

SAFETY DATA SHEET

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



FLUTRIAFOL 25 G/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name FLUTRIAFOL 25 G/L SC

Other means of identification

Product code 50000694

Unique Formula Identifier (UFI) : 0MU9-92FV-4N4Q-959Y

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

Use of the Substance/Mixture : Fungicide

Recommended restrictions on use : Use as recommended by the label.
For professional and industrial use only

1.3 Manufacturer or supplier's details

Supplier Address FMC Agricultural Solutions A/S
Thyborønvej 78
DK-7673 Harbøre
Denmark

Telephone: +45 9690 9690
Telefax: +45 9690 9691
E-mail address: SDS-Info@fmc.com .

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:
Denmark: +45-69918573 (CHEMTREC)

Medical emergency:
Denmark: +45 82 12 12 12

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

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Long-term (chronic) aquatic hazard, Category 3

H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.

Disposal:
P501 Dispose of contents/container as hazardous waste in accordance with local regulations.

Additional Labelling

EUH208 Contains disodium 5-acetylamino-4-hydroxy-3-(phenylazo)naphthalene-2,7-disulphonate, 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

For special phrases (SP) and safety intervals, consult the label.

2.3 Other hazards

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

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

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
disodium 5-acetylamino-4-hydroxy-3-(phenylazo)naphthalene-2,7-	3734-67-6 223-098-9	Skin Sens. 1B; H317	>= 1 - < 10

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disulphonate Flutriafol	76674-21-0	Acute Tox. 4; H302 Aquatic Chronic 2; H411	$\geq 1 - < 2,5$
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 2; H330 Acute Tox. 4; H302 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 specific concentration limit Skin Sens. 1A; H317 $\geq 0,036 \%$ Acute toxicity esti- mate Acute oral toxicity: 450 mg/kg Acute inhalation tox- icity (dust/mist): 0,21 mg/l	$\geq 0,025 - < 0,036$

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Do not leave the victim unattended.
- Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.

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| In case of skin contact | : If on clothes, remove clothes.
If on skin, rinse well with water.
Wash off with soap and plenty of water.
Get medical attention immediately if irritation develops and persists. |
| In case of eye contact | : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Do not induce vomiting without medical advice. |

4.2 Most important symptoms and effects, both acute and delayed

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| Symptoms | : When fed to animals at high dosage, the product caused salivation, depression of activity, muscle spasms, ataxia and increased body temperature. |
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4.3 Indication of any immediate medical attention and special treatment needed

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| Treatment | : Treat symptomatically.

Immediate medical attention is required in case of ingestion. |
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SECTION 5: Firefighting measures

5.1 Extinguishing media

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| Suitable extinguishing media | : Dry chemical, CO ₂ , water spray or regular foam. |
| Unsuitable extinguishing media | : Do not spread spilled material with high-pressure water streams. |

5.2 Special hazards arising from the substance or mixture

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|---------------------------------------|---|
| Specific hazards during fire-fighting | : Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : Fire may produce irritating, corrosive and/or toxic gases.
Carbon oxides
Hydrogen fluoride
Nitrogen oxides (NO _x)
Fluorinated compounds
Hydrogen cyanide
Sulphur oxides |

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5.3 Advice for firefighters

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| Special protective equipment for firefighters | : | Firefighters should wear protective clothing and self-contained breathing apparatus. |
| Specific extinguishing methods | : | Remove undamaged containers from fire area if it is safe to do so.
Use a water spray to cool fully closed containers. |
| Further information | : | Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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| Personal precautions | : | Use personal protective equipment.
If it can be safely done, stop the leak.
Immediately evacuate personnel to safe areas.
Ensure adequate ventilation.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene. |
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6.2 Environmental precautions

- | | | |
|---------------------------|---|---|
| Environmental precautions | : | Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities. |
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6.3 Methods and material for containment and cleaning up

- | | | |
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| Methods for cleaning up | : | Never return spills in original containers for re-use.
Collect as much of the spill as possible with a suitable absorbent material.
Pick up and transfer to properly labelled containers.
Keep in suitable, closed containers for disposal. |
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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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| Advice on safe handling | : | Avoid contact with skin and eyes.
For personal protection see section 8. |
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Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice. Avoid contact with skin, eyes and clothing. Do not inhale aerosol.

When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully re-sealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available. Protect from frost, fire, heat and direct sunlight.

