

Deltamethrin Collar

Version	Revision Date:	SDS Number:	Date of last issue: 06.04.2024
7.9	28.09.2024	87837-00030	Date of first issue: 01.04.2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1	Product identifier Trade name	:	Deltamethrin Collar
1.2	Relevant identified uses of the	e s	substance or mixture and uses advised against
			Veterinary product
	Recommended restrictions on use	:	Not applicable
1.3	Details of the supplier of the s	af	ety data sheet
	Company	:	MSD Kilsheelan Clonmel Tipperary, IE
	Telephone	:	353-51-601000
	E-mail address of person responsible for the SDS	:	EHSDATASTEWARD@msd.com

1.4 Emergency telephone number

+1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 2	H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through pro- longed or repeated exposure.
Long-term (chronic) aquatic hazard, Cat-	H412: Harmful to aquatic life with long lasting ef-
egory 3	fects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) Hazard pictograms :



according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Signa	l word	Warning	
Hazar	rd statements	 H302 Harmful if swallowed. H317 May cause an allergic skin re H361fd Suspected of damaging fertiling the unborn child. H373 May cause damage to organ repeated exposure. H412 Harmful to aquatic life with logonal statements. 	ity. Suspected of damag- s through prolonged or
Preca	utionary statements	Prevention:	
		 P201 Obtain special instructions b P270 Do not eat, drink or smoke w P273 Avoid release to the environine P280 Wear protective gloves/ protection/ face protection. 	hen using this product. nent.
		Response:	
		attention.	rned: Get medical advice/ h occurs: Get medical
Hazaı	dous components whi	nust be listed on the label:	

deltamethrin (ISO)

EUH212

Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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).

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No.	Classification	Concentration
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according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

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ersion)	Revision Date: 28.09.2024	SDS Number: 87837-00030	Date of last issue: 06.04.2024 Date of first issue: 01.04.2015	
		EC-No. Index-No. Registratior	number	(% w/w)
Triphe	enyl phosphate	115-86-6 204-112-2	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 30 - < 5
deltar	nethrin (ISO)	52918-63-5 258-256-6 607-319-00	Acute Tox. 3; H331	>= 3 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of 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.
Protection of first-aiders	:	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).



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lf inha	aled	: If inhaled, ren Get medical a	nove to fresh air. attention.		
In cas	se of skin contact	of water. Remove cont Get medical a Wash clothing	ntact, immediately flush skin with soap and plenty aminated clothing and shoes. attention. g before reuse. ean shoes before reuse.		
In cas	se of eye contact		ith water as a precaution. attention if irritation develops and persists.		
If swallowed		Get medical a Rinse mouth	DO NOT induce vomiting. attention. thoroughly with water. nything by mouth to an unconscious person.		
4.2 Most i	mportant symptoms a	nd effects, both a	cute and delayed		
Risks		Suspected of unborn child.	allowed. n allergic skin reaction. damaging fertility. Suspected of damaging the amage to organs through prolonged or repeated		
		Pyrethroid po	contains a pyrethroid. isoning should not be confused with carbamate sphate poisoning.		
4.3 Indica	tion of any immediate		and special treatment needed		
Treat	ment	: Treat sympto	matically and supportively.		
SECTION	SECTION 5: Firefighting measures				
-	Juishing media ble extinguishing media	: Water spray Alcohol-resist Carbon dioxic Dry chemical			

Unsuitable extinguishing : None known. media

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire- : Exposure to combustion products may be a hazard to health. fighting

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

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	Hazardous combustion prod- ucts	:	Carbon oxides Nitrogen oxides (I Bromine compour Chlorine compour Oxides of phosph	nds nds
5.3	Advice for firefighters			
	Special protective equipment for firefighters	:		e, wear self-contained breathing apparatus. tective equipment.
	Specific extinguishing methods	:	cumstances and t Use water spray t	measures that are appropriate to local cir- the surrounding environment. to cool unopened containers. ged containers from fire area if it is safe to do

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Follow safe handling advice (see section 7) and personal pro- tective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions	: Avoid release to the environment.
	Prevent further leakage or spillage if safe to do so.
	Retain and dispose of contaminated wash water.
	Local authorities should be advised if significant spillages
	cannot be contained.

