

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519



## Diflubenzuron (25%) Formulation

Version 1.4      Revision Date: 2023/09/30      SDS Number: 10877037-00005      Date of last issue: 2023/02/24  
Date of first issue: 2022/10/26

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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Diflubenzuron (25%) Formulation

#### Manufacturer or supplier's details

Company : MSD

Address : No. 485 Jing Tai Road  
Pu Tuo District - Shanghai - China 200331

Telephone : +1-908-740-4000

Emergency telephone number : 86-571-87268110

E-mail address : EHSDATASTEWARD@msd.com

#### Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : Not applicable

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### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

<b>Appearance</b>	: suspension
<b>Colour</b>	: off-white
<b>Odour</b>	: No data available

Causes mild skin irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

#### GHS Classification

Skin corrosion/irritation : Category 3

Skin sensitisation : Category 1

Specific target organ toxicity - repeated exposure : Category 2

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

#### GHS label elements


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- Hazard pictograms : 
- Signal word : Warning
- Hazard statements : H316 Causes mild skin irritation.  
H317 May cause an allergic skin reaction.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.
- Precautionary statements : **Prevention:**  
P260 Do not breathe mist or vapours.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves.  
**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P314 Get medical advice/ attention if you feel unwell.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Physical and chemical hazards

Not classified based on available information.

### Health hazards

Causes mild skin irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.

### Environmental hazards

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

### Other hazards which do not result in classification

None known.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
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N-[[4-chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide	35367-38-5	>= 25 -< 30
Sulfurous acid, monosodium salt, reaction products with (cresol, formaldehyde, nonylphenol) polymer	115535-44-9	>= 2.5 -< 10
(R)-p-mentha-1,8-diene	5989-27-5	>= 1 -< 2.5
N,N''-Methylenebis[N'-(3-(hydroxymethyl)-2,5-dioximidazolidin-4-yl)]urea]	39236-46-9	>= 0.1 -< 0.25

### 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 : Causes mild skin irritation.  
May cause an allergic skin reaction.  
May cause damage to organs through prolonged or repeated exposure.
- 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).
- Notes to physician : Treat symptomatically and supportively.

### 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : None known.
- 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<sub>x</sub>)

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Fluorine compounds  
Metal oxides  
Sulphur oxides

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

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- 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.
- Methods and materials for containment and 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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### 7. HANDLING AND STORAGE

#### Handling

- 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.  
Avoid contact with eyes.
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- Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Take care to prevent spills, waste and minimize release to the environment.
- Avoidance of contact : Oxidizing agents
- Storage**
- Conditions for safe storage : Keep in properly labelled containers.  
Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents
- Packaging material : Unsuitable material: None known.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
N-[[[4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide	35367-38-5	TWA	100 µg/m <sup>3</sup> (OEB 2)	Internal

- 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.  
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

- Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
- Filter type : Combined particulates and organic vapour type
- 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.
- Skin and body protection : Work uniform or laboratory coat.  
Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, dis-

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posable suits) to avoid exposed skin surfaces.  
Use appropriate degowning techniques to remove potentially contaminated clothing.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : suspension

Colour : off-white

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 : No data available

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

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Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1.09 - 1.19
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	:	1300 - 2400 mm <sup>2</sup> /s
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available
Particle size	:	Not applicable

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### 10. STABILITY AND REACTIVITY

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

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### 11. TOXICOLOGICAL INFORMATION

Exposure routes	:	Inhalation Skin contact Ingestion Eye contact
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#### Acute toxicity

Not classified based on available information.

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### Product:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg  
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

#### **(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

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

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l  
Exposure time: 1 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 8,000 mg/kg

### **Skin corrosion/irritation**

Causes mild skin irritation.

### Components:

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

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

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

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Skin irritation



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

Species : Rabbit  
Result : No skin irritation

### **Serious eye damage/eye irritation**

Not classified based on available information.

### **Components:**

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

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

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

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

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

Species : Rabbit  
Result : No eye irritation

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

May cause an allergic skin reaction.

#### **Respiratory sensitisation**

Not classified based on available information.

