



Permethrin (65%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2024
2.0	07/09/2024	7766187-00010	Date of first issue: 02/05/2021

SECTION 1. IDENTIFICATION

Product name	:	Permethrin (65%) Formulation
Other means of identification	:	No data available

Manufacturer or supplier's details

Company name of supplier	:	Merck & Co., Inc
Address	:	126 E. Lincoln Avenue
		Rahway, New Jersey U.S.A. 07065
Telephone	:	908-740-4000
Emergency telephone	:	1-908-423-6000
E-mail address	:	EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use

Recommended use	:	Veterinary product
Restrictions on use	:	Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Flammable liquids	:	Category 3
Acute toxicity (Oral)	:	Category 4
Acute toxicity (Inhalation)	:	Category 4
Skin sensitization	:	Category 1
Reproductive toxicity	:	Category 1B
Specific target organ toxicity - single exposure	:	Category 3
GHS label elements Hazard pictograms	:	
Signal Word	:	Danger
Hazard Statements	:	H226 Flammable liquid and vapor. H302 + H332 Harmful if swallowed or if inhaled. H317 May cause an allergic skin reaction. H336 May cause drowsiness or dizziness. H360D May damage the unborn child.
Precautionary Statements	:	Prevention: P201 Obtain special instructions before use.

according to the Hazardous Products Regulations



Permethrin (65%) Formulation

ersion)	Revision Date: 07/09/2024	SDS Number: 7766187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
		and understood P210 Keep awa and other ignitio P261 Avoid bre P264 Wash ski P270 Do not ea P271 Use only P272 Contamin the workplace.	ay from heat, hot surfaces, sparks, open flames on sources. No smoking. eathing mist or vapors. In thoroughly after handling. at, drink or smoke when using this product. outdoors or in a well-ventilated area. hated work clothing should not be allowed out o tective gloves, protective clothing, eye protection
		unwell. Rinse n P303 + P361 + all contaminate P304 + P340 + and keep comfe unwell. P308 + P313 IF P333 + P313 If tion.	P330 IF SWALLOWED: Call a doctor if you fee nouth. P353 IF ON SKIN (or hair): Take off immediate d clothing. Rinse skin with water. P312 IF INHALED: Remove person to fresh ai ortable for breathing. Call a doctor if you feel F exposed or concerned: Get medical attention. skin irritation or rash occurs: Get medical attent
		Storage: P405 Store locl	ked up.
		Disposal:	of contents and container to an approved waste
Cutar er, the		no lesions and are of a	g or stinging on the face and mucosae. However a transitory nature (max. 24 hours).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture	:	Mixture
---------------------	---	---------

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Permethrin (ISO)	m- phenoxybenzyl 3-(2,2- dichlorovinyl)- 2,2- dimethylcyclo- propanecarbox- ylate	52645-53-1	65



according to the Hazardous Products Regulations

Permethrin (65%) Formulation

Version 2.0			nber: 00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
1-Met	hoxy-2-propanol	Methoxyisopro- panol	107-98-2	33.8
2-Met	2-Methoxypropanol 1-Prop metho		1589-47-5	0.238

SECTION 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
In case of skin contact	:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
In case of eye contact	:	Flush eyes with water as a precaution.
If swallowed	:	Get medical attention if irritation develops and persists. If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	Harmful if swallowed or if inhaled. May cause an allergic skin reaction. May cause drowsiness or dizziness. May damage the unborn child. This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate
Protection of first-aiders	:	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).
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media		Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health.
Hazardous combustion prod-	:	Chlorine compounds



according to the Hazardous Products Regulations

Permethrin (65%) Formulation

Vers 2.0	sion	Revision Date: 07/09/2024		9S Number: 66187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021	
	ucts			Carbon oxides		
	Specific ods	c extinguishing meth-	:	Use extinguishing measures that are appropriate to local cir- cumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so.		
	Special for fire-	protective equipment fighters	:	Evacuate area. In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.		
SEC	CTION 6.	. ACCIDENTAL RELE	ASI	EMEASURES		
	tive equ	al precautions, protec- uipment and emer- procedures	:			
	Environ	nmental precautions	:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containmer oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillage cannot be contained.		
	Methods and materials for containment and cleaning up		:	Suppress (knock of jet. For large spills, pr containment to ke can be pumped, s container. Clean up remainin absorbent. Local or national r disposal of this ma employed in the c determine which r Sections 13 and 1	s should be used. absorbent material. down) gases/vapors/mists with a water spray ovide diking or other appropriate ep material from spreading. If diked material tore recovered material in appropriate ng materials from spill with suitable egulations may apply to releases and aterial, as well as those materials and items leanup of releases. You will need to egulations are applicable. 5 of this SDS provide information regarding tional requirements.	

