

Date: 29.4.2009

Former date: 26.10.2006

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**1.1 Identification of the substance or preparation**

Trade name

Mycostop

Code of the preparation

Reach registration number

not applicable

1.2 Use of the substance/preparation**1.2.1 The uses of the chemical**

Biofungicide for the control of wilt and root diseases in turf, vegetables, ornamentals and herbs.

1.2.2 Classification of economic activities (NACE) A 011**1.2.3 Use categories (UC62)** Plant Protection Products 38**1.2.4 The chemical can be used by the general public** **1.2.5 The chemical is used by the general public only** **1.3 Company/undertaking identification****1.3.1 Manufacturer, importer, other undertaking**
VERDERA OY**1.3.2 Contact information:****Street address** Kurjenkellontie 5 B**Postcode and post office** FI-02270 ESPOO**Post-office box** 5**Postcode and post office** FI-02271 ESPOO**Telephone number** +358 10 217 3700**Telefax** +358 10 217 3711**E-mail address****Y code** 0220917-4**1.3.3 Information on the foreign manufacturer**

1.4 Emergency telephone**1.4.1 Telephone number, name and address**

2. HAZARDS IDENTIFICATION

May cause sensitization by inhalation and skin contact.

3. COMPOSITION AND INFORMATION ON INGREDIENTS**3.1 Hazardous ingredients**

3.1.1 CAS/EC number and the Registration number	3.1.2 Name of the ingredient	3.1.3 Concentration	3.1.4 Classification (symbol letters and R phrases) and other data on the ingredient
Reg. number in Finland 1603	Dried spores and mycelium of Streptomyces strain K61	1E08 cfu/1g of the product	Xn, R42/43

3.1.5 There has been a request for confidentiality of a substance according to Annex 2 of the decree **3.1.6 A substance not dangerous has been indicated as confidential** **3.1.7 Other information**

Trade name: Mycostop

Date: 29.4.2009

Former date: 26.10.2006

4.	FIRST AID MEASURES
4.1	Special instructions - - -
4.2	Inhalation Remove from exposure to fresh air. Obtain medical attention.
4.3	Skin contact Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
4.4	Eye contact Rinse immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a physician.
4.5	Ingestion Immediately give plenty of water. Never give anything by mouth to an unconscious person. Induce vomiting immediately and call a physician.
4.6	Information for a doctor or other professionals giving first aid - - -
5.	FIRE-FIGHTING MEASURES
5.1	Suitable extinguishing media Water
5.2	Extinguishing media which shall not be used for safety reasons - - -
5.3	Special exposure hazards in a fire - - -
5.4	Special protective equipment for fire-fighters In case of fire, wear a self contained breathing apparatus and a protective suit.
5.5	Other instructions
6.	ACCIDENTAL RELEASE MEASURES
6.1	Personal precautions Avoid contact with skin, eyes and clothing. Use personal protective equipment.
6.2	Environmental precautions The active substance is a common, naturally occurring soil microbe.
6.3	Methods for cleaning up Use personal protective equipment. Pick-up and arrange disposal without creating dust. Shovel into suitable container for disposal. Dispose of in compliance with local and national regulations.
6.4	Other instructions - - -
7.	HANDLING AND STORAGE
7.1	Handling Avoid contact with skin, eyes and clothing. Do not breathe dust/spray mist. Wear personal protective clothing, gloves and eye/face protection when handling the product. Wash hands and face with soap and water before breaks and after handling the product. Do not use as a tank mixture with chemical pesticides.
7.2	Storage Keep unopened in a dry and cool place at temperatures below + 8 °C. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs.
7.3	Specific use(s) - - -
8.	EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1	Exposure limit values
8.1.1	HTP values (in Finland) Organic dust, HTP (8h) = 5 mg/m ³ (Finland), HTP (15 min) = 10 mg/m ³ (Finland)
8.1.2	Other limit values - - -
8.1.3	Limit values in other countries Particulates Not Otherwise Specified, TLV = 10 mg/m ³ (TWA, E , I) USA, TLV = 3 mg/m ³ (TWA, E, R) USA, Allgemeine Staube, MAK = 4 mg/m ³ (E) Germany

Trade name: Mycostop

Date: 29.4.2009

Former date: 26.10.2006

8.1.4 DNELs

8.1.5 PNECs

8.2 Exposure controls

8.2.1 Occupational exposure controls

Avoid exposure.

8.2.1.1 Respiratory protection

Wear suitable respiratory equipment: respirator with combination filter for vapour/particulate (A + P2).

8.2.1.2 Hand protection

Rubber or plastic gloves (e.g. nitrile).

8.2.1.3 Eye protection

Goggles or face-shield.

8.2.1.4 Skin protection

Suitable protective clothing (protective suit, rubber boots, hat).

8.2.2 Environmental exposure controls

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 General information (physical state, colour and odour)

Yellowish powder, odour of soil

9.2 Important health, safety and environmental information

9.2.1 pH

Approx. 7

9.2.2 Boiling point/boiling range

Not applicable

9.2.3 Flash point

Not applicable

9.2.4 Flammability (solid, gas)

Not applicable

9.2.5 Explosive properties

Not applicable

9.2.6 Oxidising properties

Not applicable

9.2.7 Vapour pressure

Not applicable

9.2.8 Relative density

Approx. 500 kg/cu.m.