6.3 Methods and material for containment and cleaning up

:

Methods for cleaning up :	 Sweep up or vacuum up spillage and collect in suitable container for disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
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6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures

See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

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Local/Total ventilation Advice on safe handling		:	If sufficient ventilation is unavailable, use with local exhaust ventilation. Do not get on skin or clothing. Do not breathe dust, fume, gas, mist, vapours or spray. 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 as- sessment Do not eat, drink or smoke when using this product. Take care to prevent spills, waste and minimize release to the environment.		
Hygiene measures		:	If exposure to che flushing systems place. When usin work clothing sho Wash contaminat The effective ope engineering contr appropriate dego	emical is likely during typical use, provide eye and safety showers close to the working g do not eat, drink or smoke. Contaminated ould not be allowed out of the workplace. ted clothing before re-use. ration of a facility should include review of rols, proper personal protective equipment, wning and decontamination procedures, e monitoring, medical surveillance and the tive controls.	
7.2 Cor	7.2 Conditions for safe storage, i		uding any incom	patibilities	
	quirements for storage eas and containers	:		labelled containers. Store locked up. Store in the particular national regulations.	
Ad	vice on common storage	:	Do not store with	the following product types:	

Strong oxidizing agents Self-reactive substances and mixtures Organic peroxides Explosives Gases

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Triphenyl phos- phate	115-86-6	TWA	3 mg/m3	FOR-2011- 12-06-1358
deltamethrin (ISO)	52918-63-5	TWA	15 µg/m3 (OEB 3)	Internal
	Further inform	nation: DSEN, Skin		
		Wipe limit	100 µg/100 cm²	Internal
Titanium dioxide	13463-67-7	TWA	5 mg/m3	FOR-2011-



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			12-06-1358	

This substance(s) is not bioavailable and therefore does not contribute to a dust inhalation hazard.

Titanium dioxide

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

	<u>,</u>	<u> </u>	<u> </u>	
Substance name	End Use	Exposure routes	Potential health ef- fects	Value
Triphenyl phosphate	Workers	Inhalation	Long-term systemic effects	5,2 mg/m3
	Workers	Skin contact	Long-term systemic effects	5,55 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,9 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1,98 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,5 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

		. ,
Substance name	Environmental Compartment	Value
Triphenyl phosphate	Fresh water	0,0037 mg/l
	Marine water	0,00037 mg/l
	Intermittent use/release	0,0025 mg/l
	Sewage treatment plant	5 mg/l
	Fresh water sediment	1,103 mg/kg dry
		weight (d.w.)
	Marine sediment	0,1103 mg/kg dry
		weight (d.w.)
	Soil	0,2183 mg/kg dry
		weight (d.w.)
	Oral (Secondary Poisoning)	16,667 mg/kg
		food

8.2 Exposure controls

Engineering measures

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 containment devices).

Minimize open handling.

Personal protective equipment

Eye/face 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.
Hand protection		



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Ma	aterial	: Chemical-resis	tant gloves
	marks and body protection	Additional body being performe suits) to avoid o	or laboratory coat. y garments should be used based upon the task ed (e.g., sleevelets, apron, gauntlets, disposable exposed skin surfaces. e degowning techniques to remove potentially
	ratory protection ter type	sure assessme ommended gui	al exhaust ventilation is not available or expo- ent demonstrates exposures outside the rec- delines, use respiratory protection. uld conform to NS EN 143 be (P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	solid
Colour	:	white
Odour	:	very faint
Odour Threshold	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	> 148,8 °C
Flammability (solid, gas)	:	Not classified as a flammability hazard
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
рН	:	No data available

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Vis	cosity Viscosity, kinematic	: Not applicable	
So	lubility(ies) Water solubility	: No data availal	ble
Partition coefficient: n- octanol/water		: Not applicable	
Va	pour pressure	: Not applicable	
Re	lative density	: No data availal	ble
De	nsity	: No data availal	ble
Re	lative vapour density	: Not applicable	
Pa	rticle characteristics Particle size	: Not applicable	
	er information		
Ex	plosives	: Not explosive	
Ox	idizing properties	: The substance	or mixture is not classified as oxidizing.
Ev	aporation rate	: Not applicable	
Mc	ecular weight	: Not applicable	

SECTION 10: Stability and reactivity

10.1	Reactivity	

Not classified as a reactivity hazard.

