



Diflubenzuron (25%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 04/11/2024
2.0	07/06/2024	10877035-00008	Date of first issue: 10/26/2022

SECTION 1. IDENTIFICATION

Product name	:	Diflubenzuron (25%) Formulation
Other means of identification	:	Zenith Concentrate (A006102)

Manufacturer or supplier's details

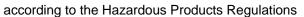
Company name of supplier	:	Merck & Co., Inc
Address	:	126 E. Lincoln Avenue
		Rahway, New Jersey U.S.A. 07065
Telephone	:	908-740-4000
Emergency telephone	:	1-908-423-6000
E-mail address	:	EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use

Recommended use	:	Veterinary product
Restrictions on use	:	Not applicable

SECTION 2. HAZARDS IDENTIFICATION

	dan	ce with the Hazardous Products Regulations
Skin sensitization	:	Sub-category 1B
Specific target organ toxicity - repeated exposure	:	Category 2 (Blood, spleen, Liver)
GHS label elements		
Hazard pictograms	:	
Signal Word	:	Warning
Hazard Statements	:	H317 May cause an allergic skin reaction. H373 May cause damage to organs (Blood, spleen, Liver) through prolonged or repeated exposure.
Precautionary Statements	:	Prevention: P260 Do not breathe mist or vapors. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves.
		Response: P302 + P352 IF ON SKIN: Wash with plenty of water. P314 Get medical attention if you feel unwell. P333 + P313 If skin irritation or rash occurs: Get medical atten- tion. P362 + P364 Take off contaminated clothing and wash it before reuse.





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Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
2,6-difluorobenzamide	Benzamide, N- [[(4- chloro- phe- nyl)amino]carbo nyl]-2,6-difluoro-	35367-38-5	25
Propylene glycol	1,2-Propanediol	57-55-6	5
(R)-p-mentha-1,8- diene	Cyclohexene, 1- methyl-4-(1- methylethenyl)-, (4R)-	5989-27-5	1
N,N"-methylenebis[N'- [3-(hydroxymethyl)-2,5- dioxoimidazolidin-4- yl]urea]	lmidazolidinyl urea	39236-46-9	0.2

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. Get medical attention if symptoms occur.
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. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed Protection of first-aiders	:	May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. First Aid responders should pay attention to self-protection,



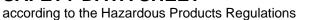
according to the Hazardous Products Regulations

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Ν	and use the recommended personal protective equipment when the potential for exposure exists (see section 8).Notes to physician: Treat symptomatically and supportively.							
SECT	FION 5	. FIRE-FIGHTING ME	ASL	JRES				
S	Suitable	e extinguishing media	:	Water spray Alcohol-resistant Carbon dioxide (C Dry chemical				
		able extinguishing	:	None known.				
S		c hazards during fire	:	Exposure to comb	oustion products may be a hazard to health.			
F	fighting Hazard ucts	ous combustion prod-	:	Carbon oxides Chlorine compour Nitrogen oxides (I Fluorine compour Metal oxides Sulfur oxides	NOx)			
	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			
		protective equipment fighters	:	In the event of fire	e, wear self-contained breathing apparatus. ective equipment.			
SECT	FION 6	. ACCIDENTAL RELE	AS	E MEASURES				
ti	tive equ	al precautions, protec- uipment and emer- procedures	:	Follow safe handl	ective equipment. ing advice (see section 7) and personal ent recommendations (see section 8).			
E	Enviror	nmental precautions	:	Prevent spreading oil barriers). Retain and dispos	he environment. akage or spillage if safe to do so. g over a wide area (e.g., by containment or se of contaminated wash water. should be advised if significant spillages			

Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.
		Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

cannot be contained.