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	If sufficient ventilation is unavailable, use with local exhaust ventilation.
		Use explosion-proof electrical, ventilating and lighting equip- ment.
Advice on safe handling	:	Do not get on skin or clothing.

according to the Hazardous Products Regulations



Permethrin (65%) Formulation

Version 2.0	Revision Date: 07/09/2024	SDS Number: 7766187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021			
		Avoid breathing mist or vapors. Do not swallow. Avoid contact with eyes. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Non-sparking tools should be used. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment.				
Con	ditions for safe storage	: Keep in prope Store locked u Keep tightly cl				
Mate	erials to avoid	Store in accorn Keep away fro Do not store w Strong oxidizin Self-reactive s Organic perox Flammable so Pyrophoric liqu Pyrophoric sol Self-heating su Substances an flammable gas Explosives Gases	dance with the particular national regulations. om heat and sources of ignition. vith the following product types: ng agents ubstances and mixtures ides lids uids ubstances and mixtures nd mixtures which in contact with water emit			

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
Permethrin (ISO)	52645-53-1	TWA	80 µg/m3 (OEB 3)	Internal
		Wipe limit	800 µg/100 cm ²	Internal
1-Methoxy-2-propanol	107-98-2	TWA	100 ppm 369 mg/m³	CA AB OEL
		STEL	150 ppm 553 mg/m³	CA AB OEL
		TWA	50 ppm	CA BC OEL
		STEL	100 ppm	CA BC OEL
		TWAEV	100 ppm 369 mg/m³	CA QC OEL
		STEV	150 ppm	CA QC OEL



according to the Hazardous Products Regulations

rsion	Revision Date: 07/09/2024	SDS Number: 7766187-00010		f last issue: 04/06/20 f first issue: 02/05/20		
				553 mg/m³		
			TWA	50 ppm	ACGIH	
			STEL	100 ppm	ACGIH	
2-Mo	thoxypropanol	1589-47-5	TWA	20 ppm	CA BC O	
2-1016	linoxyproparior	1303-47-5	STEL	40 ppm	CA BC O	
Engi	neering measures	technologies less quick co All engineer design and o protect prod Containmen are required the compoun containment	s to control air onnections). ing controls sloperated in ac ucts, workers t technologies to control at and to uncontro	ing controls and mar borne concentration hould be implemente ccordance with GMP , and the environmer s suitable for controll source and to prever plied areas (e.g., ope	s (e.g., drip- ed by facility principles to nt. ing compounds nt migration of	
			-	rical, ventilating and	lighting	
Perso	onal protective equipr					
Fi	iratory protection Iter type protection	 If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. Organic vapor Type 			es outside the	
M	aterial	: Chemical-re	Chemical-resistant gloves			
Re	emarks		Consider double gloving. Take note that the product is flammable, which may impact the selection of hand			
Eye p	protection	: Wear safety If the work e mists or aer Wear a face potential for	 protection. Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols. Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces. Use appropriate degowning techniques to remove potentially contaminated clothing. 			
Skin	and body protection	: Work uniforn Additional b task being p disposable s Use approp				
Hygie	ene measures	: If exposure eye flushing working plac When using Contaminate workplace. Wash conta The effective	to chemical is systems and ce. do not eat, di ed work clothi minated cloth e operation of	likely during typical safety showers close rink or smoke. ng should not be allo ing before re-use. a facility should inclu- per personal protectiv	e to the owed out of the ude review of	



