

Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06
10.0	2024/09/28	1078716-00021	Date of first issue: 2016/11/18

1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name	:	Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formula- tion
Supplier's company name, ad	ldr	ess and phone number
Company name of supplier	:	MSD
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 chemic Acute toxicity (Inhalation)		
Acute toxicity (Dermal)	:	Category 4
Serious eye damage/eye irri- tation	:	Category 2B
Specific target organ toxicity - single exposure	:	Category 2 (Nervous system)
Short-term (acute) aquatic hazard	:	Category 1
Long-term (chronic) aquatic hazard	:	Category 1

GHS label elements



Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

ersion).0	Revision Date: 2024/09/28	SDS Number: 1078716-00021	Date of last issue: 2024/04/06 Date of first issue: 2016/11/18
Haza	rd pictograms	:	
Signa	l word	: Warning	v v
Haza	rd statements	H320 Causes H371 May cau	Harmful in contact with skin or if inhaled. eye irritation. use damage to organs (Nervous system). kic to aquatic life with long lasting effects.
r ieca	utionary statements	P264 Wash sl P270 Do not e P271 Use only P273 Avoid re	preathe mist or vapours. kin thoroughly after handling. eat, drink or smoke when using this product. y outdoors or in a well-ventilated area. elease to the environment. otective gloves/ protective clothing.
		Call a POISO P304 + P340 and keep com doctor if you for P305 + P351 for several min easy to do. Co P308 + P311 CENTER/ doo P337 + P313 tention.	 + P338 IF IN EYES: Rinse cautiously with wate nutes. Remove contact lenses, if present and ontinue rinsing. IF exposed or concerned: Call a POISON ctor. If eye irritation persists: Get medical advice/ at Take off contaminated clothing and wash it before
		Storage: P405 Store lo	cked up.
		Disposal: P501 Dispose disposal plant	of contents/ container to an approved waste

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Mixture



Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06
10.0	2024/09/28	1078716-00021	Date of first issue: 2016/11/18

Components

Chemical name	CAS-No.	Concentration (% w/w)	ENCS No.
Decamethylcyclopentasiloxane	541-02-6	>= 1 - < 10	7-475
lambda-cyhalothrin (ISO)	91465-08-6	1	-

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
If inhaled	:	advice. 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	:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.
If swallowed	:	If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. 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	:	Harmful in contact with skin or if inhaled. Causes eye irritation.
delayed Protection of first-aiders	:	May cause damage to organs. 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.
5. FIREFIGHTING MEASURES		
Suitable extinguishing media	ι:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	None known.
Specific hazards during fire-	:	Vapours may form explosive mixtures with air.
		0/04



Versi 10.0	ion	Revision Date: 2024/09/28	-	0S Number: 78716-00021	Date of last issue: 2024/04/06 Date of first issue: 2016/11/18
	fighting Hazard ucts	ous combustion prod-	:	Exposure to comb Carbon oxides Nitrogen oxides (N Chlorine compour Fluorine compour Silicon oxides Formaldehyde	nds
	Specific ods	c extinguishing meth-	:	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
	Special for firefi	protective equipment ghters	:	In the event of fire Use personal prot	e, wear self-contained breathing apparatus. ective equipment.
6. AC	CCIDEN	ITAL RELEASE MEAS	SUF	RES	
	tive equ	al precautions, protec- uipment and emer- procedures	:		ective equipment. ing advice (see section 7) and personal pro- recommendations (see section 8).
	Environ	mental precautions	:	Prevent spreading barriers). Retain and dispos	akage or spillage if safe to do so. g over a wide area (e.g. by containment or oil se of contaminated wash water. should be advised if significant spillages
		ls and materials for ment and cleaning up	:	For large spills, pr ment to keep mate be pumped, store Clean up remaining bent. Local or national r posal of this mate employed in the c mine which regula Sections 13 and 1	absorbent material. Tovide dyking or other appropriate contain- erial from spreading. If dyked material can recovered material in appropriate container. In materials from spill with suitable absor- regulations may apply to releases and dis- rial, as well as those materials and items leanup of releases. You will need to deter- ations are applicable. 5 of this SDS provide information regarding tional requirements.