10.2 Chemical stability Stable under normal conditions.

10.3 Possibility of hazardous read	ctio	ns
Hazardous reactions	:	Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : N	None known.
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10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.



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SECTION 11: Toxicological information

11.1 Information on hazard class Information on likely routes of exposure		Ingestion
		Eye contact
Acute toxicity Harmful if swallowed.		
Product:		
Acute oral toxicity	:	Acute toxicity estimate: 1.668 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Components:		
Triphenyl phosphate:		
Acute oral toxicity	:	LD50 (Rat): > 5.000 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 10.000 mg/kg
deltamethrin (ISO):		
Acute oral toxicity	:	LD50 (Rat): 66,7 mg/kg
		LD50 (Rat): 9 - 139 mg/kg
		LD50 (Mouse): 19 - 34 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0,8 mg/l Exposure time: 2 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): 2.000 mg/kg
		LD50 (Rat): > 800 mg/kg
Acute toxicity (other routes of administration)	:	LD50 (Rat): 2,5 mg/kg Application Route: Intravenous
		LD50 (Mouse): 10 mg/kg Application Route: Intraperitoneal

Skin corrosion/irritation

Not classified based on available information.



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<u>Comp</u>	onents:		
Triphe Specie Metho Result	d	: Rabbit : OECD Test (: No skin irritat	
deltan Specie Result		: Rabbit : No skin irritat	ion
	us eye damage/eye i assified based on ava		
<u>Comp</u>	onents:		
Triphe Specie Metho Result	d	: Rabbit : OECD Test (: No eye irritat	
deltan	nethrin (ISO):		
Specie Result	es	: Rabbit : Moderate eye	e irritation
Respi	ratory or skin sensi	tisation	
May ca	ensitisation ause an allergic skin	reaction.	
-	ratory sensitisation assified based on ava	ilable information.	
<u>Comp</u>	onents:		
Test T	ure routes es d	: Maximisation : Skin contact : Guinea pig : OECD Test (: negative	
deltan	nethrin (ISO):		
Test T Expos Specie Result	ure routes es	: Maximisation : Dermal : Guinea pig : negative	Test
Test T Expos Specie	ure routes	: Human repea : Dermal : Humans	at insult patch test (HRIPT)
		11 /	23

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	Result		:	positive	
	Not cla	cell mutagenicity Issified based on availa onents:	able	information.	
		nyl phosphate: oxicity in vitro	:	Test Type: Chrom Method: OECD To Result: negative	osome aberration test in vitro est Guideline 473
				Test Type: Bacter Method: OECD Te Result: negative	ial reverse mutation assay (AMES) est Guideline 471
				Test Type: In vitro Result: negative	o mammalian cell gene mutation test
	deltam	nethrin (ISO):			
		oxicity in vitro	:	Test Type: Bacter Result: negative	ial reverse mutation assay (AMES)
				Test Type: DNA F Test system: Esch Result: negative	
					nosomal aberration nese hamster ovary cells
					o mammalian cell gene mutation test nese hamster lung cells DAEL: 20 mg/kg
	Genoto	oxicity in vivo	:	Test Type: Micron Species: Mouse Application Route Result: negative	
				Test Type: domina Species: Mouse Application Route Result: negative	
				Test Type: sister of Species: Mouse Cell type: Bone m Application Route Result: negative	chromatid exchange assay arrow : Oral

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Carcinogenicity

Not classified based on available information.

Components:

deltamethrin (ISO):

Species Application Route Exposure time NOAEL LOAEL	:	Mouse, male and female oral (feed) 104 weeks 8 mg/kg body weight
Result	÷	4 mg/kg body weight positive
Target Organs	:	Lymph nodes
Species Application Route Exposure time Result	:	Rat, male and female oral (feed) 2 Years negative
Species Application Route Exposure time NOAEL Result	: : : : : : : : : : : : : : : : : : : :	Dog, male and female oral (feed) 2 Years 1 mg/kg body weight negative

Reproductive toxicity

Suspected of damaging fertility. Suspected of damaging the unborn child.