Recommended storage temperature : < 25 °C

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Registered pesticide to be used in accordance with a label approved by country-specific regulatory authorities.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

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

Substance name	End Use	Exposure routes	Potential health effects	Value
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6,81 mg/m3

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	Workers	Dermal	Long-term systemic effects	0,966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1,2 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,345 mg/kg

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

Substance name	Environmental Compartment	Value
1,2-benzisothiazol-3(2H)-one	Fresh water	0,00403 mg/l
	Marine water	0,000403 mg/l
	Sewage treatment plant	1,03 mg/l
	Fresh water sediment	0,0499 mg/l
	Marine sediment	0,00499 mg/l

8.2 Exposure controls

Personal protective equipment

- Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles
- Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
- Protective measures : Plan first aid action before beginning work with this product.
Always have on hand a first-aid kit, together with proper instructions.
Wear suitable protective equipment.
When using do not eat, drink or smoke.
- In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Physical state : liquid
Form : suspension
Colour : red
Odour : hydrocarbon-like

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Odour Threshold	:	No data available
Melting point/freezing point	:	< 0 °C
Boiling point/boiling range	:	> 100 °C
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	> 105 °C Method: closed cup
Auto-ignition temperature	:	420 °C
Decomposition temperature	:	No data available
pH	:	7,0 Concentration: 1 % 8,1 (undiluted)
Viscosity	:	
Viscosity, dynamic	:	1.100 mPa.s
Viscosity, kinematic	:	No data available
Solubility(ies)	:	
Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	Not available for this mixture.
Vapour pressure	:	Not available for this mixture.
Density	:	1,05 g/cm ³ (20 °C)
Relative vapour density	:	No data available
Particle characteristics	:	
Particle size	:	Not applicable

9.2 Other information

Explosives	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Evaporation rate	:	No data available
Molecular weight	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	No decomposition if stored and applied as directed.
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10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks. Avoid formation of aerosol. Protect from frost.
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10.5 Incompatible materials

Materials to avoid : Avoid strong acids, bases, and oxidizers

10.6 Hazardous decomposition products

Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.

Product:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat): > 5,75 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

Components:

disodium 5-acetylamino-4-hydroxy-3-(phenylazo)naphthalene-2,7-disulphonate:

Acute oral toxicity : LD50 (Mouse, male): > 5.000 mg/kg
Method: OECD Test Guideline 401

Flutriafol:

Acute oral toxicity : LD50 (Rat, female): 300 - 2.000 mg/kg
Method: OECD Test Guideline 423
Target Organs: Liver, Gastrointestinal tract
Symptoms: Fatality
GLP: yes
Assessment: The component/mixture is moderately toxic after single ingestion.

LD50 (Rat, female): 1.030 mg/kg
Method: OECD Test Guideline 425
Target Organs: Liver, Gastrointestinal tract
Symptoms: Breathing difficulties

Acute inhalation toxicity : LC50 (Rat): > 5,2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Symptoms: Fatality, ataxia, Breathing difficulties

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GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: no mortality

LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402
Symptoms: Irritation
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: no mortality

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

Acute oral toxicity : LD50 (Rat, male and female): 490 mg/kg
Method: OECD Test Guideline 401

Acute toxicity estimate: 450 mg/kg
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008
Remarks: Based on EU Harmonised classification - Annex VI of Regulation (EC) No 1272/2008 (CLP Regulation)

Acute inhalation toxicity : Acute toxicity estimate: 0,21 mg/l
Test atmosphere: dust/mist
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008
Remarks: Based on EU Harmonised classification - Annex VI of Regulation (EC) No 1272/2008 (CLP Regulation)

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

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Product:

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

Components:

Flutriafol:

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 404

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Result : No skin irritation
GLP : yes

Species : Rabbit
Result : No skin irritation

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

Species : Rabbit
Exposure time : 72 h
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
Remarks : Minimal effects that do not meet the threshold for classification.

Components:

Flutriafol:

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 405
Result : slight irritation
GLP : yes

Species : Rabbit
Assessment : Not classified as irritant
Method : OECD Test Guideline 405
Result : Slight or no eye irritation
GLP : yes

Species : Rabbit
Result : slight irritation

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

Species : Bovine cornea
Method : OECD Test Guideline 437
Result : No eye irritation

Species : Rabbit
Method : EPA OPP 81-4
Result : Irreversible effects on the eye

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Respiratory or skin sensitisation

Skin sensitisation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Product:

Species	:	Guinea pig
Method	:	OECD Test Guideline 429
Result	:	Not a skin sensitizer.

Components:

disodium 5-acetylamino-4-hydroxy-3-(phenylazo)naphthalene-2,7-disulphonate:

Assessment	:	The product is a skin sensitiser, sub-category 1B.
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Flutriafol:

Test Type	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Assessment	:	Did not cause sensitisation on laboratory animals.
Method	:	OECD Test Guideline 406
GLP	:	yes

Species	:	Guinea pig
Result	:	Not a skin sensitizer.

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

Test Type	:	Maximisation Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	May cause sensitisation by skin contact.