10.0 2024/09/28 1078716-00021 Date of first issue: 2016/1	Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06	
	10.0	2024/09/28	1078716-00021	Date of first issue: 2016/11/18	

7. HANDLING AND STORAGE

Handling		
Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	:	If sufficient ventilation is unavailable, use with local exhaust ventilation.
Advice on safe handling	:	Do not get on skin or clothing. Do not breathe mist or vapours. Do not swallow. Do not get in eyes. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as- sessment Keep container tightly closed. Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment. Do not breathe decomposition products.
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. 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.
Storage		
Conditions for safe storage Materials to avoid	:	Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Do not store with the following product types: Ovidizing solids
		Oxidizing solids Oxidizing liquids
Packaging material	:	Unsuitable material: 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 Control parame- Basis	asis



Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

10.0 2024/09/28 1078716-00021 Date of first issue: 2016/11/18	Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06
	10.0	2024/09/28	1078716-00021	Date of first issue: 2016/11/18

		(Form of exposure)	ters / Concentra- tion standard / Permissible con- centration	
lambda-cyhalothrin (ISO)	91465-08-6	TWA	5 µg/m3 (OEB 4)	Internal
	Further information: Skin			
		Wipe limit	50 µg/100 cm ²	Internal

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type	Control parame-	Basis	
Componenta	0.00-110.	(Form of	ters / Permissible	00313	
		exposure)	concentration		
Formaldehyde	50-00-0	ACL	0.1 ppm	JP OEL ISHL	
		OEL-M	0.1 ppm	JP OEL	
		•==	0.12 mg/m3	JSOH	
	which proba ing agent; G	bly induce allergio roup 1 substance	ensitizing agent; Grou c reactions in humans s which induce allergi carcinogenic to huma	., Skin sensitiz- c reactions in	
		OEL-C	0.2 ppm	JP OEL	
		022.0	0.24 mg/m3	JSOH	
	which proba ing agent; G	bly induce allergie roup 1 substance oup 2A: probably	ensitizing agent; Grou c reactions in humans s which induce allergi carcinogenic to huma	., Skin sensitiz- c reactions in ns	
		TWA	0.1 ppm	ACGIH	
		STEL	0.3 ppm	ACGIH	
Engineering measures	design and protect proc Essentially Use closed If handled in cabinet, fun tial exists fo	operated in acco ducts, workers, ar no open handling processing syste n a laboratory, us ne hood, or other	ms or containment teo e a properly designed containment device if If this potential does n	ciples to chnologies. biosafety the poten-	
Personal protective equip	nent				
Respiratory protection	sure assess	: If adequate local exhaust ventilation is not available or expo- sure assessment demonstrates exposures outside the rec- ommended guidelines, use respiratory protection.			
Filter type	: Combined	Combined particulates, inorganic gas/vapour and organic vapour type			
Hand protection	······································				
Material	: Chemical-re	esistant gloves			
Remarks Eye protection		ouble gloving. y glasses with sid	e shields or goggles.		



Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date: 2024/09/28	SDS Number:	Date of last issue: 2024/04/06
10.0		1078716-00021	Date of first issue: 2016/11/18
Skin a	and body protection	mists or aeroso Wear a faceshi potential for dir aerosols. : Work uniform o Additional body task being perf posable suits)	Fronment or activity involves dusty conditions, ols, wear the appropriate goggles. eld or other full face protection if there is a ect contact to the face with dusts, mists, or or laboratory coat. y garments should be used based upon the ormed (e.g., sleevelets, apron, gauntlets, dis- to avoid exposed skin surfaces. e degowning techniques to remove potentially clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Colour	:	gold
Odour	:	oily
Odour Threshold	:	No data available
Melting point/freezing point	:	No data available
Boiling point, initial boiling point and boiling range	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Lower explosion limit and upper Upper explosion limit / Up- per flammability limit		xplosion limit / flammability limit No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	> 93.3 °C
		Method: Tag closed cup
Decomposition temperature	:	No data available
рН	:	No data available
Evaporation rate	:	No data available
Auto-ignition temperature	:	No data available
Viscosity		



Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Ver 10.0	sion D	Revision Date: 2024/09/28		S Number: 8716-00021	Date of last issue: 2024/04/06 Date of first issue: 2016/11/18
	Visc	osity, kinematic	:	61.69 - 73.9 mm2	2/s
	Solubili Wat	ty(ies) er solubility	:	insoluble	
	Partition octanol	n coefficient: n- /water	:	No data available	
	Vapour	pressure	:	No data available	9
		and / or relative densinative densinative density	ty :	No data available	9
	Den	sity	:	0.924 - 0.974 g/c	m³ (20 °C)
	Relative	e vapour density	:	No data available)
	Explosi	ve properties	:	Not explosive	
	Oxidizir	ng properties	:	The substance of	r mixture is not classified as oxidizing.
	Molecu	lar weight	:	Not applicable	
		characteristics icle size	:	Not applicable	

10. STABILITY AND REACTIVITY

Reactivity Chemical stability Possibility of hazardous reac- tions	: :	Not classified as a reactivity hazard. Stable under normal conditions. Vapours may form explosive mixture with air. Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.		
Conditions to avoid Incompatible materials	:	None known. Oxidizing agents		
Hazardous decomposition products Thermal decomposition : Formaldehyde				

11. TOXICOLOGICAL INFORMATION

Information on likely routes of	:	Inhalation
exposure		Skin contact
		Ingestion
		Eye contact



10.0 2024/09/28 1078716-00021 Date of first issue: 2016/11/18	Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06
	10.0	2024/09/28	1078716-00021	Date of first issue: 2016/11/18

Acute toxicity

Harmful in contact with skin or if inhaled.

|--|

Acute oral toxicity	:	LD50 (Rat): > 9,500 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 4.1 mg/l Remarks: No mortality observed at this dose.
Acute dermal toxicity	:	LD50 (Rabbit): > 1,900 mg/kg

Components:

Decamethylcyclopentasiloxane:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 8.67 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity
lambda-cyhalothrin (ISO):		
Acute oral toxicity	:	LD50 (Rat): 56 - 79 mg/kg
		LD50 (Mouse): 20 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0.06 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rat): 632 - 696 mg/kg

Acute toxicity (other routes of : LD50 (Rat): 250 - 750 mg/kg administration) Application Route: Intraperitoneal

Skin corrosion/irritation

Not classified based on available information.

Product:

Species	:	Rabbit
Result	:	Mild skin irritation

Components:

Decamethylcyclopentasiloxane:



Version 10.0	Revision Date: 2024/09/28	-	DS Number: 078716-00021	Date of last issue: 2024/04/06 Date of first issue: 2016/11/18
Spec Resu		:	Rabbit No skin irritation	
lamb	da-cyhalothrin (ISO):			
Spec Resu	ies		Rabbit No skin irritation	
	ous eye damage/eye in es eye irritation.	ritati	ion	
<u>Prod</u> Spec Resu	ies	:	Rabbit Mild eye irritation	
Com	ponents:			
	methylcyclopentasilo	xane	:	
Spec Resu		:	Rabbit No eye irritation	
	da-cyhalothrin (ISO):		Dabbit	
Spec Resu	lt	:	Rabbit Mild eye irritation	
Resp	piratory or skin sensiti	satio	on	
_	sensitisation lassified based on avail	lable	information.	
-	iratory sensitisation lassified based on avail	lable	information.	
Prod	uct:			
Spec Resu		:	Guinea pig Not a skin sensiti:	zer.
<u>Com</u>	ponents:			
Deca	methylcyclopentasilo	xane):	
Test Expo	Type sure routes	:	Local lymph node Skin contact	e assay (LLNA)
Spec	ies	:	Mouse negative	
lamb	da-cyhalothrin (ISO):			
Test Expo	Type sure routes	:	Magnusson-Klign Dermal	nan-Test