Components:

Triphenyl phosphate:	
Effects on fertility :	Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
Effects on foetal develop- : ment	Test Type: Embryo-foetal development Species: Rabbit Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative
deltamethrin (ISO):	
Effects on fertility :	Test Type: Three-generation reproduction toxicity study Species: Rat Application Route: oral (feed) Early Embryonic Development: NOAEL: 50 mg/kg body weight Symptoms: No effects on fertility, Embryo-foetal toxicity Remarks: Significant toxicity observed in testing
	Test Type: Two-generation reproduction toxicity study

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		Species: Rat Application Route: Oral Early Embryonic Development: LOAEL: 84 - 149 mg/ weight Symptoms: No effects on fertility, Embryo-foetal toxic	
		Test Type: Fertility Species: Rat, male Application Route: Oral Fertility: LOAEL: 1 mg/kg body weight Symptoms: Effects on fertility Target Organs: Testes	
Effect ment	ts on foetal develop-	 Test Type: Development Species: Mouse Application Route: oral (gavage) Developmental Toxicity: LOAEL: 1 mg/kg body weigh Result: Skeletal malformations Remarks: Maternal toxicity observed. 	ıt
		Test Type: Development Species: Rat, female Developmental Toxicity: NOAEL: 10 mg/kg body weig Symptoms: No effects on foetal development	yht
		Test Type: Development Species: Rabbit, female Application Route: oral (gavage) Developmental Toxicity: NOAEL: 16 mg/kg body weig Symptoms: No effects on foetal development	ght
Repro sessr	oductive toxicity - As- nent	: Some evidence of adverse effects on sexual function fertility, and/or on development, based on animal exp	
Not c	- single exposure lassified based on avai	le information.	
delta	ponents: methrin (ISO): ssment	: May cause respiratory irritation.	
	- repeated exposure cause damage to organ	hrough prolonged or repeated exposure.	
Com	ponents:		
Expo: Targe	methrin (ISO): sure routes et Organs ssment	 Ingestion Central nervous system, Immune system Causes damage to organs through prolonged or reperexposure. 	ated

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Targe	sure routes et Organs ssment	 inhalation (du Central nervo Causes dama exposure. 	
Repe	eated dose toxicity		
Com	ponents:		
Spec NOA Appli	EL cation Route sure time	: Rat : 105 mg/kg : Ingestion : 90 Days : OECD Test G	uideline 408
Spec NOA LOAI Appli Expo Targo	EL	: Rat, male and : 1 mg/kg : 2,5 mg/kg : Oral : 13 Weeks : Nervous syste : hyperexcitabi	em
Expo		: Rat : 3 mg/m3 : inhalation (du : 2 wk / 5 d/wk : Local irritatior	
Expo Targe	EL	: Dog : 0,1 mg/kg : 1 mg/kg : Oral : 13 Weeks : Nervous syste : Dilatation of the tion	em ne pupil, Vomiting, Tremors, Diarrhoea, Saliva-
Expo	EL	: Rat : 14 mg/kg : 54 mg/kg : Oral : 91 d : Nervous syste	em
		: Mouse : 6 mg/kg : Oral : 12 Weeks	