according to the Hazardous Products Regulations

Version 2.0	Revision Date: 07/09/2024		9S Number: 66187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
				wning and decontamination procedures, monitoring, medical surveillance and the tive controls.
SECTION	9. PHYSICAL AND CHI	EMI		S
Appe	arance	:	liquid	
Color		:	dark amber	
Odor		:	strong	
Odor	Threshold	:	No data available	9
рН		:	No data available	e
Meltir	ng point/freezing point	:	No data available	e
Initial range	l boiling point and boiling e	:	No data available	9
Flash	n point	:	37.8 - 40 °C	
Evap	oration rate	:	No data available	e
Flam	mability (solid, gas)	:	Not applicable	
Flam	mability (liquids)	:	Not applicable	
	er explosion limit / Upper nability limit	:	No data available	9
	er explosion limit / Lower nability limit	:	No data available	9
Vapo	r pressure	:	No data available	9
Relat	ive vapor density	:	No data available	9
Relat	tive density	:	No data available	e
Dens	ity	:	No data available	e
	bility(ies) /ater solubility	:	immiscible	
	tion coefficient: n-	:	Not applicable	
	nol/water gnition temperature	:	No data available	e
Deco	mposition temperature	:	No data available	e
Visco	osity			

according to the Hazardous Products Regulations



Permethrin (65%) Formulation

Version 2.0	Revision Date: 07/09/2024	SDS Number: 7766187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021	
V	iscosity, kinematic	: No data availa	able	
Explo	osive properties	: Not explosive		
Oxid	izing properties	: The substanc	e or mixture is not classified as oxidizing.	
Mole	cular weight	: No data available		
	cle characteristics cle size	: Not applicable	9	

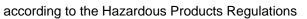
SECTION 10. STABILITY AND REACTIVITY

Reactivity Chemical stability Possibility of hazardous reac- tions	:	Not classified as a reactivity hazard. Stable under normal conditions. Flammable liquid and vapor. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid Incompatible materials Hazardous decomposition products	:	Heat, flames and sparks. Oxidizing agents No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

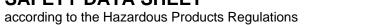
Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact		
Acute toxicity Harmful if swallowed or if inh	aled	
Product:		
Acute oral toxicity	:	Acute toxicity estimate: 722.46 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 11 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method
Components:		
Permethrin (ISO):		
Acute oral toxicity	:	LD50 (Rat): 480 - 554 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 2.3 mg/l



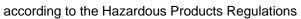


/ersion 2.0	Revision Date: 07/09/2024	SDS Number: 7766187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
		Exposure tim Test atmosph	e: 4 h ere: dust/mist
Acute	e dermal toxicity	: LD50 (Rabbit): > 2,000 mg/kg
1-Me	thoxy-2-propanol:		
Acute	e oral toxicity	: LD50 (Rat): 4	,016 mg/kg
Acute	e inhalation toxicity	: LC50 (Mouse Exposure tim Test atmosph	e: 6 h
Acute	e dermal toxicity	: LD50 (Rat): > Assessment: toxicity	2,000 mg/kg The substance or mixture has no acute dermal
11 2-Me	thoxypropanol:		
	e oral toxicity	: LD50 (Rat): >	5,000 mg/kg
Acute	e inhalation toxicity	: LC50 (Rat): > Exposure tim Test atmosph	e: 4 h
	corrosion/irritation lassified based on ava	ilable information.	
Com	ponents:		
Perm	ethrin (ISO):		
Spec Resu	ies	: Rabbit : No skin irritat	ion
1-Me	thoxy-2-propanol:		
Spec Resu	ies	: Rabbit : No skin irritat	ion
2-Me	thoxypropanol:		
Spec		: Rabbit	
Resu Rema		: No skin irritat : Based on dat	ion a from similar materials
Not c	ous eye damage/eye i lassified based on ava ponents:		
	ethrin (ISO):		
Spec Resu	ies	: Rabbit : No eye irritati	on