ersion).0	Revision Date: 2024/09/28	SDS Number: 1078716-00021	Date of last issue: 2024/04/06 Date of first issue: 2016/11/18	
Speci Resul		: Guinea pig : Not a skin ser	nsitizer.	
	cell mutagenicity assified based on ava	ailable information.		
	ponents:			
Deca	methylcyclopentasi	oxane:		
Geno	toxicity in vitro		acterial reverse mutation assay (AMES) D Test Guideline 471 ive	
			nromosome aberration test in vitro D Test Guideline 473 ive	
		Test Type: In Result: negat	vitro mammalian cell gene mutation test ive	
Geno	Genotoxicity in vivo	Genotoxicity in vivo	cytogenetic as Species: Rat Application R	oute: inhalation (vapour) D Test Guideline 474
		mammalian li Species: Rat Application Re	nscheduled DNA synthesis (UDS) test with ver cells in vivo oute: Inhalation D Test Guideline 486 ive	
lambo	da-cyhalothrin (ISO)	:		
Geno	toxicity in vitro	: Test Type: Ba Result: negat	acterial reverse mutation assay (AMES) ive	
			nromosomal aberration Human lymphocytes ive	
			ischeduled DNA synthesis assay rat hepatocytes ive	
			vitro mammalian cell gene mutation test mouse lymphoma cells ive	



Version 10.0	Revision Date: 2024/09/28	SDS Number: 1078716-00021	Date of last issue: 2024/04/06 Date of first issue: 2016/11/18
Genc	otoxicity in vivo	Species: Mo Cell type: Bo	ne marrow Route: Intraperitoneal
	inogenicity Iassified based on avai	lable information.	
Com	ponents:		
lamb	da-cyhalothrin (ISO):		
Spec Appli	ies cation Route sure time It	: Mouse : oral (feed) : 2 Years : negative : Based on da	ta from similar materials
	cation Route sure time It	: Rat : oral (feed) : 2 Years : negative : Based on da	ta from similar materials
Not c Com	oductive toxicity lassified based on avai ponents:		
	methylcyclopentasilo ts on fertility	: Test Type: T Species: Rat Application F	Route: inhalation (vapour) PTS 870.3800
Effec ment	ts on foetal develop-	Species: Rat Application F	Route: inhalation (vapour) PTS 870.3800
lamb	da-cyhalothrin (ISO):		
	ts on fertility	Species: Rat Application F General Tox General Tox Symptoms: F	hree-generation study Route: oral (feed) city - Parent: NOAEL: 2 mg/kg body weigh city F1: LOAEL: 6.7 mg/kg body weight Reduced offspring weight gain ffects on fertility



Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

 Revision Date:	SDS Number:	Date of last issue: 2024/04/06
2024/09/28	1078716-00021	Date of first issue: 2016/11/18

	Remarks: Based on data from similar materials
Effects on foetal develop- ment	: Test Type: Development Species: Rat Application Route: Oral General Toxicity Maternal: NOAEL: 10 mg/kg body weight Developmental Toxicity: LOAEL: 15 mg/kg body weight Result: No effects on foetal development, Reduced maternal body weight gain, Reduced foetal weight Remarks: Based on data from similar materials
	Test Type: Development Species: Rabbit Application Route: Oral General Toxicity Maternal: NOAEL: 10 mg/kg body weight Developmental Toxicity: NOAEL: 30 mg/kg body weight Result: No effects on foetal development, Reduced maternal body weight gain, Reduced foetal weight Remarks: Based on data from similar materials

STOT - single exposure

May cause damage to organs (Nervous system).

Components:

lambda-cyhalothrin (ISO):

Target Organs Assessment	:	Nervous system
Assessment	:	Causes damage to organs.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Decamethylcyclopentasiloxane:

Species	: Rat
NOAEL	: 1,000 mg/kg
LOAEL	: > 1,000 mg/kg
Application Route	: Ingestion
Species NOAEL LOAEL Application Route Method	: OECD Test Guideline 408

lambda-cyhalothrin (ISO):

Species NOAEL LOAEL	: Dog
NOAEL	: 2.5 mg/kg
LOAEL	: 12.5 mg/kg
Application Route	: oral (feed)
Exposure time	: 90 d
Application Route Exposure time Symptoms	: reduced body weight gain, reduced food consumption



