Related Regulations

Fire Service Law

Not applicable to dangerous materials / designated flammables.

Chemical Substance Control Law

Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

Industrial Safety and Health Law

Harmful Substances Prohibited from Manufacture

Not applicable

Harmful Substances Required Permission for Manufacture

Not applicable

Substances Prevented From Impairment of Health

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity

Not applicable

Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity

Not applicable

Substances Subject to be Notified Names

Article 57-2 (Enforcement Order Table 9)

Chemical name	Concentration (%)	Remarks
Mineral oil	>=50 - <=75	-
m-phenoxybenzyl 3-(2,2-dichlorovinyl)- 2,2-dimethylcyclopropanecarboxylate	>=1 - <10	From April 1st, 2026



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Substances Subject to be Indicated Names Article 57 (Enforcement Order Article 18) Chemical name Remarks Mineral oil m-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-From April 1st, 2026 dimethylcyclopropanecarboxylate Skin and Eye Damage Substances for PPE Requirements (ISHL MO Art. 594-2) Not applicable Carcinogenic Substances (Article 577-2 of the Occupational Health and Safety Regulations) Not applicable Ordinance on Prevention of Hazards Due to Specified Chemical Substances Not applicable **Ordinance on Prevention of Lead Poisoning** Not applicable Ordinance on Prevention of Tetraalkyl Lead Poisoning Not applicable Ordinance on Prevention of Organic Solvent Poisoning Not applicable Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances) Not applicable **Poisonous and Deleterious Substances Control Law** Not applicable Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Class I Designated Chemical Substances

Chemical name	Administration number	Concentration (%)
3-Phenoxybenzyl 3-(2,2-dichlorovinyl)-	350	5.0
2,2-dimethylcyclopropanecarboxylate		

High Pressure Gas Safety Act

Not applicable

Explosive Control Law

Not applicable

Vessel Safety Law

Miscellaneous dangerous substances and articles (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)

Aviation Law

Miscellaneous dangerous substances and articles (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)





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Marine Pollution and Sea Disaster Prevention etc Law							
Bulk ti	ransportation	:	Not classified as	noxious liquid substance			
Pack t	transportation	:	Classified as mar	ine pollutant			
Narcotics and Psychotropics Control Act Narcotic or Psychotropic Raw Material (Export / Import Permission) Not applicable Specific Narcotic or Psychotropic Raw Material (Export / Import permission) Not applicable							
Waste Disposal and Public Cleansing Law Industrial waste							
The components of this product are reported in the following inventories:							
AICS		:	not determined				
DSL		:	not determined				
IECSO	2	:	not determined				

16. OTHER INFORMATION

In this SDS, if the concentration of substances subject to notification under the Industrial Safety and Health Law is indicated as a range, it includes cases where it is a trade secret.

Further information

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

: yyyy/mm/dd

Full text of other abbreviations

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

SAFETY DATA SHEET



Permethrin (5%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06
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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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