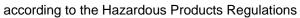


Version 2.0	Revision Date: 07/09/2024	SDS Number: 7766187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
1-Me Spec Resu		: Rabbit : No eye irritat	ion
2-Me Resu Rem		: No eye irritat : Based on da	ion ta from similar materials
Res	oiratory or skin sensi	tization	
-	sensitization cause an allergic skin	reaction.	
-	biratory sensitization classified based on ava	ilable information.	
Com	ponents:		
		: Buehler Test : Skin contact : Guinea pig : positive	
Asse	essment	: Probability of	evidence of skin sensitization in humans
Test	ethoxy-2-propanol: Type ces of exposure cies ult	: Maximizatior : Skin contact : Guinea pig : negative	i Test
2 Ma	the supremental.		
Test	ult	: Maximizatior : Skin contact : Guinea pig : negative : Based on da	n Test ta from similar materials
Not o	n cell mutagenicity classified based on ava ponents:	ilable information.	
	nethrin (ISO):		
	otoxicity in vitro	: Test Type: B Result: nega	acterial reverse mutation assay (AMES) tive
		Test Type: Ir Result: nega	e vitro mammalian cell gene mutation test tive
11			





Version 2.0	Revision Date: 07/09/2024	SDS Numbe 7766187-00	
		Test Typ Result: i	pe: Chromosome aberration test in vitro negative
		thesis in	be: DNA damage and repair, unscheduled DNA syn- n mammalian cells (in vitro) negative
		Test Typ Result: _I	pe: Chromosome aberration test in vitro positive
Ger	otoxicity in vivo		
		Test Typ Species Result: i	
		cytogen Species	ion Route: Intraperitoneal injection
		cytogen Species	ion Route: Ingestion
Ger Ass	m cell mutagenicity - essment	: Weight o cell muta	of evidence does not support classification as a germ agen.
1-M	ethoxy-2-propanol:		
	otoxicity in vitro	: Test Typ Result: i	be: Bacterial reverse mutation assay (AMES) negative
		Test Typ Result: i	pe: Chromosome aberration test in vitro negative
		Test Typ Result: i	pe: In vitro mammalian cell gene mutation test negative
		malian	be: In vitro sister chromatid exchange assay in mam- cells equivocal





Permethrin (65%) Formulation

Version 2.0	Revision Date: 07/09/2024	SDS Number: 7766187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
		thesis in mam	IA damage and repair, unscheduled DNA syn- malian cells (in vitro) D Test Guideline 482 ve
Genc	otoxicity in vivo	cytogenetic as Species: Mou	se function set injection
2-Me	thoxypropanol:		
	ptoxicity in vitro	: Test Type: Ba Result: negati	cterial reverse mutation assay (AMES) ve
		Result: negati	romosome aberration test in vitro ve sed on data from similar materials
		Result: negati	vitro mammalian cell gene mutation test ve sed on data from similar materials
		malian cells Result: equivo	vitro sister chromatid exchange assay in mam- ocal sed on data from similar materials
		thesis in mam Method: OEC Result: negati	IA damage and repair, unscheduled DNA syn- malian cells (in vitro) D Test Guideline 482 ve sed on data from similar materials
Genc	Genotoxicity in vivo	cytogenetic as Species: Mou Application Ro Result: negati	se functioneal injection
		cytogenetic te Species: Mou Application Ro Result: negati	pute: Ingestion

Carcinogenicity

Not classified based on available information.



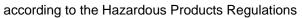
according to the Hazardous Products Regulations

rsion	Revision Date: 07/09/2024	SDS Number: 7766187-00010		Date of last issue: 04/06/2024 Date of first issue: 02/05/2021	
<u>Comp</u>	oonents:				
Perme	ethrin (ISO):				
Specie		:	Rat		
Result	t	:	negative		
Specie Result	es t	:	Mouse negative		
1-Met	hoxy-2-propanol:				
Specie		:	Rat		
	ation Route	:	inhalation (vapor) 2 Years		
Metho		÷	OECD Test Guide	eline 453	
Result	t	:	negative		
Repro	oductive toxicity				
May d	lamage the unborn child.				
Comp	oonents:				
Perme	ethrin (ISO):				
Effect	s on fertility	:	Test Type: Two-g Species: Rat	eneration reproduction toxicity study	
			Application Route	: Ingestion	
			Result: negative	0	
Effect	s on fetal development	:		ined repeated dose toxicity study with the	
			Species: Rat	elopmental toxicity screening test	
			Application Route	: Ingestion	
			Result: negative		
1-Met	hoxy-2-propanol:				
Effect	s on fertility	:	Test Type: Two-g Species: Rat	eneration reproduction toxicity study	
				: inhalation (vapor)	
			Method: OECD To		
			Result: negative		
Effect	s on fetal development	:	Test Type: Embry Species: Rat	o-fetal development	
				: inhalation (vapor)	
			Result: negative		
2-Met	hoxypropanol:				
Effect	s on fetal development	:		o-fetal development	
11			Species: Rabbit Application Route	· Inhalation	
			Result: positive		
			-		



