

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending
Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

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

1.1 Product identifier

Product name Flutriafol 125 g/l SC

Other means of identification

Product code 50000346

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

Use of the Sub- stance/Mixture	Fungicide
Recommended restrictions on use	Use as recommended by the label.

1.3 Details of the supplier of the safety data sheet

Supplier Address FMC Agricultural Solutions A/S
Thyborønvej 78
DK-7673 Harboøre
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)

Skin sensitisation, Sub-category 1B H317: May cause an allergic skin reaction.

Long-term (chronic) aquatic hazard, Category 1 H410: Very toxic to aquatic life with long lasting effects.

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing mist or vapours.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
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 as hazardous waste in accordance with local regulations.

Hazardous components which must be listed on the label:

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

Additional Labelling

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.

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Flutriafol Technical	76674-21-0	Acute Tox. 4; H302 Aquatic Chronic 2; H411 Acute toxicity estimate Acute oral toxicity: 1.140 mg/kg	>= 2,5 - < 10
Sodium alkylnaphthalenesulfonate, formaldehyde condensate	68425-94-5	Eye Irrit. 2; H319 Aquatic Chronic 3; H412	>= 1 - < 2,5
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 10 specific concentration limit Skin Sens. 1; H317 >= 0,05 % Acute toxicity estimate Acute oral toxicity: 500,0 mg/kg 490 mg/kg	>= 0,025 - < 0,05

For explanation of abbreviations see section 16.

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.
- If inhaled : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- 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 : Flush eyes with water as a precaution.
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

- Risks : May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.
-

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.
- Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire- : Do not allow run-off from fire fighting to enter drains or water
-

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

fighting

courses.

Hazardous combustion products : Thermal decomposition can lead to release of irritating gases and vapours.
Hydrogen fluoride
Nitrogen oxides (NO_x)
Carbon oxides
Sulphur oxides
Fluorinated compounds

5.3 Advice for firefighters

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.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
If it can be safely done, stop the leak.
Do not touch or walk through the spilled material.
Keep people away from and upwind of spill/leak.
Remove all sources of ignition.
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.

6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

6.3 Methods and material for containment and cleaning up

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.

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

Advice on safe handling : For personal protection see section 8. Avoid formation of respirable particles. Dispose of rinse water in accordance with local and national regulations. Smoking, eating and drinking should be prohibited in the application area.

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. 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 resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : Store at room temperatures. Protect from frost, fire, heat and direct sunlight. Keep 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.

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.

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

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
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m ³
	Workers	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	Consumers	Inhalation	Long-term local effects	10 mg/m ³
	Workers	Inhalation	Long-term systemic effects	6,81 mg/m ³
	Workers	Dermal	Long-term systemic effects	0,966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1,2 mg/m ³
	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
Flutriafol Technical	Water	6,2 µg/l
propane-1,2-diol	Fresh water	260 mg/l
	Intermittent use/release	183 mg/l
	Marine water	26 mg/l
	Sewage treatment plant	20 g/l
	Fresh water sediment	572 mg/kg
	Marine sediment	57,2 mg/kg
1,2-benzisothiazol-3(2H)-one	Soil	50 mg/kg
	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 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.

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

- 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

- Appearance : liquid
- Colour : off-white, brown
- Odour : characteristic, fish-like, glue-like
- Odour Threshold : not determined
- Melting point/freezing point : < 0 °C
- Boiling point/boiling range : 99 °C
- Upper explosion limit / Upper flammability limit : not determined
- Lower explosion limit / Lower flammability limit : not determined
- Flash point : > 99 °C
Method: Pensky-Martens closed cup - PMCC
- Auto-ignition temperature : No data available
- Decomposition temperature : not determined
- pH : 7,1 (25 °C)

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

(undiluted)
6,5 (25 °C)
(1% solution in water)

Viscosity
Viscosity, kinematic : Non-newtonian fluid: viscosity is dependent on shear rate.
78 - 528 mm²/s (20 °C)
64 - 429 mm²/s (40 °C)

Solubility(ies)
Water solubility : emulsifiable

Partition coefficient: n-octanol/water : Not available for this mixture.