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		determine whic Sections 13 and	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.				
SECTION	7. HANDLING AND ST	ORAGE					
Technical measures			See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.				
Loca	/Total ventilation		Use only with adequate ventilation.				
Advice on safe handling		: Do not get on s Do not breathe Do not swallow Avoid contact w Handle in acco practice, based assessment	kin or clothing. mist or vapors.				
Cond	litions for safe storage	e : Keep in properly labeled containers. Store in accordance with the particular national regulations.					
Mate	rials to avoid	 Do not store with the following product types: Strong oxidizing agents Gases 					

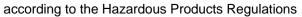
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parame- ters / Permissible concentration	Basis
N-[[(4- chlorophenyl)amino]carbonyl]- 2,6-difluorobenzamide	35367-38-5	TWA	100 µg/m3 (OEB 2)	Internal
Propylene glycol	57-55-6	TWA (Va- pour and aerosols)	50 ppm 155 mg/m³	CA ON OEL
		TWA (aero- sol)	10 mg/m³	CA ON OEL

Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless quick connections).
 All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
 Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).
 Minimize open handling.





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Pers	onal protective equip	nent						
Respiratory protection		exposure ass	: If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.					
	Iter type I protection	: Combined pa	articulates and organic vapor type					
М	aterial	: Chemical-res	sistant gloves					
	emarks protection	If the work er mists or aero Wear a faces	uble gloving. glasses with side shields or goggles. hvironment or activity involves dusty conditions, sols, wear the appropriate goggles. shield or other full face protection if there is a direct contact to the face with dusts, mists, or					
Skin	and body protection	: Work uniform Additional bo task being pe disposable so	n or laboratory coat. dy garments should be used based upon the erformed (e.g., sleevelets, apron, gauntlets, uits) to avoid exposed skin surfaces. ate degowning techniques to remove potentially					
Hygiene measures		: If exposure to eye flushing : working place When using of Contaminate workplace. Wash contam The effective engineering of appropriate of industrial hyg	o chemical is likely during typical use, provide systems and safety showers close to the					

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	suspension
Color	:	off-white, to, pink, orange
Odor	:	No data available
Odor Threshold	:	No data available
рН	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available

according to the Hazardous Products Regulations

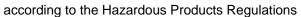


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E	vaporation rate	:	No data available	
F	lammability (solid, gas)	:	Not applicable	
F	lammability (liquids)	:	No data available	
	pper explosion limit / Upper ammability limit	:	No data available	
	ower explosion limit / Lower ammability limit	:	No data available	
V	apor pressure	:	No data available	•
R	elative vapor density	:	No data available	
R	elative density	:	1.09 - 1.19	
D	ensity	:	No data available	•
S	olubility(ies) Water solubility	:	No data available	
	artition coefficient: n- ctanol/water	:	Not applicable	
	utoignition temperature	:	No data available	•
D	ecomposition temperature	:	No data available	
∨ ∏	iscosity Viscosity, kinematic	:	1300 - 2400 mm²	/s
E E	xplosive properties	:	Not explosive	
С	xidizing properties	:	The substance or	mixture is not classified as oxidizing.
Ν	lolecular weight	:	No data available	•
	article characteristics article size	:	Not applicable	

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reac-	:	Can react with strong oxidizing agents.
tions		
Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition	:	No hazardous decomposition products are known.
products		
Hazardous decomposition	:	





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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 20000 ppm Exposure time: 4 h Test atmosphere: gas Method: Calculation method

Components:

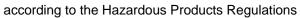
N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide:

Acute oral toxicity	:	LD50 (Rat): 4,640 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 2.49 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Method: OECD Test Guideline 402
Propylene glycol:		
Acute oral toxicity	:	LD50 (Rat): 22,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 44.9 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity
(R)-p-mentha-1,8-diene:		
Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 423 Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Remarks: Based on data from similar materials