### **Components:**

#### **N-[[4-(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

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

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : positive

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Assessment : Probability or evidence of low to moderate skin sensitisation rate in humans

### **N,N''-Methylenebis[N'-(3-(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl)urea]:**

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Result : positive

Assessment : Probability or evidence of low to moderate skin sensitisation rate in humans

### **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

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative

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

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo : Test Type: In vivo mammalian alkaline comet assay  
Species: Rat  
Application Route: Ingestion  
Result: negative

### **N,N''-Methylenebis[N'-(3-(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl)urea]:**

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

Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

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  
Remarks: Based on data from similar materials

### 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

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

Species : Mouse  
Application Route : Ingestion  
Exposure time : 103 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

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

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

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

### **N,N''-Methylenebis[N'-(3-(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl)urea]:**

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Mouse  
Application Route: Ingestion  
Result: negative

### **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.

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

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

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

Species : Rat, male  
NOAEL : 5 mg/kg  
LOAEL : 30 mg/kg  
Application Route : Ingestion  
Exposure time : 13 Weeks

##### **N,N''-Methylenebis[N'-[3-(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl]urea]:**

Species : Rat, male  
NOAEL : 672 mg/kg  
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.

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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

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

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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)): 0.0026 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) : 100

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.2 mg/l  
Exposure time: 21 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.00004 mg/l  
Exposure time: 21 d

M-Factor (Chronic aquatic toxicity) : 1,000

### **Sulfurous acid, monosodium salt, reaction products with (cresol, formaldehyde, nonylphenol) polymer:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 10 - 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials

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

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.720 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 307 µg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.25 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

EC10 (Pseudokirchneriella subcapitata (green algae)): 0.14 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : EC10 (Pimephales promelas (fathead minnow)): 0.37 mg/l

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icity) Exposure time: 8 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): 0.153 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50: > 100 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

### Ecotoxicology Assessment

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.  
Remarks: Based on national or regional regulation.

### **N,N'-Methylenebis[N'-(3-(hydroxymethyl)-2,5-dioximidazolidin-4-yl)urea]:**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): > 220 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10 - 100 mg/l  
Exposure time: 48 h  
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 10 mg/l  
Exposure time: 72 h  
Method: Directive 67/548/EEC, Annex V, C.3.  
Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): > 1 - 10 mg/l  
Exposure time: 72 h  
Method: Directive 67/548/EEC, Annex V, C.3.  
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

### Persistence and degradability

#### Components:

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

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

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

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Biodegradability : Result: Readily biodegradable.  
Biodegradation: 71.4 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

### **N,N''-Methylenebis[N'-(3-(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl)urea]:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 37.4 - 42.7 %  
Exposure time: 25 d

### **Bioaccumulative potential**

#### **Components:**

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

Bioaccumulation : Bioconcentration factor (BCF): 320

Partition coefficient: n-octanol/water : log Pow: 3.89

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

Partition coefficient: n-octanol/water : log Pow: 4.38

#### **N,N''-Methylenebis[N'-(3-(hydroxymethyl)-2,5-dioxoimidazolidin-4-yl)urea]:**

Partition coefficient: n-octanol/water : log Pow: < 4  
Remarks: Expert judgement

### **Mobility in soil**

No data available

### **Other adverse effects**

No data available

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## 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues : Do not dispose of waste into sewer.  
Dispose of in accordance with local regulations.  
Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

### **International Regulations**

#### **UNRTDG**

UN number : UN 3082



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Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(N-[[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide, (R)-p-mentha-1,8-diene)

Class : 9  
Packing group : III  
Labels : 9  
Environmentally hazardous : yes

### IATA-DGR

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(N-[[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide, (R)-p-mentha-1,8-diene)

Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964  
Environmentally hazardous : yes

### IMDG-Code

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(N-[[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide, (R)-p-mentha-1,8-diene)

Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

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

Not applicable for product as supplied.

### National Regulations

#### GB 6944/12268

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(N-[[[(4-chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide, (R)-p-mentha-1,8-diene)

Class : 9  
Packing group : III  
Labels : 9  
Marine pollutant : no

### 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

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Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 15. REGULATORY INFORMATION

#### National regulatory information

##### Law on the Prevention and Control of Occupational Diseases

##### Yangtze River Protection Law

This product does not contain any dangerous chemicals prohibited for inland river transport.

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

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

### 16. OTHER INFORMATION

Revision Date : 2023/09/30

#### 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/>

Date format : yyyy/mm/dd

#### Full text of other abbreviations

AIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect

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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; TECL - 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

### Disclaimer

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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