according to the Hazardous Products Regulations

Version 2.0	Revision Date: 07/09/2024	SDS Number: 7766187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
Reproductive toxicity - As- sessment		: Clear evide animal expe	nce of adverse effects on development, based or eriments.
stot	-single exposure		
May c	ause drowsiness or di	zziness.	
<u>Comp</u>	oonents:		
	hoxy-2-propanol:		
Asses	ssment	: May cause	drowsiness or dizziness.
2-Met	hoxypropanol:		
Asses Rema	ssment arks		respiratory irritation. ational or regional regulation.
	-repeated exposure assified based on ava	ilable information.	
Repe	ated dose toxicity		
Comp	oonents:		
Perm	ethrin (ISO):		
		: Rat : 0.2201 mg/ : Inhalation : 90 Days	I
Speci	es	: Rat	
NOAE	EL	: 175 mg/kg	
	cation Route sure time	: Ingestion : 90 Days	
1-Met	hoxy-2-propanol:		
Speci	es	: Rat	
NOAE		: 919 mg/kg : Ingestion	
	cation Route sure time	: 35 Days	
Speci	es	: Rat	
NOAE	EL cation Route	: 1.1 mg/l : inhalation (vapor)
	sure time	: 2 y	· ~ P ~ · /
Metho			Guideline 453
Speci		: Rabbit	
NOAE		: 1,838 mg/k	
Applic	cation Route sure time	: Skin contac : 90 Days	il de la constant de





Permethrin (65%) Formulation

Version 2.0	Revision Date: 07/09/2024	SDS Number 7766187-000	
2-Methoxypropanol: Species NOAEL Application Route Exposure time		: Rat : 10.5 mg/l : inhalation : 28 Days	(vapor)
Species NOAEL Application Route Number of exposures Remarks		: Rat : > 300 mg/ : Ingestion : 25 Days : Based on	۲ data from similar materials
Species NOAEL Application Route Number of exposures Remarks		: Rabbit : > 200 mg/ : Skin conta : 90 Days : Based on	

Aspiration toxicity

Not classified based on available information.

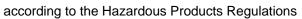
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Permethrin (ISO):

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.00079 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.0001 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.13 mg/l Exposure time: 72 h
		EC10 (Pseudokirchneriella subcapitata (green algae)): 0.0023 mg/l Exposure time: 72 h
Toxicity to fish (Chronic tox- icity)	:	NOEC (Danio rerio (zebra fish)): 0.00041 mg/l Exposure time: 35 d Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.0047 μg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50: > 1,000 mg/l Exposure time: 3 h





Version 2.0	Revision Date: 07/09/2024		0S Number: 66187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
1-Metl	hoxy-2-propanol:			
	ty to fish	:	LC50 (Leuciscus Exposure time: 96 Method: DIN 3847	
	ty to daphnia and other c invertebrates	:	EC50 (Daphnia m Exposure time: 48	agna (Water flea)): 23,300 mg/l 3 h
Toxicit plants	ty to algae/aquatic	:	ErC50 (Skeletone Exposure time: 72 Method: ISO 1025	ma costatum (marine diatom)): 6,745 mg/l 2 h 53
Toxicit	ty to microorganisms	:	IC50: > 1,000 mg/ Exposure time: 3 Method: OECD Te	h
2-Metl	hoxypropanol:			
	ty to fish	:	Exposure time: 96	idus (Golden orfe)): > 100 mg/l S h on data from similar materials
	ty to daphnia and other c invertebrates	:	Exposure time: 48	agna (Water flea)): > 100 mg/l 3 h on data from similar materials
Toxicit plants	ty to algae/aquatic	:	Exposure time: 72 Method: ISO 1025	
	ty to daphnia and other c invertebrates (Chron- city)	:	Exposure time: 21 Method: OECD Te	
Toxicit	ty to microorganisms	:	EC10: > 1 mg/l Exposure time: 3 Method: OECD To Remarks: Based o	
Persis	stence and degradabili	ity		
Comp	onents:	-		
Perme	ethrin (ISO):			
	gradability	:	Result: Not readily Method: OECD To	y biodegradable. est Guideline 301F
1-Metl	hoxy-2-propanol:			
Biode	gradability	:	Result: Readily bi Biodegradation: 9 Exposure time: 28	96 %



