

# SAFETY DATA SHEET



## EMESTO PRIME

Version 1 / NZ  
102000020042

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Revision Date: 16.04.2024  
Print Date: 16.04.2024

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

#### 1.1 Product identifier

Trade name EMESTO PRIME  
Product code (UVP) 79631332

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

Use Fungicide, Seed treatment  
EPA-Nr. HSR101587

Restrictions on use See product label for restrictions.

#### 1.3 Details of the supplier of the safety data sheet

Supplier Bayer New Zealand Limited  
CropScience Division  
B:HIVE Building  
74 Taharoto Rd  
Smales Farm  
Takapuna  
Auckland, 0622  
New Zealand  
Telephone 0800 428 246  
Telefax (09) 441 8645

#### 1.4 Emergency telephone no.

Emergency Number 0800 734 607 (24hr)  
Global Incident Response Hotline (24h) +1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

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### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Classified as hazardous according to the criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2020 as amended

Aquatic Chronic 1  
H410 Very toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

Labelling in accordance with the Hazardous Substances (Safety Data Sheets) Notice 2020 as amended

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**Signal word:** Warning

### Hazard statements

H410 Very toxic to aquatic life with long lasting effects.

### Precautionary statements

P102 Keep out of reach of children.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local regulation.

### 2.3 Other hazards

No additional hazards known beside those mentioned.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

#### Chemical nature

Flowable concentrate for seed treatment (FS)  
Penflufen 240 g/l

#### Hazardous components

Chemical name	CAS-No.	Conc. [%]
Penflufen	494793-67-8	22.40
reaction mass of 5-chloro-2- methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	> 0.0002 – < 0.0015
1,2-Benzisothiazol-3(2H)-one	2634-33-5	> 0.005 – < 0.05
1,2-Propanediol	57-55-6	> 1

#### Further information

1,2-Benzisothiazol-3(2H)-one	2634-33-5	M-Factor: 1 (acute)
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## 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.

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<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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.

Contact the National Poisons and Hazardous Chemicals Information center in Dunedin, PO Box 913, Dunedin. Phone 0800 POISON (0800 764 766).

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## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable** Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Sand

**Unsuitable** High volume water jet

**5.2 Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire.

### 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.

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## 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.

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### 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). Collect and transfer the product into a properly labelled and tightly closed container. Contaminated soil may have to be removed and disposed. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal.

**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. Wash hands immediately after work, if necessary take a shower. 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 a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Protect from freezing.

**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

Components	CAS-No.	Control parameters	Update	Basis
Penflufen	494793-67-8	1.1 mg/m <sup>3</sup> (TWA)		OES BCS*

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

### 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.

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<b>Respiratory protection</b>	<p>Respiratory protection is not required under anticipated circumstances of exposure.</p> <p>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.</p>
<b>Hand protection</b>	<p>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.</p> <p>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.</p> <p>Material Nitrile rubber Rate of permeability &gt; 480 min Glove thickness &gt; 0.4 mm Directive Protective gloves complying with EN 374.</p>
<b>Eye protection</b>	<p>Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).</p>
<b>Skin and body protection</b>	<p>Wear standard coveralls and Category 3 Type 6 suit.</p> <p>If there is a risk of significant exposure, consider a higher protective type suit.</p> <p>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.</p> <p>If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.</p>
<b>General protective measures</b>	<p>Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.</p> <p>Keep and wash PPE separately from other laundry.</p>

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Form</b>	suspension
<b>Colour</b>	red
<b>Odour</b>	characteristic
<b>Odour Threshold</b>	No data available
<b>pH</b>	5.0 - 8.0 (100 %) (23 °C)
<b>Melting point/range</b>	No data available
<b>Boiling Point</b>	No data available

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<b>Flash point</b>	No flash point - Determination conducted up to the boiling point.
<b>Flammability</b>	No data available
<b>Auto-ignition temperature</b>	520 °C
<b>Thermal decomposition</b>	No data available
<b>Minimum ignition energy</b>	Not applicable
<b>Self-accelerating decomposition temperature (SADT)</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	1.07 g/cm <sup>3</sup> (20 °C)
<b>Water solubility</b>	dispersible
<b>Partition coefficient: n-octanol/water</b>	Penflufen: log Pow: 3.3 (25 °C)
<b>Viscosity, dynamic</b>	600 - 900 mPa.s (25 °C) 200 - 320 mPa.s (20 °C) Velocity gradient 20 /s 80 - 150 mPa.s (20 °C) Velocity gradient 100 /s
<b>Viscosity, kinematic</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Explosivity</b>	Not applicable

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## SECTION 10: STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	Stable under normal conditions.
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.

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- 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

- Acute oral toxicity** LD50 (Rat) > 2,000 mg/kg
- Acute inhalation toxicity** LC50 (Rat) > 1.877 mg/l  
Exposure time: 4 h  
Determined in the form of liquid 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** Skin: 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

Only acute toxicity studies have been performed on the formulated product.

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The non-acute information pertains to the active ingredient(s).

### 11.2 Information on other hazards

#### Endocrine disrupting properties

**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.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

**Toxicity to fish** LC50 (Cyprinus carpio (Carp)) 0.103 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient penflufen.

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) > 4.66 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient penflufen.  
No acute toxicity was observed at its limit of water solubility.

**Toxicity to aquatic plants** EC50 (Raphidocelis subcapitata (freshwater green alga)) > 5.1 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient penflufen.  
No acute toxicity was observed at its limit of water solubility.

### 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 Endocrine disrupting properties

**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



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**Additional ecological information** No other effects to be mentioned.

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

**Product** Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

**Contaminated packaging** Triple rinse containers. Recycle if possible. If allowed under local authority, burn if circumstances, especially wind direction permit, otherwise crush and bury in an approved local authority facility. Do not use container for any other purpose.

### SECTION 14: TRANSPORT INFORMATION

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

#### 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  
14.4 Packaging Group III  
14.5 Environm. Hazardous Mark YES  
Hazchem Code 3Z

#### 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.

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### 14.7 Transport in bulk according to IMO instruments

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

HSNO approval-Nr.	HSR101587
HSNO Controls	See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
ACVM Reg.	P9916
ACVM Condition	See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a>

## SECTION 16: OTHER INFORMATION

### 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 <sub>x</sub>	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)
IC <sub>x</sub>	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LC <sub>x</sub>	Lethal concentration to x %
LD <sub>x</sub>	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 data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance of the product.

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