Species	:	Guinea pig
Method	:	FIFRA 81.06
Result	:	May cause sensitisation by skin contact.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Components:

Flutriafol:

Genotoxicity in vivo	:	Test Type: dominant lethal test
		Method: OECD Test Guideline 478
		Result: negative

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

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Genotoxicity in vitro : Test Type: gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Test Type: Ames test
Method: OECD Test Guideline 471
Result: negative

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

Genotoxicity in vivo : Test Type: unscheduled DNA synthesis assay
Species: Rat (male)
Cell type: Liver cells
Application Route: Ingestion
Exposure time: 4 h
Method: OECD Test Guideline 486
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Germ cell mutagenicity- Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Based on available data, the classification criteria are not met.

Components:

Flutriafol:

Species : Mouse
Exposure time : 2 Years
NOAEL : 1,2 mg/kg bw/day
Result : negative

Species : Rat
Exposure time : 2 Years
NOAEL : 1 mg/kg bw/day
Result : negative

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

Reproductive toxicity

Based on available data, the classification criteria are not met.

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Components:

Flutriafol:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Method: OECD Test Guideline 416
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Method: OECD Test Guideline 414
Result: negative

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

Effects on fertility : Species: Rat, male
Application Route: Ingestion
General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight
General Toxicity F1: NOAEL: 48 mg/kg body weight
Fertility: NOAEL: 112 mg/kg bw/day
Symptoms: No effects on reproduction parameters
Method: OPPTS 870.3800
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT - single exposure

Based on available data, the classification criteria are not met.

Components:

Flutriafol:

Remarks : No significant adverse effects were reported

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Components:

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

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Flutriafol:

Species : Rat
NOAEL : 13.3 mg/kg bw/day
Application Route : Oral - feed
Exposure time : 90 d
Symptoms : anemia, Liver effects

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Species	:	Dog
NOAEL	:	5 mg/kg bw/day
Application Route	:	Oral
Exposure time	:	90 d
Symptoms	:	blood effects, Liver effects

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

Species	:	Rat, male and female
NOAEL	:	15 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 d
Method	:	OECD Test Guideline 407
Symptoms	:	Irritation

Species	:	Rat, male and female
NOAEL	:	69 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 d
Symptoms	:	Irritation, Reduced body weight

Aspiration toxicity

Based on available data, the classification criteria are not met.

Components:

Flutriafol:

The substance does not have properties associated with aspiration hazard potential.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

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

Components:

Flutriafol:

No neurotoxicity observed in animal studies

Further information

Product:

Remarks	:	To our knowledge, adverse effects in humans have not been
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reported. When fed to animals at high dosage, similar compounds caused salivation, depression of activity, muscle spasms, ataxia and increased body temperature.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 7,9 mg/l
Exposure time: 96 h
Remarks: Information given is based on data obtained from similar product.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 7,5 mg/l
Exposure time: 48 h
Remarks: Information given is based on data obtained from similar product.

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (Diatom)): 3,2 mg/l
Exposure time: 72 h
Remarks: Information given is based on data obtained from similar product.

EC50 (Pseudokirchneriella subcapitata (green algae)): 4,3 mg/l
Exposure time: 72 h
Remarks: Information given is based on data obtained from similar product.

Toxicity to terrestrial organisms : LD50: > 2.000 mg/kg
Exposure time: 14 d
Species: Coturnix japonica (Japanese quail)
Remarks: Information given is based on data obtained from similar product.

LD50: > 100 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Species: Apis mellifera (bees)
Remarks: Information given is based on data obtained from similar product.

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.
Remarks: Expert judgement

Components:

Flutriafol:

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- Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 33 mg/l
Exposure time: 96 h
- LC50 (Danio rerio (zebra fish)): 22,97 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 67 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes
- EC50 (Daphnia magna (Water flea)): 42,21 mg/l
End point: Immobilization
Exposure time: 48 h
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : IC50 (Selenastrum capricornutum (green algae)): 12 mg/l
Exposure time: 96 h
- IC50 (Scenedesmus subspicatus): 1,9 mg/l
Exposure time: 72 h
- EbC50 (Lemna gibba (duckweed)): 0,65 mg/l
Exposure time: 7 d
- EyC50 (Pseudokirchneriella subcapitata (algae)): 3,69 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes
- Toxicity to fish (Chronic toxicity) : NOEC: 4,8 mg/l
Exposure time: 28 d
Species: Lepomis macrochirus (Bluegill sunfish)
- NOEC: 20 mg/l
Exposure time: 14 d
Species: Danio rerio (zebra fish)
Method: OECD Test Guideline 204
- NOEC: 0,1 mg/l
End point: Growth
Species: Pimephales promelas (fathead minnow)
Test Type: Early Life-Stage
Method: OECD Test Guideline 210
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,31 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
- NOEC: 0,45 mg/l

