



EMESTO PRIME FS50 4X5L BOT IL

Version 4 / EU
102000017285

1/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name EMESTO PRIME FS50 4X5L BOT IL
Product code (UVP) 79115911

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

Use Seed treatment, Fungicide

1.3 Details of the supplier of the safety data sheet

Supplier Bayer AG
Kaiser-Wilhelm-Allee 1
51373 Leverkusen
Germany

Telefax +49(0)2173-38-7394

Responsible Department Chemical Regulatory Affairs
+49(0)2173-38-3409 (during business hours only)
Email: BCS-SDS@bayer.com

1.4 Emergency telephone no.

Emergency telephone no. Global Incident Response Hotline (24h)
+1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Carcinogenicity: Category 2
H351 Suspected of causing cancer.

Chronic aquatic toxicity: Category 2
H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Penflufen

**EMESTO PRIME FS50 4X5L BOT IL**Version 4 / EU
1020000172852/12
Revision Date: 14.01.2022
Print Date: 05.09.2022**Signal word:** Warning**Hazard statements**

H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.
EUH208	Contains 1,2-benzisothiazolin-3-one, reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3- one (3:1). May produce an allergic reaction.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P201	Obtain special instructions before use.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P311	IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
P391	Collect spillage.
P501	Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No additional hazards known beside those mentioned.

Penflufen: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures****Chemical nature**Flowable concentrate for seed treatment (FS)
Penflufen 50 g/l**Hazardous components**

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Penflufen	494793-67-8 619-823-7	Aquatic Chronic 1, H410 Aquatic Acute 1, H400 Carc. 2, H351	5,00
1,2-Benzisothiazol-3(2H)- one	2634-33-5 220-120-9 01-2120761540-60-0003	Skin Irrit. 2, H315 Skin Sens. 1, H317 Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Acute 1, H400	>= 0,005 – <= 0,05
reaction mass of 5-chloro- 2- methyl-2H-isothiazol-3- one and 2-methyl-2H-	55965-84-9	Acute Tox. 3, H301 Acute Tox. 2, H310 Acute Tox. 2, H330	>= 0,0002 – <= 0,0015

**EMESTO PRIME FS50 4X5L BOT IL**Version 4 / EU
1020000172853/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

isothiazol-3- one (3:1)		Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	
1,2-Propanediol	57-55-6 200-338-0 01-2119456809-23-XXXX	Not classified	>= 1,00

Further information

Penflufen	494793-67-8	M-Factor: 1 (acute)
1,2-Benzisothiazol-3(2H)-one	2634-33-5	SCL: Skin Sens. 1; H317: SCL >= 0,05 %
reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	M-Factor: 100 (acute), 100 (chronic)
reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	SCL: Skin Corr. 1C; H314: SCL >= 0,6 %
reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	SCL: Skin Irrit. 2; H315: SCL 0,06 - < 0,6 %
reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	SCL: Eye Dam. 1; H318: SCL >= 0,6 %
reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	SCL: Eye Irrit. 2; H319: SCL 0,06 - < 0,6 %
reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	SCL: Skin Sens. 1A; H317: SCL >= 0,0015 %

For the full text of the H-Statements mentioned in this Section, see Section 16.



EMESTO PRIME FS50 4X5L BOT IL

Version 4 / EU
102000017285

4/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable High volume water jet

5.2 Special hazards arising from the substance or mixture In the event of fire the following may be released: Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x)

5.3 Advice for firefighters

Special protective equipment for firefighters In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.



EMESTO PRIME FS50 4X5L BOT IL

Version 4 / EU
102000017285

5/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

6.2 Environmental precautions Do not allow to get into surface water, drains and ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling Use only in area provided with appropriate exhaust ventilation.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

Suitable materials HDPE (high density polyethylene)

7.3 Specific end use(s) Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

No known occupational limit values.

8.2 Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**EMESTO PRIME FS50 4X5L BOT IL**Version 4 / EU
1020000172856/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

Respiratory protection	Respiratory protection is not required under anticipated circumstances of exposure. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
Hand protection	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet. Material Nitrile rubber Rate of permeability > 480 min Glove thickness > 0,4 mm Directive Protective gloves complying with EN 374.
Eye protection	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).
Skin and body protection	Wear standard coveralls and Category 3 Type 6 suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Form	suspension
Colour	red
Odour	weak, characteristic
Odour Threshold	No data available
pH	6,5 - 8,0 (100 %) (23 °C)
Melting point/range	No data available
Boiling Point	No data available
Flash point	No flash point - Determination conducted up to the boiling point.
Flammability	No data available
Auto-ignition temperature	No data available
Ignition temperature	515 °C
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available

