

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

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

1.1 Product identifier

Product name FLUTRIAFOL 50 g/L SC

Other means of identification

Product code 50000345

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 users only.

1.3 Details of the supplier of the safety data sheet

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)

Long-term (chronic) aquatic hazard, Category 2 H411: Toxic to aquatic life with long lasting effects.

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Hazard statements : H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

P273 Avoid release to the environment.

Response:

P391 Collect spillage.

Disposal:

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

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Lignosulfonic acid, sodium salt, sulfomethylated	68512-34-5	Eye Irrit. 2; H319	>= 50 - < 70

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version 1.0 Revision Date: 15.12.2023 SDS Number: 50000345 Date of last issue: -
Date of first issue: 15.12.2023

Flutriafol	76674-21-0	Acute Tox. 4; H302 Aquatic Chronic 2; H411	$\geq 2,5 - < 10$
Sodium alkyl naphthalenesulfonate, formaldehyde condensate	68425-94-5	Eye Irrit. 2; H319 Aquatic Chronic 3; H412	$\geq 1 - < 2,5$

For explanation of abbreviations see section 16.

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 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.
- 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 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.
Take victim immediately to hospital.
Do not induce vomiting without medical advice.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : When fed to animals at high dosage, similar but more concentrated formulations of flutriafol caused salivation, depression of activity, muscle spasms, ataxia and increased body temperature.

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

Immediate medical attention is required in case of ingestion.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO₂, 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

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
Sulphur oxides
Hydrogen fluoride
Nitrogen oxides (NO_x)
Fluorinated compounds
Hydrogen cyanide

5.3 Advice for firefighters

Special protective equipment for firefighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

Wear self-contained breathing apparatus for firefighting if necessary.

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 : 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.

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.

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

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.
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 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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Never return spills in original containers for re-use.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
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 : Avoid formation of aerosol.
Do not breathe vapours/dust.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
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 : Avoid contact with skin, eyes and clothing. Do not inhale aerosol. When using do not eat or drink. When using do not

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

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 : Protect from frost, fire, heat and direct sunlight. 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.
- Advice on common storage : Do not store near acids.
- Recommended storage temperature : > 0 - < 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
propane-1,2-diol	Workers	Inhalation	Long-term systemic effects	168 mg/m3
	Workers	Inhalation	Long-term local effects	10 mg/m3
	Consumers	Inhalation	Long-term systemic effects	50 mg/m3
	Consumers	Inhalation	Long-term local effects	10 mg/m3

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

Substance name	Environmental Compartment	Value
propane-1,2-diol	Fresh water	260 mg/l
	Intermittent use/release	183 mg/l

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version 1.0 Revision Date: 15.12.2023 SDS Number: 50000345 Date of last issue: -
Date of first issue: 15.12.2023

	Marine water	26 mg/l
	Sewage treatment plant	20 g/l
	Fresh water sediment	572 mg/kg
	Marine sediment	57,2 mg/kg
	Soil	50 mg/kg

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 : characteristic, slight
- Odour Threshold : No data available

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

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 : > 95 °C
Method: Pensky-Martens closed cup - PMCC

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : 4,93 (20 °C)

Viscosity
Viscosity, dynamic : 850 - 1.150 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.

Relative density : No data available

Density : 1,065 - 1,085 g/cm³

Relative vapour density : No data available

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

Particle characteristics
Particle size : Not applicable

9.2 Other information

Explosives : Not explosive

Oxidizing properties : Non-oxidizing

Flammability (liquids) : Based on available information, the classification criteria for flammability hazard are not met.

Self-ignition : No data available

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.

10.4 Conditions to avoid

Conditions to avoid : Avoid extreme temperatures
Avoid formation of aerosol.
Heat, flames and sparks.
Protect from frost.

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

Stable under recommended storage conditions.

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

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): > 3.000 mg/kg
Method: OECD Test Guideline 423
GLP: yes |
| Acute inhalation toxicity | : LC50 (Rat, male and female): > 0,19 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Highest attainable concentration.
An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration. |
| Acute dermal toxicity | : LD50 (Rat, male and female): > 4.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes |

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

- | | |
|---------------------|---------------------------------|
| Acute oral toxicity | : LD50 (Rat, female): > 10 g/kg |
|---------------------|---------------------------------|

Flutriafol:

- | | |
|---------------------------|---|
| Acute oral toxicity | : LD50 (Rat, male): 1.140 mg/kg

LD50 (Rat, female): 1.480 mg/kg

LD50 (Rat, female): 200 - 2.000 mg/kg
Method: OECD Test Guideline 423
Target Organs: Liver, Gastrointestinal tract
Symptoms: Fatality
Assessment: The component/mixture is moderately toxic after single ingestion. |
| 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 |

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

Method: OECD Test Guideline 402

GLP: yes

Assessment: The component/mixture is minimally toxic after single contact with skin.