according to the Hazardous Products Regulations

Permethrin (65%) Formulation

Version 2.0	Revision Date: 07/09/2024		DS Number: 766187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
			Method: OECD T	est Guideline 301E
2-Met	hoxypropanol:			
Biode	Biodegradability		Result: Readily b Remarks: Based	iodegradable. on data from similar materials
Bioac	cumulative potential			
Comp	oonents:			
Perm	ethrin (ISO):			
Bioac	cumulation	:		s macrochirus (Bluegill sunfish) factor (BCF): 570
	on coefficient: n- ol/water	:	log Pow: 4.67	
1-Met	hoxy-2-propanol:			
	on coefficient: n- ol/water	:	log Pow: < 1	
	hoxypropanol:			
	on coefficient: n- ol/water	:	log Pow: -0.49 Remarks: Calcula	ation
Mobil	ity in soil			
No da	ta available			
	adverse effects ta available			

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

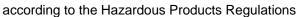
Waste from residues	:	Do not dispose of waste into sewer. Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3092
Proper shipping name	:	1-METHOXY-2-PROPANOL SOLUTION





Permethrin (65%) Formulation

Version 2.0	Revision Date: 07/09/2024	SDS Number:Date of last issue: 04/06/20247766187-00010Date of first issue: 02/05/2021	
Labe Envir	ing group ls onmentally hazardous	: 3 : III : 3 : no	
UN/II Prop Class Pack Labe Pack aircra Pack	ing group ls ing instruction (cargo	 UN 3092 1-Methoxy-2-propanol solution 3 III Flammable Liquids 366 355 	
UN n Prop Class Pack Labe EmS	ing group	 UN 3092 1-METHOXY-2-PROPANOL SOLUTION (Permethrin (ISO)) 3 III 3 F-E, S-D yes 	
	sport in bulk according	g to Annex II of MARPOL 73/78 and the IBC Code supplied.	
Dom	estic regulation		
Prop Class Pack Labe ERG Marir	ing group	 UN 3092 1-METHOXY-2-PROPANOL SOLUTION 3 III 3 129 yes(Permethrin (ISO)) 	

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

The ingredients of this product are reported in the following inventories:

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

according to the Hazardous Products Regulations



Permethrin (65%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04/06/2024
2.0	07/09/2024	7766187-00010	Date of first issue: 02/05/2021

SECTION 16. OTHER INFORMATION

Full text of other abbreviations				
ACGIH CA AB OEL CA BC OEL CA QC OEL	:	USA. ACGIH Threshold Limit Values (TLV) Canada. Alberta, Occupational Health and Safety Code (table 2: OEL) Canada. British Columbia OEL Québec. Regulation respecting occupational health and safe- ty, Schedule 1, Part 1: Permissible exposure values for air-		
ACGIH / TWA ACGIH / STEL CA AB OEL / TWA CA AB OEL / STEL CA BC OEL / TWA CA BC OEL / STEL CA QC OEL / TWAEV CA QC OEL / STEV	:	borne contaminants 8-hour, time-weighted average Short-term exposure limit 8-hour Occupational exposure limit 15-minute occupational exposure limit 8-hour time weighted average short-term exposure limit Time-weighted average exposure value Short-term exposure value		

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



Permethrin (65%) Formulation

Version 2.0	Revision Date: 07/09/2024		DS Number: 766187-00010	Date of last issue: 04/06/2024 Date of first issue: 02/05/2021
Sources of key data used to compile the Material Safety Data Sheet		:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/	
Revision Date Date format		:	07/09/2024 mm/dd/yyyy	

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

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

CA / Z8