**EMESTO PRIME FS50 4X5L BOT IL**Version 4 / EU
1020000172857/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	ca. 1,04 g/cm ³ (20 °C)
Water solubility	miscible
Partition coefficient: n-octanol/water	Penflufen: log Pow: 3,3 (25 °C)
Viscosity, dynamic	0,182 Pas (20 °C) Velocity gradient 20 /s 0,153 Pas (40 °C) Velocity gradient 20 /s
Viscosity, kinematic	No data available
Surface tension	39 mN/m (25 °C)
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113
9.2 Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4 Conditions to avoid	Extremes of temperature and direct sunlight.
10.5 Incompatible materials	Store only in the original container.
10.6 Hazardous decomposition products	No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects**

**EMESTO PRIME FS50 4X5L BOT IL**Version 4 / EU
1020000172858/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

Acute oral toxicity	LD50 (Rat) > 2.000 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 4,188 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. Highest attainable concentration.
Acute dermal toxicity	LD50 (Rat) > 2.000 mg/kg
Skin corrosion/irritation	No skin irritation (Rabbit)
Serious eye damage/eye irritation	No eye irritation (Rabbit)
Respiratory or skin sensitisation	Non-sensitizing. (Mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

Assessment STOT Specific target organ toxicity – single exposure

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

Assessment STOT Specific target organ toxicity – repeated exposure

Penflufen did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Penflufen was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Penflufen caused at high dose levels an increased incidence of tumours in rats in the following organ(s): ovaries, Brain, hematopoietic system. The mechanism that triggers these tumours is not relevant to humans.

Assessment toxicity to reproduction

Penflufen did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Penflufen did not cause developmental toxicity in rats and rabbits.

Aspiration hazard

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

Further information

No further toxicological information is available.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish	LC50 (Cyprinus carpio (Carp)) 1,68 mg/l Exposure time: 96 h
Chronic toxicity to fish	Pimephales promelas (fathead minnow) flow-through test 0,0234 mg/l Exposure time: 35 d The value mentioned relates to the active ingredient penflufen.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 85 mg/l Exposure time: 48 h



EMESTO PRIME FS50 4X5L BOT IL

Version 4 / EU
102000017285

9/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

Toxicity to aquatic plants EC50 (Raphidocelis subcapitata (freshwater green alga)) > 100 mg/l
Growth rate; Exposure time: 72 h

Toxicity to bacteria EC50 (activated sludge) > 1.000 mg/l
Exposure time: 3 h
The value mentioned relates to the active ingredient penflufen.

12.2 Persistence and degradability

Biodegradability Penflufen:
Not rapidly biodegradable

Koc Penflufen: Koc: 280

12.3 Bioaccumulative potential

Bioaccumulation Penflufen: Bioconcentration factor (BCF) 142
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Penflufen: Moderately mobile in soils

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Penflufen: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Contaminated packaging Not completely emptied packagings should be disposed of as hazardous waste.

Waste key for the unused product **02 01 08*** agrochemical waste containing hazardous substances

SECTION 14: TRANSPORT INFORMATION

ADR/RID/ADN

14.1 UN number

3082

14.2 Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(PENFLUFEN SOLUTION)

14.3 Transport hazard class(es)

9



EMESTO PRIME FS50 4X5L BOT IL

Version 4 / EU
102000017285

10/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

14.4 Packaging Group III
14.5 Environm. Hazardous Mark YES
Hazard no. 90
Tunnel Code -

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG

14.1 UN number **3082**
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PENFLUFEN SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packaging Group III
14.5 Marine pollutant YES

IATA

14.1 UN number **3082**
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PENFLUFEN SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packaging Group III
14.5 Environm. Hazardous Mark YES

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

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

Further information

WHO-classification: III (Slightly hazardous)

15.2 Chemical safety assessment

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.

**EMESTO PRIME FS50 4X5L BOT IL**Version 4 / EU
10200001728511/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2020/878 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

Reason for Revision:

The following sections have been revised: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 11: Toxicological information on STOT (Specific Target Organ Toxicity) and CMR (Carcinogenic, Mutagenic and toxic to Reproduction).

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006



EMESTO PRIME FS50 4X5L BOT IL

Version 4 / EU
102000017285

12/12
Revision Date: 14.01.2022
Print Date: 05.09.2022

Changes since the last version are highlighted in the margin. This version replaces all previous versions.