Remarks: no mortality

Sodium alkyl naphthalenesulfonate, formaldehyde condensate:

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

Skin corrosion/irritation

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

Product:

Species	: Rabbit
Assessment	: Not classified as irritant
Method	: OECD Test Guideline 404
Result	: slight or no skin irritation.
GLP	: yes

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Result : No skin irritation

Flutriafol:

Species	: Rabbit
Assessment	: Not classified as irritant
Method	: OECD Test Guideline 404
Result	: No skin irritation
GLP	: yes

Serious eye damage/eye irritation

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

Product:

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

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Result : Eye irritation

Flutriafol:

Species	: Rabbit
---------	----------

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

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

Sodium alkyl naphthalenesulfonate, formaldehyde condensate:

Result	:	Eye irritation
--------	---	----------------

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:

Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitisation.
GLP	:	yes

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Species	:	Guinea pig
Result	:	Not a skin sensitizer.

Flutriafol:

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

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

Germ cell mutagenicity

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

Product:

Genotoxicity in vitro	:	Test Type: Ames test
		Method: OECD Test Guideline 471
		Result: negative
		GLP: yes

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

Genotoxicity in vivo : Species: Mouse
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Germ cell mutagenicity- Assessment : In vitro tests did not show mutagenic effects

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Remarks: No data available

Flutriafol:

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

Carcinogenicity

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

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Remarks : No data available

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.

Product:

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

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Flutriafol:

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

STOT - single exposure

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

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Remarks : No data available

Flutriafol:

Remarks : No significant adverse effects were reported

STOT - repeated exposure

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

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Remarks : No data available

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

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

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version 1.0	Revision Date: 15.12.2023	SDS Number: 50000345	Date of last issue: - Date of first issue: 15.12.2023
----------------	------------------------------	-------------------------	--

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.

Neurological effects

Components:

Flutriafol:

No neurotoxicity observed in animal studies

Further information

Product:

Remarks : To our knowledge, adverse effects in humans have not been 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 (Salmo gairdneri): 7,9 mg/l
Exposure time: 96 h
Remarks: Based on data from a similar product.

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 a similar product.

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 4,3 mg/l
Exposure time: 72 h
Remarks: Based on data from a similar product.

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

ErC50 (Skeletonema costatum (Diatom)): 4,7 mg/l
Exposure time: 72 h
Remarks: Based on data from a similar product.

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

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

Ecotoxicology Assessment

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

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 615 mg/l
Exposure time: 96 h

Flutriafol:

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)): 75,7 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

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)

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version 1.0	Revision Date: 15.12.2023	SDS Number: 50000345	Date of last issue: - Date of first issue: 15.12.2023
----------------	------------------------------	-------------------------	--

Toxicity to soil dwelling organisms	: NOEC: 0.01 mg/cm ² Exposure time: 180 d Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	: LD50: > 144 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 LDD50: 14 µg/bee Exposure time: 10 d End point: Acute oral toxicity Species: Apis mellifera (bees) Method: OECD TG 245 GLP:yes 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 aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 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 aquatic invertebrates (Chron-	: EC10: > 10 - 100 mg/l Exposure time: 21 d

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version 1.0	Revision Date: 15.12.2023	SDS Number: 50000345	Date of last issue: - Date of first issue: 15.12.2023
----------------	------------------------------	-------------------------	--

ic toxicity)	Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Remarks: Based on data from similar materials
--------------	---

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:

Lignosulfonic acid, sodium salt, sulfomethylated:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: < 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Flutriafol:

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

Sodium alkyl naphthalenesulfonate, formaldehyde condensate:

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

12.3 Bioaccumulative potential

Product:

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

Components:

Lignosulfonic acid, sodium salt, sulfomethylated:

Bioaccumulation : Remarks: Low potential for bioaccumulation
Partition coefficient: n-octanol/water : log Pow: -3,45

Flutriafol:

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 7
Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water : log Pow: 2,29

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

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.

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

Product:

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.

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

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version 1.0	Revision Date: 15.12.2023	SDS Number: 50000345	Date of last issue: - Date of first issue: 15.12.2023
----------------	------------------------------	-------------------------	--

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
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	

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

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
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
---------------------------	-------

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

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 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) 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.	E2	ENVIRONMENTAL HAZARDS
---	----	-----------------------

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.

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version 1.0	Revision Date: 15.12.2023	SDS Number: 50000345	Date of last issue: - Date of first issue: 15.12.2023
----------------	------------------------------	-------------------------	--

AIIC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL. Flutriafol Agalmatolite Sodium alkyl naphthalenesulfonate, formaldehyde condensate Alcohols, C13-15, branched and linear, ethoxylated
ENCS	: Not in compliance with the inventory
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.
H319	: Causes serious eye irritation.
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 Chronic	: Long-term (chronic) aquatic hazard
Eye Irrit.	: Eye irritation

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 La-

SAFETY DATA SHEET

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



FLUTRIAFOL 50 g/L SC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	15.12.2023	50000345	Date of first issue: 15.12.2023

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; 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:

Aquatic Chronic 2

H411

Classification procedure:

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