Vapour pressure : Not available for this mixture.

Relative density : No data available

Density : 1,06 g/cm³ (20 °C)

Relative vapour density : not determined

Particle characteristics
Particle size : Not applicable
Particle Size Distribution : Not applicable
Shape : Not applicable

9.2 Other information

Explosives : Not explosive

Oxidizing properties : Non-oxidizing

Flammability (liquids) : Not ignitable

Self-ignition : not determined

Evaporation rate : No data available

Surface tension : 31,6 mN/m, 21 °C

Molecular weight : Not applicable

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

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.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.
Protect from frost, heat and sunlight.

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

Not classified based on available information.

Product:

Acute oral toxicity : LD50 (Rat): > 3.000 mg/kg
Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat): > 2,1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Highest attainable concentration.

Acute dermal toxicity : LD50 (Rat, male and female): > 4.000 mg/kg
Method: OECD Test Guideline 402

Components:

Flutriafol Technical:

Acute oral toxicity : LD50 (Rat): 1.140 - 1.480 mg/kg

Acute toxicity estimate: 1.140 mg/kg

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

Method: Calculation method

Acute inhalation toxicity : LC50 (Rat): > 5,2 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

Sodium alkyl-naphthalenesulfonate, formaldehyde condensate:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

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

Acute oral toxicity : Acute toxicity estimate: 500,0 mg/kg
Method: Converted acute toxicity point estimate

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

Acute toxicity estimate: 490 mg/kg
Method: Calculation method

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

Not classified based on available information.

Product:

Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation

Components:

Flutriafol Technical:

Species : Rabbit
Method : OECD Test Guideline 404
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

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

Serious eye damage/eye irritation

Not classified based on available information.

Product:

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

Components:

Flutriafol Technical:

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

Sodium alkyl naphthalenesulfonate, formaldehyde condensate:

Result : Eye 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

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Test Type : Local lymph node assay (LLNA)
Species : mice
Method : OECD Test Guideline 429
Result : The product is a skin sensitiser, sub-category 1B.

Components:

Flutriafol Technical:

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Method : OECD Test Guideline 429
Result : Not a skin sensitizer.

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending
Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

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

Not classified based on available information.

Components:

Flutriafol Technical:

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

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

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- As- : Weight of evidence does not support classification as a germ

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

assessment cell mutagen.

Carcinogenicity

Not classified based on available information.

Components:

Flutriafol Technical:

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

Not classified based on available information.

Components:

Flutriafol Technical:

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.
Animal testing showed no developmental toxicity.

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

Not classified based on available information.

Components:

Flutriafol Technical:

Remarks : No significant adverse effects were reported

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

STOT - repeated exposure

Not classified based on available information.

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 Technical:

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

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

Not classified based on available information.

Components:

Flutriafol Technical:

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

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

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.

Neurological effects

Components:

Flutriafol Technical:

No neurotoxicity observed in animal studies

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 20 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 7,5 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 10 mg/l
Exposure time: 72 h

ErC50 (Skeletonema costatum (Diatom)): 4,7 mg/l
Exposure time: 72 h

EC50 (Lemna gibba (duckweed)): 53 mg/l
Exposure time: 7 d

NOEC (Lemna gibba (duckweed)): 1,1 mg/l
Exposure time: 7 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending
Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

Remarks: Based on data from similar materials

Toxicity to soil dwelling organisms : LC50: > 1.000 mg/kg
Exposure time: 14 d
Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organisms : LD50: 91,8 µg/bee
Exposure time: 48 h
End point: Acute oral toxicity
Species: Apis mellifera (bees)

LD50: > 100 µg/bee
Exposure time: 48 h
End point: Acute contact toxicity
Species: Apis mellifera (bees)