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methylenebis[N'-[3-(hydro	xymethyl)-2,5-d	ioxoimidazolidin-4-yl]urea]:
oral toxicity	:	LD50 (Rat): > 5	,000 mg/kg
inhalation toxicity	:	Exposure time: Test atmospher	1 h e: dust/mist
		Exposure time: Test atmospher Method: Expert	e: gas
dermal toxicity	:	LD50 (Rabbit): :	> 8,000 mg/kg
	ailable	information.	
onents:			
	o]cark	onyl]-2,6-difluo	robenzamide:
	:		1-1
	:		
lene glycol:		Pabbit	
es id	:		deline 404
	:		
mentha-1,8-diene:			
es	:	Rabbit	
d t	:	OECD Test Gui Skin irritation	deline 404
	/l		·
methyleneois[iv-[5-(nyaro	Rabbit	ioxoimidazolidin-4-yl]urea]:
es	•	Rannit	
	methylenebis[N'-[3-(oral toxicity inhalation toxicity dermal toxicity corrosion/irritation assified based on ava onents: -chlorophenyl)amines d : flene glycol: es d : mentha-1,8-diene: es d	methylenebis[N'-[3-(hydro oral toxicity inhalation toxicity inhalation toxicity dermal toxicity corrosion/irritation assified based on available onents: -chlorophenyl)amino]carb es d inhalation inhalation assified based on available onents: -chlorophenyl)amino]carb es inhalation inhalation inhalation inhalation assified based on available inhalation inhalation <t< td=""><td>methylenebis[N'-[3-(hydroxymethyl)-2,5-d oral toxicity inhalation toxicity : LD50 (Rat): > 5 inhalation toxicity : LC50 (Rat): > 5 Exposure time: Test atmospher Acute toxicity es Exposure time: Test atmospher Method: Expert Remarks: Value dermal toxicity : dermal toxicity : LD50 (Rabbit): : corrosion/irritation assified based on available information. assified based on available information. . onents: : Rabbit d : OECD Test Gui es : Rabbit d : OECD Test Gui es : Rabbit d : No skin irritation</td></t<>	methylenebis[N'-[3-(hydroxymethyl)-2,5-d oral toxicity inhalation toxicity : LD50 (Rat): > 5 inhalation toxicity : LC50 (Rat): > 5 Exposure time: Test atmospher Acute toxicity es Exposure time: Test atmospher Method: Expert Remarks: Value dermal toxicity : dermal toxicity : LD50 (Rabbit): : corrosion/irritation assified based on available information. assified based on available information. . onents: : Rabbit d : OECD Test Gui es : Rabbit d : OECD Test Gui es : Rabbit d : No skin irritation



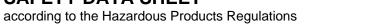


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Prop	ylene glycol:			
Spec	ies	: Rabbit		
Resu		: No eye irritation		
Meth	od	: OECD Test Guid	leline 405	
(R)-p	-mentha-1,8-diene:			
Spec		: Rabbit		
Resu		: No eye irritation		
Meth	od	: OECD Test Guid	leline 405	
		(hydroxymethyl)-2,5-di	oxoimidazolidin-4-yl]urea]:	
Spec		: Rabbit		
Resu	llt	: No eye irritation		
Resp	piratory or skin sensi	tization		
Skin	sensitization			
May	cause an allergic skin	reaction.		
Resp	piratory sensitization			
Not c	lassified based on ava	ailable information.		
Com	ponents:			
N-[[(4	4-chlorophenyl)amin	o]carbonyl]-2,6-difluor	obenzamide:	
Test	Туре	: Buehler Test		
Route	es of exposure	: Skin contact		
Spec		: Guinea pig		
Meth Resu		: OECD Test Guid	leline 406	
Resu	in and the second se	: negative		
	ylene glycol:			
Test	Type es of exposure	: Maximization Te	st	
Spec	es of exposure	: Skin contact		
Resu		: Guinea pig : negative		
		. nogatio		
	-mentha-1,8-diene:			
Test	Type es of exposure ies	: Local lymph nod	e assay (LLNA)	
Route	es of exposure	: Skin contact : Mouse		
Meth	od	: OECD Test Guid	leline 429	
Resu	ılt	: positive		
Asse	ssment	•	dence of low to moderate skin sensitization	
11		rate in humans		
N,N''	-methylenebis[N'-[3-	(hydroxymethyl)-2,5-di	oxoimidazolidin-4-yl]urea]:	
II		: Maximization Te		
Route	Type es of exposure	: Skin contact		

