

Diflubenzuron (25%) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 24.07.2025
2.0	15.08.2025	11566167-00002	Date of first issue: 24.07.2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name : Diflubenzuron (25%) Formulation

Other means of identification : COOPERS STRIKE INSECT GROWTH REGULATOR FOR SHEEP DIPPING AND JETTING (48741)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub-stance/Mixture : Veterinary product

Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD
20 Spartan Road
1619 Spartan, South Africa

Telephone : +27119239300

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)**

Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.
Endocrine disruptor for environment, Category 1	EUH430: May cause endocrine disruption in the environment

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

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- Hazard pictograms :    
- Signal word : Danger
- Hazard statements :
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.
 EUH430 May cause endocrine disruption in the environment
- Precautionary statements :
Prevention:
 P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/ eye protection/ face protection.
Response:
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
 P391 Collect spillage.
Storage:
 P405 Store locked up.
Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

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

Nonylphenol, ethoxylated

1,2-Benzisothiazol-3(2H)-one

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 3 %

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

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Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
N-[[[4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide	35367-38-5 252-529-3	STOT RE 2; H373 (Blood, spleen, Liver) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1.000 M-Factor (Chronic aquatic toxicity): 1.000	>= 25 - < 30
Nonylphenol, ethoxylated	9016-45-9	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ED ENV 1; EUH430 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	>= 3 - < 10
Sodium methyl naphthalene formaldehyde sulfonate	68425-94-5	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 1 - < 10
1,2-Benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Acute Tox. 2; H330 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 0,1 - < 0,25

For explanation of abbreviations see section 16.

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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 advice 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). |
| 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 | : | 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 immediately. |
| If swallowed | : | If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water. |

4.2 Most important symptoms and effects, both acute and delayed

- | | | |
|-------|---|--|
| Risks | : | May cause an allergic skin reaction.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure. |
|-------|---|--|

4.3 Indication of any immediate medical attention and special treatment needed

- | | | |
|-----------|---|---|
| Treatment | : | Treat symptomatically and supportively. |
|-----------|---|---|
-

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- | | | |
|--------------------------------|---|--|
| Suitable extinguishing media | : | Water spray
Alcohol-resistant foam
Carbon dioxide (CO ₂)
Dry chemical |
| Unsuitable extinguishing media | : | None known. |

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5.2 Special hazards arising from the substance or mixture

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

Hazardous combustion products : Carbon oxides
Chlorine compounds
Nitrogen oxides (NO_x)
Fluorine compounds
Metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

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 protective 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.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
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 : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked 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 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**

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|-------------------------|---|--|
| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | Use only with adequate 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.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Take care to prevent spills, waste and minimize release to the environment. |
| Hygiene measures | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use.
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls. |

7.2 Conditions for safe storage, including any incompatibilities

- | | | |
|---|---|---|
| Requirements for storage areas and containers | : | Keep in properly labelled containers. Keep tightly closed.
Store in accordance with the particular national regulations. |
| Advice on common storage | : | Do not store with the following product types:
Strong oxidizing agents
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
N-[[4-chloro-phe-nyl)amino]carbonyl	35367-38-5	TWA	400 µg/m3 (OEB 2)	Internal

SAFETY DATA SHEET



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] -2,6-difluorobenzamide				
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Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
Propylene glycol	Workers	Inhalation	Long-term local effects	10 mg/m ³
	Workers	Inhalation	Long-term systemic effects	168 mg/m ³
	Consumers	Inhalation	Long-term local effects	10 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	50 mg/m ³
1,2-Benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6,81 mg/m ³
	Workers	Skin contact	Long-term systemic effects	0,966 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1,2 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	0,345 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
N-[[4-chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide	Fresh water	0,004 µg/l
Propylene glycol	Fresh water	260 mg/l
	Freshwater - intermittent	183 mg/l
	Marine water	26 mg/l
	Sewage treatment plant	20000 mg/l
	Fresh water sediment	572 mg/kg dry weight (d.w.)
	Marine sediment	57,2 mg/kg dry weight (d.w.)
	Soil	50 mg/kg dry weight (d.w.)
1,2-Benzisothiazol-3(2H)-one	Fresh water	11 µg/l
	Intermittent use/release	0,403 µg/l
	Marine water	1,1 µg/l
	Intermittent use/release	0,0403 µg/l
	Sewage treatment plant	1,03 mg/l
	Fresh water sediment	0,0499 mg/kg dry weight (d.w.)
	Marine sediment	0,00499 mg/kg dry weight (d.w.)
	Soil	3 mg/kg dry weight (d.w.)

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8.2 Exposure controls**Engineering measures**

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Laboratory operations do not require special containment.

