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



## FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

17.04.2024 50000696 Date of first issue: 17.04.2024 1.0

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

1.1 Product identifier

**Product name** FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Other means of identification

**Product code** 50000696

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

Use of the Sub-**Fungicide** 

stance/Mixture

**Recommended restrictions**: Use as recommended by the label.

on use

1.3 Details of the supplier of the safety data sheet

**Supplier Address** FMC Agricultural Solutions A/S

Thyborønyei 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)

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

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

¥2>

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** 

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

EUH401 To avoid risks to human health and the environment, comply with the instruc-

tions 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

Observational resource	CAC N-	Olasaitias	0
Chemical name	CAS-No.	Classification	Concentration

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



# FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

	EC-No. Index-No. Registration number		(% w/w)
thiabendazole (ISO)	148-79-8 205-725-8 613-054-00-0	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 1 - < 2,5
		M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	
Flutriafol	76674-21-0	Acute Tox. 4; H302 Aquatic Chronic 2; H411	>= 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	>= 0,025 - < 0,05
		M-Factor (Acute aquatic toxicity): 10	
		specific concentration limit Skin Sens. 1; H317 >= 0,05 %	
		Acute toxicity esti- mate	
		Acute oral toxicity: 500,0 mg/kg 490 mg/kg	

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.

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



## FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

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 ambu-

lance.

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

Symptoms : Contains a triazole. Symptoms may include nausea, vomiting,

diarrhea, visual changes, hallucinations, rash, itching, and

alopecia.

### 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- : Do not allow run-off from fire fighting to enter drains or water

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



## FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

fighting courses.

Hazardous combustion prod: :

ucts

Fire may produce irritating, corrosive and/or toxic gases.

Carbon oxides
Hydrogen fluoride
Nitrogen oxides (NOx)
Fluorinated compounds

Sulphur oxides

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 nec-

essary.

Specific extinguishing meth-

ods

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 cir-

cumstances 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.

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.

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



## FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

### 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 absor-

bent material.

Pick up and transfer to properly labelled containers. Keep in suitable, closed containers for disposal.

Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

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.

Smoking, eating and drinking should be prohibited in the ap-

plication 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 : Avoid contact with skin, eyes and clothing. 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 resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological

safety standards.

Further information on stor-

age conditions

Protect against strong heat, frost and excessive 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.

Recommended storage tem- :

perature

< 25 °C

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



# FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

Further information on stor-

age 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 ef- fects	10 mg/m3
1,2-benzisothiazol- 3(2H)-one	Workers	Inhalation	Long-term systemic effects	6,81 mg/m3
	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
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
	Soil	50 mg/kg
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

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

#### 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 case of mist, spray or aerosol exposure wear suitable per-

sonal respiratory protection and protective suit.

Protective measures : Plan first aid action before beginning work with this product.

Always have on hand a first-aid kit, together with proper in-

structions.

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 instruc-

tions for use.

#### **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

Physical state : liquid

Form : liquid, suspension

Colour : red

Odour : odourless

Odour Threshold : No data available

Melting point/freezing point : < 0 °C

Boiling point/boiling range : > 100 °C

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



# FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

Upper explosion limit / Upper

flammability limit

not determined

Lower explosion limit / Lower

flammability limit

not determined

Flash point : > 100 °C

Auto-ignition temperature : No data available

Decomposition temperature : not determined

pH : not determined

Viscosity

Viscosity, dynamic : 900 - 1.300 mPa.s

Non-newtonian fluid: viscosity is dependent on shear rate.

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 : not determined

Density : ca. 1.040 g/l

Relative vapour density : not determined

Particle characteristics

Particle size : Not applicable

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



## FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

Particle Size Distribution : Not applicable

Shape : Not applicable

9.2 Other information

Explosives : Not explosive

Oxidizing properties : Non-oxidizing

Self-ignition : > 400 °C

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 : Heat, flames and sparks.

Heating of the mixture may evolve harmful and irritant va-

pours.

10.5 Incompatible materials

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

10.6 Hazardous decomposition products

Stable under recommended storage conditions.

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



## FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

17.04.2024 50000696 Date of first issue: 17.04.2024 1.0

### **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:

LD50 (Rat): > 2.000 mg/kgAcute oral toxicity

Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg

Remarks: Based on data from similar materials

**Components:** 

thiabendazole (ISO):

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

Acute inhalation toxicity LC50 (Rat): > 0.53 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Highest attainable concentration.

LD50 (Rabbit): > 5.000 mg/kg Acute dermal toxicity

Flutriafol:

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

LD50 (Rat, female): 1.480 mg/kg

LD50 (Rat, female): 300 - 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

Method: OECD Test Guideline 402

GLP: yes

Assessment: The component/mixture is minimally toxic after

single contact with skin.

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

Remarks: no mortality

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 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:** 

Result : No skin irritation

Remarks : Based on data from a similar product.

**Components:** 

thiabendazole (ISO):

Species : Rabbit

Assessment : No skin irritation

Remarks : Minimal effects that do not meet the threshold for classifica-

tion.

Flutriafol:

Species : Rabbit

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

Result : No skin irritation

GLP : yes

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

Not classified based on available information.

**Product:** 

Result : No eye irritation

Remarks : Minimal effects that do not meet the threshold for classifica-

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

tion.

Based on data from a similar product.

**Components:** 

thiabendazole (ISO):

Species : Rabbit

Assessment : No eye irritation

Remarks : Minimal effects that do not meet the threshold for classifica-

tion.

Flutriafol:

Species : Rabbit

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

GLP : yes

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

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

**Product:** 

Result : Not a skin sensitizer.

Remarks : Based on data from similar materials

Components:

thiabendazole (ISO):

Species : Guinea pig Method : Maximisation Test

Result : Does not cause skin sensitisation.