rsion .0	Revision Date: 2024/09/28		9S Number: 78716-00021	Date of last issue: 2024/04/06 Date of first issue: 2016/11/18
Speci		:	Rat	
NOAE LOAE	EL	:	10 mg/kg 50 mg/kg	
Expo	cation Route sure time et Organs	:	Dermal 21 d Nervous system	
Expo	ΞL	:	Rat 0.08 mg/kg 0.9 mg/kg Inhalation 21 d Nervous system	
Expo	EL EL cation Route sure time et Organs		Dog 0.1 mg/kg 0.5 mg/kg Oral 1 yr Nervous system Gastrointestinal d Liver effects	isturbance, Vomiting, Convulsions, ataxia,
Not c	ration toxicity lassified based on av			
•	rience with human e	•		
Prod		:	Symptoms: May o	cause, Local irritation
<u>Prod</u> Skin o	uct:	:	Symptoms: May o Symptoms: irritati	
<mark>Prod</mark> e Skin o Eye o	<u>uct:</u> contact	:		
Produ Skin o Eye o <u>Com</u> J Iamb	<u>uct:</u> contact contact <u>ponents:</u> da-cyhalothrin (ISO)	:	Symptoms: irritati	ng
Produ Skin o Eye o <u>Com</u>	<u>uct:</u> contact contact <u>ponents:</u> da-cyhalothrin (ISO)	:	Symptoms: irritati	
Prode Skin o Eye o Com Iamb	<u>uct:</u> contact contact <u>ponents:</u> da-cyhalothrin (ISO)	:	Symptoms: irritati Symptoms: Coug Symptoms: Skin i tion, Local irritatio	ng h, Local irritation, sneezing rritation, tingling, superficial burning sensa
Produ Skin o Eye o Comj Iamb Inhala Skin o	<u>uct:</u> contact contact <u>ponents:</u> da-cyhalothrin (ISO) ation	:	Symptoms: irritati Symptoms: Coug Symptoms: Skin i tion, Local irritatio	ng h, Local irritation, sneezing rritation, tingling, superficial burning sensa n absorbed through skin.



Version	Revision Date: 2024/09/28	SDS Number:	Date of last issue: 2024/04/06
10.0		1078716-00021	Date of first issue: 2016/11/18
-			

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Decamethylcyclopentas	siloxane	:
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 16 μ g/l Exposure time: 96 h

		Remarks: No toxicity at the limit of solubility
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 2.9 μg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: No toxicity at the limit of solubility
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 12 μg/l Exposure time: 96 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
		EC10 (Pseudokirchneriella subcapitata (green algae)): > 12 μg/l Exposure time: 96 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
Toxicity to fish (Chronic tox- icity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 14 µg/l Exposure time: 90 d Method: OECD Test Guideline 210 Remarks: No toxicity at the limit of solubility
Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity)	:	NOEC (Daphnia magna (Water flea)): 15 µg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: No toxicity at the limit of solubility
Toxicity to microorganisms	:	EC50: > 2,000 mg/l Exposure time: 3 h Method: 88/302/EC
lambda-cyhalothrin (ISO):		
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00019 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
		LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.00021 mg/l Exposure time: 96 h



ersion).0	Revision Date: 2024/09/28	-	S Number: 78716-00021	Date of last issue: 2024/04/06 Date of first issue: 2016/11/18
				9 Test Guideline 203 ed on data from similar materials
	y to daphnia and other c invertebrates	:	Exposure time: Method: OECD	a magna (Water flea)): 0.00004 mg/l 48 h 9 Test Guideline 202 ed on data from similar materials
M-Fact icity)	tor (Acute aquatic tox-	:	10,000	
	y to fish (Chronic tox-	:	mg/l Exposure time: Method: OECE	nales promelas (fathead minnow)): 0.000062 32 d 9 Test Guideline 210 ed on data from similar materials
	y to daphnia and other c invertebrates (Chron- ity)	:	Exposure time: Method: OECD	ia magna (Water flea)): 0.0035 μg/l 21 d) Test Guideline 211 ed on data from similar materials
M-Fact toxicity	tor (Chronic aquatic	:	10,000	
Persis	tence and degradabili	ty		
Compo	onents:			
Decam	nethylcyclopentasilox	ane	:	
Biodeg	<i>jradability</i>	:	Biodegradation Exposure time:	
Bioaco	cumulative potential			
Compo	onents:			
Decam	nethylcyclopentasilox	ane	:	
Bioacc	umulation	:	Bioconcentratio	ohales promelas (fathead minnow) on factor (BCF): 7,060 - 13,300) Test Guideline 305
Partitio octano	on coefficient: n- I/water	:	log Pow: 8.023	
lambd	a-cyhalothrin (ISO):			
	umulation	:		on factor (BCF): 2,240 9 Test Guideline 305
	on coefficient: n- I/water	:	log Pow: 7.0 (2	20 °C)