according to the Hazardous Products Regulations



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Specie Result			Guinea pig positive	
Asses	Assessment		Probability or evid ate in humans	ence of low to moderate skin sensitization
	cell mutagenicity assified based on avai	lable in	formation.	
Comp	onents:			
N-[[(4	-chlorophenyl)amino]carbo	nyl]-2,6-difluoro	benzamide:
Genot	oxicity in vitro	Ν	Test Type: Bacter Method: OECD Te Result: negative	ial reverse mutation assay (AMES) est Guideline 471
		Ν		osome aberration test in vitro est Guideline 473
Genot	oxicity in vivo	S A	Species: Mouse	t dominant lethal test (germ cell) (in vivo) : Intraperitoneal injection
Propy	lene glycol:			
	oxicity in vitro		Fest Type: Bacter Result: negative	ial reverse mutation assay (AMES)
		Ν		osome aberration test in vitro est Guideline 473
Genot	oxicity in vivo	c	Fest Type: Mamm cytogenetic assay Species: Mouse	alian erythrocyte micronucleus test (in vivo)
			Application Route Result: negative	: Intraperitoneal injection
(R)-n-	mentha-1,8-diene:			
	oxicity in vitro	N F	Method: OECD Te Result: negative	ial reverse mutation assay (AMES) est Guideline 471 on data from similar materials
			Fest Type: In vitro Result: negative	mammalian cell gene mutation test
			Fest Type: Chrom Result: negative	osome aberration test in vitro
Genot	oxicity in vivo	: 1	Fest Type: In vivo	mammalian alkaline comet assay





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		Species: Rat Application Re Result: negati	oute: Ingestion ive				
N,N"-	-methylenebis[N'-[3-(nydroxymethyl)-2,5	-dioxoimidazolidin-4-yl]urea]:				
Geno			Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative				
		Test Type: Ch Result: negati	nromosome aberration test in vitro				
Geno	toxicity in vivo	cytogenetic as Species: Mou Application Re Result: negati	se oute: Ingestion				
		mammalian liv Species: Rat Application Re Method: OEC Result: negati	nscheduled DNA synthesis (UDS) test with ver cells in vivo oute: Ingestion D Test Guideline 486 ive sed on data from similar materials				

Carcinogenicity

Not classified based on available information.

Components:

N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide:

: Rat
: Ingestion
: 104 weeks
: negative

Propylene glycol:

Species	:	Rat
Application Route	:	Ingestion
Exposure time	:	2 Years
Result	:	negative

(R)-p-mentha-1,8-diene:

Species	: Mouse	
Application Route	: Ingestion	
Exposure time	: 103 weeks	
Result	: negative	

according to the Hazardous Products Regulations



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Reproductive toxicity

Not classified based on available information.

Components:

N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rabbit Application Route: Ingestion Result: negative
Propylene glycol:		
Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Mouse Application Route: Ingestion Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development

(R)-p-mentha-1,8-diene:

	:	Test Type: Embryo-fetal development Species: Rat
		Application Route: Ingestion Result: negative

N,N"-methylenebis[N'-[3-(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]urea]:

Effects on fetal development	:	Test Type: Embryo-fetal development Species: Mouse
		Application Route: Ingestion Result: negative
		Robult. Hogulivo

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

May cause damage to organs (Blood, spleen, Liver) through prolonged or repeated exposure.

Components:

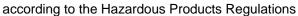
N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide:

Routes of exposure	: Ingestion
Target Organs Assessment	: Blood, spleen, Liver
Assessment	: Shown to produce significant health effects in animals at con-
	centrations of >10 to 100 mg/kg bw.

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Targe	es of exposure et Organs ssment		
Targe	es of exposure et Organs ssment		Liver luce significant health effects in animals at con- >20 to 200 mg/kg bw.
	- mentha-1,8-diene: ssment		health effects observed in animals at concentra- g/kg bw or less.
	ated dose toxicity ponents:		
N-[[(4	l-chlorophenyl)amino]carbonyl]-2,6-diflu	orobenzamide:
Speci		: Rat	
LÖAE	EL	: 81 mg/kg	
Applic	cation Route	: Ingestion	
Expos	sure time	: 28 Days	
		: Rabbit : > 322 mg/kg : Skin contact : 28 Days	
llour		Det	
Speci NOAE		: Rat	
	=∟ cation Route	: > 0.1 mg/l : inhalation (dus	t/mict/fumo)
	sure time	: 28 Days	amisviume)
Prop	ylene glycol:		
Speci	es	: Rat, male	
NOAE	ΞL	: >= 1,700 mg/k	g
	cation Route	: Ingestion	
Expo	sure time	: 2 y	
(R)-p	-mentha-1,8-diene:		
Speci		: Rat, male	
NOAE		: 5 mg/kg	
LOAE		: 30 mg/kg	
	cation Route sure time	: Ingestion : 13 Weeks	
		. 10 10000	
			dioxoimidazolidin-4-yl]urea]:
Speci		: Rat, male	
NOA	ΞL	: 672 mg/kg	





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Appli	cation Poute	: Indestion	

Application Route	: Ingestion
Exposure time	: 13 Weeks

Aspiration toxicity

Not classified based on available information.