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	:	
Material	:	Chemical-resistant gloves
Skin and body protection	:	Work uniform or laboratory coat.
Respiratory protection	:	If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Filter type	:	Particulates type (P)

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance	:	Aqueous solution
Colour	:	yellow
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	100 °C (1000 hPa)
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available

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Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Molecular weight	:	No data available
Particle size	:	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 reactions

Hazardous reactions	:	Can react with strong oxidizing agents.
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10.4 Conditions to avoid

Conditions to avoid	:	None known.
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10.5 Incompatible materials

Materials to avoid	:	Oxidizing agents
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10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

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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: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
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

Nonylphenol, ethoxylated:

Acute oral toxicity : LD50 (Rat): 500 - 2.000 mg/kg

Sodium methyl naphthalene formaldehyde sulfonate:

Acute oral toxicity : LD50 (Rat): > 4.500 mg/kg

1,2-Benzisothiazol-3(2H)-one:

Acute oral toxicity : LD50 (Rat, male): 450 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male): 0,21 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

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

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Nonylphenol, ethoxylated:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Sodium methyl naphthalene formaldehyde sulfonate:

Result	:	Skin irritation
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1,2-Benzisothiazol-3(2H)-one:

Result	:	Skin irritation
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Serious eye damage/eye irritation

Causes serious eye damage.

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

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation

Nonylphenol, ethoxylated:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irreversible effects on the eye

Sodium methyl naphthalene formaldehyde sulfonate:

Result	:	Irritation to eyes, reversing within 21 days
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1,2-Benzisothiazol-3(2H)-one:

Species	:	Rabbit
Result	:	Irreversible effects on the eye

Respiratory or skin sensitisation**Skin sensitisation**

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

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

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

Nonylphenol, ethoxylated:

Test Type	: Maximisation Test
Exposure routes	: Skin contact
Species	: Guinea pig
Result	: negative
Remarks	: Based on data from similar materials

1,2-Benzisothiazol-3(2H)-one:

Test Type	: Maximisation Test
Exposure routes	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: positive

Assessment	: Probability or evidence of high skin sensitisation rate in humans
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Germ cell mutagenicity

Not classified based on available information.

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

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
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	: Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
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Genotoxicity in vivo	: Test Type: Rodent dominant lethal test (germ cell) (in vivo) Species: Mouse Application Route: Intraperitoneal injection Result: negative
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Nonylphenol, ethoxylated:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on data from similar materials
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1,2-Benzisothiazol-3(2H)-one:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES)
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Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: positive

Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 486
Result: negative

Carcinogenicity

Not classified based on available information.

Components:**N-[[[4-chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide:**

Species : Rat
Application Route : Ingestion
Exposure time : 104 weeks
Result : negative

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 foetal development : Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Ingestion
Result: negative

1,2-Benzisothiazol-3(2H)-one:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat
Application Route: Ingestion
Method: OPPTS 870.3800
Result: negative

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STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

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

Exposure routes	: Ingestion
Target Organs	: Blood, spleen, Liver
Assessment	: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

Exposure routes	: inhalation (dust/mist/fume)
Target Organs	: Blood, spleen, Liver
Assessment	: Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

Exposure routes	: Skin contact
Target Organs	: Blood, spleen, Liver
Assessment	: Shown to produce significant health effects in animals at concentrations of >20 to 200 mg/kg bw.

1,2-Benzisothiazol-3(2H)-one:

Assessment	: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.
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Repeated dose toxicity**Components:****N-[[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide:**

Species	: Rat
LOAEL	: 81 mg/kg
Application Route	: Ingestion
Exposure time	: 28 Days

Species	: Rabbit
NOAEL	: > 322 mg/kg
Application Route	: Skin contact
Exposure time	: 28 Days

Species	: Rat
NOAEL	: > 0,1 mg/l
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 28 Days

1,2-Benzisothiazol-3(2H)-one:

Species	: Dog
NOAEL	: 5 mg/kg
LOAEL	: 20 mg/kg
Application Route	: Ingestion
Exposure time	: 90 Days

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Method : Directive 67/548/EEC, Annex, B.27

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

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

M-Factor (Acute aquatic toxicity) : 1.000

Toxicity to microorganisms : NOEC (activated sludge): 1.000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: The test was conducted according to guideline

Toxicity to fish (Chronic toxicity) : NOEC: 0,1 mg/l
Exposure time: 35 d
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,00004 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 1.000

Nonylphenol, ethoxylated:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 0,1 - 1 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): > 0,1 - 1 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): > 1 - 10 mg/l

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Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials

EC10 (Selenastrum capricornutum (green algae)): > 1 mg/l
 Exposure time: 72 h
 Method: OECD Test Guideline 201
 Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC: > 0,1 - 1 mg/l
 Exposure time: 100 d
 Species: Oryzias latipes (Japanese medaka)
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0,001 - 0,01 mg/l
 Exposure time: 28 d
 Species: Mysidopsis bahia (opossum shrimp)
 Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 10

Sodium methyl naphthalene formaldehyde sulfonate:**Ecotoxicology Assessment**

Acute aquatic toxicity : Toxic effects cannot be excluded

Chronic aquatic toxicity : Toxic effects cannot be excluded

1,2-Benzisothiazol-3(2H)-one:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,74 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,24 mg/l
 Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0,1087 mg/l
 Exposure time: 24 h

EC10 (Pseudokirchneriella subcapitata (green algae)): 0,0268 mg/l
 Exposure time: 24 h

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : NOEC : 10,3 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 0,28 mg/l

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icity) Exposure time: 33 d
Species: Pimephales promelas (fathead minnow)
Method: OECD Test Guideline 210

Toxicity to daphnia and other : NOEC: 0,91 mg/l
aquatic invertebrates (Chronic toxicity) Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

12.2 Persistence and degradability

Components:

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

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301

Biodegradation Simulation : Environmental Compartment: Soil
Tests Value type: DT50
Value: 2,2 - 6,2 d
Measurement method: OECD Test Guideline 307
Remarks: The test was conducted according to guideline

Nonylphenol, ethoxylated:

Biodegradability : Result: Not readily biodegradable.
Remarks: Based on data from similar materials

12.3 Bioaccumulative potential

Components:

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

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 78 - 360

Partition coefficient: n-octanol/water : log Pow: 3,7
Method: OECD Test Guideline 107

Nonylphenol, ethoxylated:

Partition coefficient: n-octanol/water : log Pow: 4,48

1,2-Benzisothiazol-3(2H)-one:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 6,62

Partition coefficient: n-octanol/water : log Pow: 0,7

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12.4 Mobility in soil**Components:****N-[[[4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide:**

Distribution among environmental compartments	:	log K _{oc} : 3,5 Method: OECD Test Guideline 106 Remarks: The test was conducted according to guideline
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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.
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12.6 Other adverse effects**Product:**

Endocrine disrupting potential	:	This substance/mixture contains components considered to have endocrine disrupting properties for environment, according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.
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Components:**Nonylphenol, ethoxylated:**

Endocrine disrupting potential	:	The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environment.
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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 handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information**14.1 UN number**

ADN	:	UN 3082
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ADR : UN 3082
 RID : UN 3082
 IMDG : UN 3082
 IATA : UN 3082

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (N-[[[4-chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide, Nonylphenol, ethoxylated)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (N-[[[4-chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide, Nonylphenol, ethoxylated)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (N-[[[4-chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide, Nonylphenol, ethoxylated)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (N-[[[4-chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide, Nonylphenol, ethoxylated)

IATA : Environmentally hazardous substance, liquid, n.o.s.
 (N-[[[4-chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide, Nonylphenol, ethoxylated)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	: 9	
ADR	: 9	
RID	: 9	
IMDG	: 9	
IATA	: 9	

14.4 Packing group

ADN
 Packing group : III
 Classification Code : M6
 Hazard Identification Number : 90
 Labels : 9

ADR
 Packing group : III
 Classification Code : M6
 Hazard Identification Number : 90
 Labels : 9
 Tunnel restriction code : (-)

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RID

Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9

IMDG

Packing group	: III
Labels	: 9
EmS Code	: F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft)	: 964
Packing instruction (LQ)	: Y964
Packing group	: III
Labels	: Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft)	: 964
Packing instruction (LQ)	: Y964
Packing group	: III
Labels	: Miscellaneous

14.5 Environmental hazards**ADN**

Environmentally hazardous	: yes
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ADR

Environmentally hazardous	: yes
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RID

Environmentally hazardous	: yes
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IMDG

Marine pollutant	: yes
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IATA (Passenger)

Environmentally hazardous	: yes
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IATA (Cargo)

Environmentally hazardous	: yes
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14.6 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks	: Not applicable for product as supplied.
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SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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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

Other information	:	Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.
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Full text of H-Statements

EUH430	:	May cause endocrine disruption in the environment
H302	:	Harmful if swallowed.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H330	:	Fatal if inhaled.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
ED ENV	:	Endocrine disruptor for environment
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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 - Interna-

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tional 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:

Eye Dam. 1	H318
Skin Sens. 1	H317
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 1	H410
ED ENV 1	EUH430

Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

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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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