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Target Organs Symptoms			Immune system immune system effects			
•	ation toxicity assified based on av	ailable ir	nformation.			
.2 Infor	mation on other haz	ards				
Endo	crine disrupting pro	perties	i			
Produ	uct:					
<u>Product:</u> Assessment			The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 a levels of 0.1% or higher.			
Expe	rience with human e		levels of 0.1% or			
Exper <u>Produ</u>			levels of 0.1% or			
Produ		exposur :	levels of 0.1% or re Remarks: Can be Based on Animal	higher. e absorbed through skin.		
Produ	<u>uct:</u> contact	exposur :	Remarks: Can be Based on Animal May irritate skin.	higher. e absorbed through skin.		
Produ Skin o Ingesi	<u>uct:</u> contact	exposur :	Remarks: Can be Based on Animal May irritate skin.	higher. e absorbed through skin. Evidence		
Produ Skin o Inges <u>Comp</u>	<u>uct:</u> contact tion	exposur :	Remarks: Can be Based on Animal May irritate skin.	higher. e absorbed through skin. Evidence		
Produ Skin o Inges <u>Comp</u>	uct: contact tion <u>conents:</u> methrin (ISO):	exposur : :	Remarks: Can be Based on Animal May irritate skin. Remarks: May be Symptoms: respi Headache, Naus	higher. e absorbed through skin. Evidence e harmful if swallowed. ratory tract irritation, Dizziness, Sweating, ea, Vomiting, anorexia, Fatigue, tingling,		
Produ Skin o Ingest Comp deltar Inhala	uct: contact tion <u>conents:</u> methrin (ISO):	exposur : :	Remarks: Can be Based on Animal May irritate skin. Remarks: May be Symptoms: respi Headache, Naus Palpitation, Blurre Symptoms: Skin sea, Vomiting, Di	higher. e absorbed through skin. Evidence e harmful if swallowed. ratory tract irritation, Dizziness, Sweating,		

Product:		
Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 13 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Ecotoxicology Assessment Chronic aquatic toxicity	:	Harmful to aquatic life with long lasting effects.



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<u>c</u>	Compo	onents:				
Т	ripher	nyl phosphate:				
Т	Toxicity to fish		:	LC50 (Oncorhync Exposure time: 96	hus mykiss (rainbow trout)): 0,4 mg/l 3 h	
	Toxicity to daphnia and other aquatic invertebrates		:	EC50 (Mysidopsis bahia (opossum shrimp)): > 0,18 - 0,32 mg/l Exposure time: 96 h		
	Toxicity to algae/aquatic plants		:	ErC50 (Raphidoce 3,73 mg/l Exposure time: 72 Method: OECD Te		
				NOEC (Raphidoco 0,25 mg/l Exposure time: 72 Method: OECD Te		
	И-Facto city)	or (Acute aquatic tox-	:	1		
	Toxicity to fish (Chronic tox- icity)		:	EC10: 0,0048 mg Exposure time: 73 Species: Danio re Method: OECD Te	3 d rio (zebra fish)	
а		to daphnia and other invertebrates (Chron- ty)	:	NOEC: 0,254 mg/ Exposure time: 21 Species: Daphnia Method: OECD Te	d magna (Water flea)	
	И-Facto oxicity)	or (Chronic aquatic	:	1		
d	leltam	ethrin (ISO):				
Т	oxicity	to fish	:	LC50 (Cyprinodor mg/l Exposure time: 96	n variegatus (sheepshead minnow)): 0,00048 Sh	
				LC50 (Oncorhync Exposure time: 96	hus mykiss (rainbow trout)): 0,00039 mg/l 3 h	
		to daphnia and other invertebrates	:	EC50 (Mysidopsis Exposure time: 48	s bahia (opossum shrimp)): 0,0037 μg/l β h	
				EC50 (Daphnia m Exposure time: 48	agna (Water flea)): 0,0035 mg/l 3 h	
				LC50 (Gammarus Exposure time: 96	fasciatus (freshwater shrimp)): 0,0003 μg/l δ h	