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Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
Method: OECD Test Guideline 211

Toxicity to soil dwelling organisms : NOEC:
0.01 mg/cm²
Exposure time: 180 d
Species: *Eisenia fetida* (earthworms)

LC50: > 1.000 mg/kg
Exposure time: 14 d
Species: *Eisenia fetida* (earthworms)
Method: OECD Test Guideline 207

Toxicity to terrestrial organisms : LD50: > 144 µg/bee
End point: Acute oral toxicity
Species: *Apis mellifera* (bees)
Method: OECD Test Guideline 213
GLP:yes

LD50: > 150 µg/bee
End point: Acute contact toxicity
Species: *Apis mellifera* (bees)
Method: OECD Test Guideline 214
GLP:yes

LD50: > 100 µg/bee
End point: Acute contact toxicity
Species: *Apis mellifera* (bees)
Method: OECD Test Guideline 214

LD50: 872,53 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Species: *Apis mellifera* (bees)
Method: OECD Test Guideline 213

LD50: > 5.000 mg/kg
Species: *Anas platyrhynchos* (Mallard duck)

LD50: ca. 385 mg/kg
Species: *Coturnix japonica* (Japanese quail)
Method: US EPA Test Guideline OPPTS 850.2100

LD50: 4260 ppm
Species: *Coturnix japonica* (Japanese quail)
Method: OPPTS 850.2200

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

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

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Toxicity to fish	: LC50 (Cyprinodon variegatus (sheepshead minnow)): 16,7 mg/l Exposure time: 96 h Test Type: static test LC50 (Oncorhynchus mykiss (rainbow trout)): 2,15 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 2,9 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): 0,070 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (green algae)): 0,04 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	: 1
Toxicity to microorganisms	: EC50 (activated sludge): 24 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209 EC50 (activated sludge): 12,8 mg/l Exposure time: 3 h Test Type: Respiration inhibition Method: OECD Test Guideline 209
M-Factor (Chronic aquatic toxicity)	: 1

12.2 Persistence and degradability

Product:

Biodegradability	: Remarks: Product contains minor amounts of not readily biodegradable components, which may not be degradable in waste water treatment plants.
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Components:

Flutriafol:

Biodegradability	: Result: Not readily biodegradable.
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Stability in water : Remarks: Does not readily hydrolyze

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

Biodegradability : Result: rapidly biodegradable
Method: OECD Test Guideline 301C

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data is available on the product itself.

Components:

Flutriafol:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 7
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 2,29

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

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 56 d
Bioconcentration factor (BCF): 6,62
Method: OECD Test Guideline 305
Remarks: Substance is not persistent, bioaccumulative, and toxic (PBT).

Partition coefficient: n-octanol/water : log Pow: 0,7 (20 °C)
pH: 7

log Pow: 0,99 (20 °C)
pH: 5

12.4 Mobility in soil

Product:

Distribution among environmental compartments : Remarks: No data is available on the product itself.

Components:

Flutriafol:

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Stability in soil : Remarks: Very persistent in soil.

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

Distribution among environmental compartments : Koc: 9,33 ml/g, log Koc: 0,97
Method: OECD Test Guideline 121
Remarks: Highly mobile in soils

12.5 Results of PBT and vPvB assessment

Product:

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

12.6 Endocrine disrupting properties

Product:

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

12.7 Other adverse effects

Components:

Flutriafol:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	: Empty remaining contents. Do not re-use empty containers. Packaging that is not properly emptied must be disposed of as the unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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SECTION 14: Transport information

14.1 UN number or ID number

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

14.2 UN proper shipping name

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

14.3 Transport hazard class(es)

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

14.4 Packing group

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks	:	Not classified as dangerous in the meaning of transport regulations.
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14.7 Maritime transport in bulk according to IMO instruments

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 75, 3

If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not applicable

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

TCSI	: Not in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIIC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL. Flutriafol Alcohols, C13-15, branched and linear, ethoxylated mixture of polyorganosiloxanes and fillers
ENCS	: Not in compliance with the inventory

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ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Not in compliance with the inventory
NZIoC	: Not in compliance with the inventory
TECI	: Not in compliance with the inventory

15.2 Chemical safety assessment

A chemical safety assessment is not required for this product (mixture).

SECTION 16: Other information

Full text of H-Statements

H302	: Harmful if swallowed.
H315	: Causes skin irritation.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H330	: Fatal if inhaled.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H411	: 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
Eye Dam.	: Serious eye damage
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL

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- 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; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Aquatic Chronic 3

H412

Classification procedure:

Based on product data or assessment

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