LD50: > 2.000 mg/kg
Exposure time: 14 d
Species: Coturnix japonica (Japanese quail)

Components:

Flutriafol Technical:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 61 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 78 mg/l
Exposure time: 48 h

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

Toxicity to fish (Chronic toxicity) : NOEC: 6,2 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,31 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

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

Toxicity to terrestrial organisms : LD50: > 50 µg/bee
End point: Acute contact toxicity

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending
Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

Species: Apis mellifera (bees)

LD50: > 2 µg/bee
End point: Acute oral toxicity
Species: Apis mellifera (bees)

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

Sodium alkyl-naphthalenesulfonate, formaldehyde condensate:

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

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 100 mg/l
aquatic invertebrates : Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100
plants : mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

EC10 (Pseudokirchneriella subcapitata (green algae)): > 100
mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other : EC10: > 10 - 100 mg/l
aquatic invertebrates (Chron- : Exposure time: 21 d
ic toxicity) : Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

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

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 : EC50 (Daphnia magna (Water flea)): 2,9 mg/l
aquatic invertebrates : Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

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) : 10

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

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.

Components:

Flutriafol Technical:

Biodegradability : Result: Not readily biodegradable.

Stability in water : Remarks: Does not readily hydrolyze

Sodium alkylnaphthalenesulfonate, formaldehyde condensate:

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

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.

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

Components:

Flutriafol Technical:

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: This substance is not considered to be persistent, bioaccumulating 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 Technical:

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Stability in soil : Remarks: Very persistent in soil.

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

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

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

Product:

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

Components:

Flutriafol Technical:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.
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.

SECTION 14: Transport information

14.1 UN number or ID number

ADN : UN 3082

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending
Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version 1.0 Revision Date: 08.02.2023 SDS Number: 50000346 Date of last issue: -
Date of first issue: 08.02.2023

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.
(Flutriafol)
ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Flutriafol)
RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Flutriafol)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(Flutriafol)
IATA : Environmentally hazardous substance, liquid, n.o.s.
(Flutriafol)

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 : (-)
RID
Packing group : III
Classification Code : M6

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

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

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

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 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on : Conditions of restriction for the fol-

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

the market and use of certain dangerous substances, mixtures and articles (Annex XVII) lowing entries should be considered: Number on list 75, 3

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

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

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

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

Regulation (EC) 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. E1 ENVIRONMENTAL HAZARDS

Other regulations:

Young people under the age of 18 are not allowed to use or be exposed to the product professionally. Young people above the age of 15 are, however, except from this rule if the product is a necessary part of their education.

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.

Sulfurous acid, monosodium salt, reaction products with cresol-formaldehydenonylphenol polymer (average MW 300-600)
Siloxanes and Silicones, di-Me, reaction products with chlorotrimethylsilane, iso-Pr alc., silica and sodium silicate
Flutriafol Technical
Agalmatolite
Sodium alkyl-naphthalenesulfonate, formaldehyde condensate

ENCS : Not in compliance with the inventory

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

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.
H319	:	Causes serious eye irritation.
H400	:	Very toxic to aquatic life.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful 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
Eye Irrit.	:	Eye irritation
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

SAFETY DATA SHEET

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



Flutriafol 125 g/l SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.02.2023	50000346	Date of first issue: 08.02.2023

- 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; 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:

Skin Sens. 1B	H317
Aquatic Chronic 1	H410

Classification procedure:

Based on product data or assessment
Based on product data or assessment

Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. You can contact FMC Corporation to ensure that this document is the most current available from FMC Corporation. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. The user is responsible for determining whether the product is fit for a particular purpose and suitable for the user's conditions and methods of use. Since the conditions and methods of use are beyond the control of FMC Corporation, FMC Corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

Prepared by

FMC Corporation

FMC and the FMC Logo are trademarks of FMC Corporation and/or an affiliate.

© 2021-2023 FMC Corporation. All Rights Reserved.

DK / 6N