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	Toxicity plants	to algae/aquatic	:	mg/l Exposure time: 72 Method: OECD T	
	M-Facto icity)	or (Acute aquatic tox-	:	1.000.000	
	Toxicity icity)	to fish (Chronic tox-	:	NOEC: 0,000022 Exposure time: 36 Species: Pimepha	
				NOEC: 0,000017 Exposure time: 26 Species: Pimepha	•
;		to daphnia and other invertebrates (Chron- ty)	:	NOEC: 0,0041 µg Exposure time: 2 ⁴ Species: Daphnia	
	M-Facto toxicity)	or (Chronic aquatic	:	1.000.000	
12.2	Persist	ence and degradabil	ity		
	Compo	nents:			
	-	nyl phosphate: radability	:	Result: Readily bi Biodegradation: 8 Exposure time: 28	33 - 94 %
		ethrin (ISO): / in water	:	Hydrolysis: 0 %(3	0 d)
12.3	Bioacc	umulative potential			
	Compo	nents:			
	•	nyl phosphate: Imulation	:	Species: Oryzias Bioconcentration	latipes (Orange-red killifish) factor (BCF): 144
	Partitior octanol/	n coefficient: n- /water	:	log Pow: 4,63	
	deltam	ethrin (ISO):			
	Bioaccu	umulation	:	• •	s macrochirus (Bluegill sunfish) factor (BCF): 1.800
	Partitior octanol	n coefficient: n- /water	:	log Pow: 4,6	

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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12.4 Mobility in soil

Components:

deltamethrin (ISO):

Distribution among environ- : log Koc: 7,2 mental compartments

12.5 Results of PBT and vPvB assessment

Product:

Assessment

: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	 Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. Do not dispose of waste into sewer. 	
Contaminated packaging	 Empty containers should be taken to an approved waste han- dling site for recycling or disposal. If not otherwise specified: Dispose of as unused product. 	

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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ΙΑΤΑ		: Not regulated as a dangerous good	
14.2 UN p	roper shipping name		
ADN		: Not regulated as a dangerous good	
ADR		: Not regulated as a dangerous good	
RID		: Not regulated as a dangerous good	
IMDO	3	: Not regulated as a dangerous good	
ΙΑΤΑ		: Not regulated as a dangerous good	
14.3 Tran	sport hazard class(es		
ADN		: Not regulated as a dangerous good	
ADR		: Not regulated as a dangerous good	
RID		: Not regulated as a dangerous good	
IMDO		: Not regulated as a dangerous good	
IATA	-	: Not regulated as a dangerous good	
14.4 Packing group			
ADN		: Not regulated as a dangerous good	
ADR		: Not regulated as a dangerous good	
RID		: Not regulated as a dangerous good	
IMDO	`	: Not regulated as a dangerous good	
	(Cargo)	: Not regulated as a dangerous good	
	(Passenger)	: Not regulated as a dangerous good	
	ronmental hazards		
	egulated as a dangerou	s good	
-	ial precautions for us	۶r	
14.7 Marit	time transport in bulk	according to IMO instruments	
Rema	arks	: Not applicable for product as supplied.	

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EC) on substances that deplete the ozone	:	Not applicable

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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layer

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) Regulation (EU) No 649/2012 of the European Parlia-: Not applicable

Regulation (EU) No 649/2012 of the European Parlia- : Not applicable ment and the Council concerning the export and import of dangerous chemicals Several III: Directive 2012/18/ELL of the European Parliament and of the Council

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

Other regulations:

Note the Working Environment Act § 4-1 and § 4-2 on requirements for the employer to protect pregnant employees against discomfort and injury as a result of the work situation and the working environment.

Note the regulation on organization, leadership and participation, chapter 12 on the work of children and young people.

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

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

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

Full text of H-Statements

H301	:	Toxic if swallowed.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H331	:	Toxic if inhaled.
H335	:	May cause respiratory irritation.
H361fd	:	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372	:	Causes damage to organs through prolonged or repeated exposure if inhaled.
H372	:	Causes damage to organs through prolonged or repeated exposure if swallowed.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
Full text of other abbreviation	ons	
Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Eye I Repr. Skin STOT STOT FOR-	Sens. F RE F SE -2011-12-06-1358 -2011-12-06-1358 /	: Eye irritation : Reproductive f : Skin sensitisat : Specific target : Specific target	ion organ toxicity - repeated exposure organ toxicity - single exposure pational Exposure limits

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; 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

Further information

Sources of key data used to	:
compile the Safety Data	
Sheet	

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Classification of the mixture:

Acute Tox. 4	H302
Skin Sens. 1	H317

Calculation method

Classification procedure:



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Repr.	2	H361fd	Calculation method
STOT	RE 2	H373	Calculation method
Aquat	ic Chronic 3	H412	Based on product data or assessment

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.

NO / EN