Components:

_

(R)-p-mentha-1,8-diene:

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

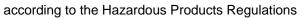
SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

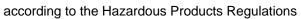
N-[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide:

Toxicity to fish	:	LC50 (Cyprinodon variegatus (sheepshead minnow)): > 0.13 mg/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)): 0.00026 mg/l Exposure time: 48 h	
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): > 0.2 mg/l Exposure time: 72 h Remarks: No toxicity at the limit of solubility.	
Toxicity to fish (Chronic tox- icity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.1 mg/l Exposure time: 35 d	
Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.00004 mg/l Exposure time: 21 d	
Propylene glycol:			
Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l Exposure time: 96 h	
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l Exposure time: 48 h	
Toxicity to algae/aquatic plants	:	ErC50 (Skeletonema costatum (marine diatom)): 19,300 mg/l Exposure time: 72 h Method: OECD Test Guideline 201	
Toxicity to daphnia and other aquatic invertebrates (Chron- ic toxicity)	:	NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l Exposure time: 7 d	
Toxicity to microorganisms	:	NOEC (Pseudomonas putida): > 20,000 mg/l	



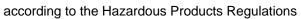


rsion	Revision Date: 07/06/2024		S Number: 877035-00008	Date of last issue: 04/11/2024 Date of first issue: 10/26/2022
I			Exposure time: 1	3 h
(R)-p-	mentha-1,8-diene:			
	ty to fish	:	LC50 (Pimephale Exposure time: 9	s promelas (fathead minnow)): 0.720 mg/l 5 h
	ty to daphnia and other c invertebrates	:	Exposure time: 4	nagna (Water flea)): 307 μg/l 3 h est Guideline 202
Toxici plants	ty to algae/aquatic	:	ErC50 (Pseudoki mg/l Exposure time: 7 Method: OECD T	
			EC10 (Pseudokir mg/l Exposure time: 7: Method: OECD T	
Toxici icity)	ty to fish (Chronic tox-	:	EC10 (Pimephale Exposure time: 8	es promelas (fathead minnow)): 0.37 mg/l d
	ty to daphnia and other c invertebrates (Chron- city)	:	EC10 (Daphnia n Exposure time: 2 Method: OECD T	
Toxici	ty to microorganisms	:	EC50: > 100 mg/ Exposure time: 3 Method: OECD T Remarks: Based	h
N N''-'	methylenebis[N'-[3-(by	dro	vymethyl)-2 5-dic	oxoimidazolidin-4-yl]urea]:
	ty to fish	:		hacrochirus (Bluegill sunfish)): > 220 mg/l
	ty to daphnia and other c invertebrates	:	Exposure time: 4	nagna (Water flea)): > 10 - 100 mg/l 3 h on data from similar materials
Toxici plants	ty to algae/aquatic	:	10 mg/l Exposure time: 72 Method: Directive	rchneriella subcapitata (green algae)): > 1 2 h 67/548/EEC, Annex V, C.3. on data from similar materials
			10 mg/l Exposure time: 72	rchneriella subcapitata (green algae)): > 1 2 h • 67/548/EEC, Annex V, C.3.