9.2.9 Solubility

Insoluble

9.2.10 Water solubility

Insoluble

9.2.11 Partition coefficient: n-octanol/water

Not applicable

9.2.12 Viscosity

Not applicable

9.2.13 Vapour density

Not applicable

9.2.14 Evaporation rate

Not applicable

9.3 Other information

10. STABILITY AND REACTIVITY

10.1 Conditions to avoid

High temperatures (>30 Celsius degrees), UV-light, irradiation

10.2 Materials to avoid

Acids, bases, concentrated fertilizer liquids, chemical pesticides, food, drink, animal feeding stuffs.

Trade name: Mycostop

Date: 29.4.2009

Former date: 26.10.2006

10.3 Hazardous decomposition products

Not applicable

11. TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

LD50/oral/rat: Not toxic or pathogenic to rat exposed to > 15 g/kg.
Inhalation: Not toxic or pathogenic to rat exposed to 108 cfu/animal.

11.2 Irritation and corrosivity

Mild eye irritation (reversible within 2 days).
No skin irritation.

11.3 Sensitisation

May cause sensitization by inhalation and skin contact.

11.4 Sub-acute, sub-chronic and prolonged toxicity

Not toxic or pathogenic to rat in 28 d subchronic study
(no-observed-effect level (NOEL) = 1000 mg/kg/day).

11.5 Human health effects based on experience

May cause sensitization. No adverse effects observed when used according to the instructions.

11.6 Other information on health effects

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

12.1.1 Aquatic toxicity

Not toxic or pathogenic to fish, (no-observed-effect level (NOEL) = 5E+04 cfu/ml, Rainbow trout).
Not toxic or pathogenic to daphnia, (no-observed-effect level (NOEL) = 1E+04 cfu/ml, Daphnia magna).

12.1.2 Toxicity to other organisms

Not toxic or pathogenic to bird, (LD50 > 2500 mg/kg Bobwhite quail, Mallard duck).
Not toxic or pathogenic to honeybee (LD50 > 2400 ppm).
Not toxic or pathogenic to earthworm (LC50 > 1000 ppm).

12.2 Mobility

Streptomyces ray bacterium is a natural inhabitant in soil.

12.3 Persistence and degradability

12.3.1 Biodegradation

Like other naturally occurring soil microbes.

12.3.2 Chemical degradation

Like other naturally occurring soil microbes.

12.4 Bioaccumulative potential

Do not accumulate

12.5 Results of PBT assessment

12.6 Other adverse effects

13. DISPOSAL CONSIDERATIONS

Packagings can be landfilled or incinerated, when in compliance with local and national regulations.
Wastes can be landfilled, when in compliance with local and national regulations.

14. TRANSPORT INFORMATION

14.1 UN number

14.2 Packing group

14.3 Land transport

14.3.1 Transport class

Not classified as dangerous in the meaning of transport regulations.

14.3.2 Risk code

14.3.3 Name according to bill of freight

Trade name: Mycostop

Date: 29.4.2009

Former date: 26.10.2006

Mycostop
14.3.4 Other information

14.4 Sea transport

14.4.1 **IMDG class**
Not classified as dangerous in the meaning of transport regulations.

14.4.2 **Correct technical name**
Mycostop

14.4.3 **Other information**

14.5 Air transport

14.5.1 **ICAO/IATA class**
Not classified as dangerous in the meaning of transport regulations.

14.5.2 **Correct technical name**
Mycostop

14.5.3 **Other information**

15. REGULATORY INFORMATION

15.1 Information on the label

15.1.1 **Danger symbols (letters) and indications of danger**
Xn, harmful

15.1.2 **Substances to be named on the label**
Dried spores and mycelium of Streptomyces strain K61

15.1.3 **R phrases**
R42/43 **May cause sensitization by inhalation and skin contact.**

15.1.4 **S phrases**
S2 **Keep out of reach of children.**
S13 **Keep away from food, drink and animal feeding stuffs.**
S22 **Do not breath dust.**
S24 **Avoid contact with the skin.**
S36/37/39 **Wear suitable protective clothing, gloves and eye/face protection.**
S38 **In case of insufficient ventilation, wear suitable respiratory equipment.**
S45 **In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).**

15.1.5 **Special provisions concerning the labelling of certain preparations**

15.1.6 **Chemical Safety Assessment has been carried out for the following substances**

15.2 **National regulations**

16. OTHER INFORMATION

16.1 **List of relevant R phrases**
R42/43 **May cause sensitization by inhalation and skin contact.**

16.2 **Training advice**

16.3 **Recommended restrictions on use**

16.4 **Further information**
The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification, since the conditions of the operations mentioned are beyond our control. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text. Verdera Oy disclaims any liability for loss or damage resulting from the use of these data, information or suggestions.

16.5 **Sources of key data used to compile the Safety Data Sheet**

Trade name: Mycostop

Date: 29.4.2009

Former date: 26.10.2006

16.6 Regulations, databases, literature, own tests
Information which has been added, deleted or revised
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