Versio 10.0	on Revision Date: 2024/09/28	-	9S Number: 78716-00021	Date of last issue: 2024/04/06 Date of first issue: 2016/11/18
2 	Mobility in soil <u>Components:</u> ambda-cyhalothrin (IS Distribution among env mental compartments Hazardous to the ozor Not applicable Other adverse effects No data available	iron- :	log Koc: 5.5	
13. D	ISPOSAL CONSIDER	ATIONS		
V	Disposal methods Waste from residues Contaminated packagir	: ng :	Do not dispose o Empty containers dling site for recy	cordance with local regulations. f waste into sewer. s should be taken to an approved waste han- cling or disposal. pecified: Dispose of as unused product.
14. TI	RANSPORT INFORM	ATION		
	nternational Regulati	ons		
ι	JNRTDG JN number ^P roper shipping name	:	N.O.S.	ALLY HAZARDOUS SUBSTANCE, LIQUID,
F	Class Packing group Labels Environmentally hazaro	i i lous i	(lambda-cyhalot 9 III 9 yes	
ι	ATA-DGR JN/ID No. ^P roper shipping name	:	UN 3082 Environmentally (lambda-cyhalot	hazardous substance, liquid, n.o.s. hrin (ISO))
F L F a	Class Packing group ∟abels Packing instruction (car aircraft)	•	9 III Miscellaneous 964	
g	Packing instruction (pas ger aircraft)		964	
I	Environmentally hazarc MDG-Code JN number	ious : :	yes UN 3082	



Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date: 2024/09/28	SDS Number:	Date of last issue: 2024/04/06
10.0		1078716-00021	Date of first issue: 2016/11/18
Proper	r shipping name	: ENVIRONMEN N.O.S. (lambda-cyhalo	TALLY HAZARDOUS SUBSTANCE, LIQUID,

	(lambda-cyhalothrin (ISO))	
Class	: 9	
Packing group	: 111	
Labels	: 9	
EmS Code	: F-A, S-F	
Marine pollutant	: yes	

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

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

Group 4, Type 3 petroleums, Water insoluble liquid, (2000 litre), Hazardous rank III

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



Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06
10.0	2024/09/28	1078716-00021	Date of first issue: 2016/11/18

Substances Subject to be Notified Names

Article 57-2 (Enforcement Order Table 9)

Chemical name	Concentration (%)	Remarks
decamethylcyclopentasiloxane	>=1 - <10	From April 1st, 2026
rel-(R)-Cyano(3-phenoxyphenyl)methyl	>=1 - <10	From April 1st, 2025
(1S,3S)-3-[(Z)-2-chloro-3,3,3-		
trifluoroprop-1-en-1-yl]-2,2-		
dimethylcyclopropanecarboxylate		

Substances Subject to be Indicated Names

Article 57 (Enforcement Order Article 18)

Chemical name	Remarks
decamethylcyclopentasiloxane	From April 1st, 2026
rel-(R)-Cyano(3-phenoxyphenyl)methyl (1S,3S)-3-[(Z)-2-chloro-3,3,3-	From April 1st, 2025
trifluoroprop-1-en-1-yl]-2,2-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

Deleterious substance	
Chemical name	Cabinet Order Number
Organic cyanide compounds and preparations	32

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Not applicable

High Pressure Gas Safety Act Not applicable

Explosive Control Law Not applicable



Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06
10.0	2024/09/28	1078716-00021	Date of first issue: 2016/11/18

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)

Marine Pollution and Sea Disaster Prevention etc Law

Bulk transportation : Noxious liquid substance(Category Y)

Pack transportation : Classified as marine 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
IECSC	:	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				
ACGIH JP OEL ISHL JP OEL JSOH	:	USA. ACGIH Threshold Limit Values (TLV) Japan. Administrative Control Levels Japan. The Japan Society for Occupational Health. Recom- mendation of Occupational Exposure Limits		



Version	Revision Date:	SDS Number:	Date of last issue: 2024/04/06
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AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized Svstem; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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

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