	y to microorganisms	:	EC50 (activated s	sludge): > 100 mg/l
Persis				
	tence and degradabi	lity		
Comp	onents:			
N-[[(4-	chlorophenyl)amino]	carl	oonyl]-2,6-difluoro	obenzamide:
Biodeg	ıradability	:	Result: Not readil Method: OECD T	ly biodegradable. est Guideline 301
Propy	ene glycol:			
Biodeg	radability	:	Result: Readily b Biodegradation: Exposure time: 2 Method: OECD T	98.3 %
(R)-p-r	nentha-1,8-diene:			
Biodeg	ıradability	:	Result: Readily b Biodegradation: Exposure time: 2 Method: OECD T	71.4 %
N,N"-n	nethylenebis[N'-[3-(h	ydro	oxymethyl)-2,5-did	oxoimidazolidin-4-yl]urea]:
	radability	:	Result: Not readil Biodegradation: Exposure time: 2	ly biodegradable. 37.4 - 42.7 %
Bioaco	cumulative potential			
	onents:			
	 chlorophenyl)amino]	lcarl	onvil-2 6-difluor	abanzamida.
	umulation	:	Species: Lepomis	s macrochirus (Bluegill sunfish) factor (BCF): 78 - 360
Partitio octano	n coefficient: n- l/water	:	log Pow: < 4	
Propyl	lene glycol:			
Partitio octano	n coefficient: n- I/water	:	log Pow: -1.07 Method: Regulati	on (EC) No. 440/2008, Annex, A.8
(R)-p-r	nentha-1,8-diene:			
Partitio octano	n coefficient: n- I/water	:	log Pow: 4.38	
N,N''-n	nethylenebis[N'-[3-(h	ydro	oxymethyl)-2,5-dio	oxoimidazolidin-4-yl]urea]:





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octan	ol/water	Remarks: Expert judgment				
Mobi	lity in soil					
	ata available					
Othe	r adverse effects					
No da	ata available					
SECTION	13. DISPOSAL CONSI	DERATIONS				
Dispo	osal methods					
Wast	e from residues		of waste into sewer.			
Conta	aminated packaging	: Empty container handling site for	cordance with local regulations. is should be taken to an approved waste recycling or disposal. specified: Dispose of as unused product.			
SECTION	14. TRANSPORT INFO	RMATION				
Interi	national Regulations					
UNR ⁻	IDG					
	umber	: UN 3082				
Prope	er shipping name	N.O.S.	TALLY HAZARDOUS SUBSTANCE, LIQUID, nenyl)amino]carbonyl]-2,6-difluorobenzamide,			
		(R)-p-mentha-1,				
Class	ng group	: 9 : III				
Label		: 9				
Envir	onmentally hazardous	: yes				
ΙΑΤΑ	-DGR					
UN/IE		: UN 3082				
·	er shipping name		hazardous substance, liquid, n.o.s. enyl)amino]carbonyl]-2,6-difluorobenzamide, 8-diene)			
Class		: 9				
Label	ng group s	: III : Miscellaneous				
Packi	ng instruction (cargo	: 964				
	ng instruction (passen-	: 964				
	rcraft) onmentally hazardous	: yes				
IMDO	-Code					
	umber	: UN 3082				
Prope	er shipping name	N.O.S.	FALLY HAZARDOUS SUBSTANCE, LIQUID,			
		(N-[[(4-chloroph (R)-p-mentha-1,	enyl)amino]carbonyl]-2,6-difluorobenzamide, 8-diene)			
Class	ng group					



according to the Hazardous Products Regulations

Diflubenzuron (25%) Formulation

Versio 2.0	n Revision Date: 07/06/2024	SDS Number: 10877035-00008	Date of last issue: 04/11/2024 Date of first issue: 10/26/2022
Er	abels mS Code arine pollutant	: 9 : F-A, S-F : yes	
	ransport in bulk accord ot applicable for product	-	POL 73/78 and the IBC Code
D	omestic regulation		
U	DG N number roper shipping name	N.O.S.	FALLY HAZARDOUS SUBSTANCE, LIQUID, nenyl)amino]carbonyl]-2,6-difluorobenzamide, 8-diene)
Pa La El	lass acking group abels RG Code arine pollutant	: 9 : III : 9 : 171 : yes(N-[[(4-chlore	ophenyl)amino]carbonyl]-2,6- de, (R)-p-mentha-1,8-diene)

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:

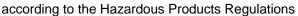
AICS	:	not determined
DSL	:	not determined
IECSC	:	not determined

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

CA ON OEL		:	Ontario Table of Occupational Exposure Limits made under
			the Occupational Health and Safety Act.
CA ON OEL / TWA		:	Time-Weighted Average Limit (TWA)

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





Diflubenzuron (25%) Formulation

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- International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China: IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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 Agen- cy, http://echa.europa.eu/
Revision Date Date format	:	07/06/2024 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