Flutriafol:

Test Type : Local lymph node assay (LLNA)

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

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

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:

thiabendazole (ISO):

Germ cell mutagenicity- As-

sessment

: No genotoxic potential

Flutriafol:

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

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

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-

sessment

Weight of evidence does not support classification as a germ

cell mutagen.

#### Carcinogenicity

Not classified based on available information.

#### **Components:**

#### thiabendazole (ISO):

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

#### 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 - Assess-

ment

: Animal testing did not show any carcinogenic effects.

### Reproductive toxicity

Not classified based on available information.

#### Components:

### thiabendazole (ISO):

Reproductive toxicity - As-

comment

sessment

: Weight of evidence does not support classification for repro-

ductive toxicity

#### Flutriafol:

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

Effects on fertility : Test Type: reproductive and developmental toxicity study

Method: OECD Test Guideline 416

Result: negative

Effects on foetal develop-

ment

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 - As-

sessment

Weight of evidence does not support classification for repro-

ductive toxicity

STOT - single exposure

Not classified based on available information.

**Components:** 

Flutriafol:

Remarks : No significant adverse effects were reported

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:

thiabendazole (ISO):

Species : Rat

NOAEL : ca. 10 mg/kg

Exposure time : 90 d

Target Organs : Blood, Liver, Thyroid

Flutriafol:

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

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

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:

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 consid-

ered 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.

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

### **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 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 22,8 mg/l

Exposure time: 48 h

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

IC50 (Desmodesmus subspicatus (green algae)): 62,65 mg/l

Exposure time: 72 h

Remarks: Based on data from similar materials

#### **Components:**

## thiabendazole (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,55 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0,81 mg/l

Exposure time: 48 h

LC50 (Americamysis bahia (mysid shrimp)): 0,34 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): 14,7

mg/l

Exposure time: 96 h

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,53

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

mg/l

End point: Growth rate Exposure time: 96 h

M-Factor (Acute aquatic tox-

icity)

: 1

Toxicity to microorganisms : EC50 (activated sludge): > 1.000 mg/l

Exposure time: 3 h

Toxicity to fish (Chronic tox-

icity)

NOEC: 0,012 mg/l Exposure time: 69 d

Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: 0,041 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic

toxicity)

1

Toxicity to terrestrial organ-

isms

LD50: > 2.250 mg/kg

Species: Colinus virginianus (Bobwhite quail)

Flutriafol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 33 mg/l

Exposure time: 96 h

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

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 tox-

icity)

NOEC: 4,8 mg/l

Exposure time: 28 d

Species: Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: 0,31 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

19 / 28

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

Toxicity to soil dwelling or-

ganisms

NOEC:

0.01 mg/cm2

Exposure time: 180 d

Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organ-

isms

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: > 5.000 mg/kg

Species: Anas platyrhynchos (Mallard duck)

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

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 16,7

mg/i

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 tox-

icity)

10

Toxicity to microorganisms : EC50 (activated sludge): 24 mg/l

Exposure time: 3 h

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

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 bio-

degradable components, which may not be degradable in

waste water treatment plants.

**Components:** 

thiabendazole (ISO):

Biodegradability : Remarks: Not readily biodegradable.

Flutriafol:

Biodegradability : Result: Not readily biodegradable.

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:** 

thiabendazole (ISO):

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-

: log Pow: 2,39 (20 °C) pH: 7

octanol/water

Flutriafol:

Bioaccumulation : Species: Fish

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

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

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:** 

thiabendazole (ISO):

Distribution among environ-

mental compartments

Remarks: Low mobility in soil

Flutriafol:

Distribution among environ-

mental compartments

Remarks: Moderately mobile in soils

Stability in soil : Remarks: Very persistent in soil.

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

Distribution among environ-

mental 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.

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



## FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

#### 12.6 Endocrine disrupting properties

**Product:** 

Assessment : The substance/mixture does not contain components consid-

ered 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 infor-

mation

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 infor-

mation

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 chemi-

cal 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 han-

dling 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

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

IMDG : UN 3082 IATA : UN 3082

14.2 UN proper shipping name

**ADN** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(thiabendazol, Flutriafol)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(thiabendazol, Flutriafol)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(thiabendazol, Flutriafol)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(thiabendazol, Flutriafol)

IATA : Environmentally hazardous substance, liquid, n.o.s.

(thiabendazol, 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
Hazard Identification Number : 90
Labels : 9

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

**IMDG** 

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

IATA (Cargo)

Packing instruction (cargo : 964

aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passen: 964

ger aircraft)

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 the market and use of certain dangerous substances,

Conditions of restriction for the following entries should be considered:

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



## FLUTRIAFOL 25 g/I + THIABENDAZOLE 25 g/I SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

mixtures and articles (Annex XVII)

Number on list 3

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

Regulation (EC) No 1005/2009 on substances that de-

plete the ozone layer

bstances that de- : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollu-

tants (recast)

Not applicable

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.

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.

AIIC : Not in compliance with the inventory

DSL : This product contains the following components that are not

on the Canadian DSL nor NDSL.

E2

Flutriafol

mixture of polyorganosiloxanes and fillers

Alcohols, C13-15, branched and linear, ethoxylated

thiabendazole (ISO)

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

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

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.
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.Skin Irrit.Skin irritationSkin 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 - 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 - (Quanti-

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



## FLUTRIAFOL 25 g/l + THIABENDAZOLE 25 g/l SC

Version Revision Date: SDS Number: Date of last issue: -

1.0 17.04.2024 50000696 Date of first issue: 17.04.2024

tative) 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: Classification procedure:

Aquatic Chronic 2 H411 Calculation method

#### **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.

© 2021-2024 FMC Corporation. All Rights Reserved.

**DK / 6N**