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## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

### Identification of the substance/preparation

#### Product name

Mycostop

### Use of the Substance/Preparation

#### Expressed in writing

Biofungicide for the control of wilts and root diseases in turf, vegetables, ornamentals and herbs grown in greenhouse.

### Company/Undertaking Identification

#### Manufacturer, importer, supplier

Verdera Oy  
Riihitontuntie 14 A  
02201 ESPOO  
FINLAND

Tel. +358 10 217 3700 Fax. +358 10 217 3711

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous components

CAS number or other code	Chemical name of the substance	Concentration	Warning symbol, R phrases and other information
	Dried spores and mycelium of <i>Streptomyces griseoviridis</i>	>10 <sup>8</sup> cfu/1g of the product	Xn, R 42/43

### Further information

Ray fungus, naturally occurring living microorganism.

## 3. HAZARDS IDENTIFICATION

May cause sensitization by inhalation and skin contact.

## 4. FIRST AID MEASURES

### Additional advice

#### Inhalation

Remove from exposure to fresh air. Obtain medical attention.

#### Skin contact

Wash off immediately with soap and plenty of water.  
If skin irritation persists, call a physician.

#### Eye contact

Rinse immediately with plenty of water for at least 15 minutes.  
If eye irritation persists, consult a physician.

#### Ingestion

Immediately give plenty of water. Never give anything by mouth to an unconscious person. Induce vomiting immediately and call a physician.

## 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

Water

### Extinguishing media which must not be used for safety reasons

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**Special exposure hazards in a fire**

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**Special protective equipment for firefighters**

In case of fire, wear a self contained breathing apparatus and a protective suit.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Avoid contact with skin, eyes and clothing.  
Use personal protective equipment.

**Environmental precautions**

The active ingredient is a common naturally occurring soil microbe.

**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.

**7. HANDLING AND STORAGE****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.

**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.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Limit Values**

Exposure limit(s):

Organic dust

HTP (8h) = 5 mg/m<sup>3</sup> (Finland)

HTP (15 min) = 10 mg/m<sup>3</sup> (Finland)

**Limit values in other countries**

Particulates Not Otherwise Specified

TLV = 10 mg/m<sup>3</sup> (TWA, E, I) USA

TLV = 3 mg/m<sup>3</sup> (TWA, E, R) USA

Allgemeine Stäube

MAK = 4 mg/m<sup>3</sup> (E) Germany

**Exposure controls****Occupational exposure controls**

Avoid exposure.

**Respiratory protection**

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

**Hand protection**

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

**Eye protection**

Goggles or face-shield.

**Skin and body protection**

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

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### General Information (appearance, odour)

Powder; Yellowish; Odour of soil

### Important Health Safety and Environmental Information

pH	Approx. 7
Boiling point/range	Not applicable
Flash point	Not applicable
Explosive properties	
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure	Not applicable
Relative density	Approx. 500 kg/m <sup>3</sup>
Solubility	
Water solubility	Insoluble
Fat solubility (solvent - oil to be specified)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable
Viscosity	Not applicable

## 10. STABILITY AND REACTIVITY

### Conditions to avoid

High temperatures.

### Materials to avoid

Food, drink and animal feeding stuffs.

### Hazardous decomposition products

Not applicable

## 11. TOXICOLOGICAL INFORMATION

### 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 10<sup>8</sup> cfu/animal.

### Irritation and corrosion

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

### Sensitisation

May cause sensitization by inhalation and skin contact.

### Subacute, subchronic and prolonged toxicity

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

### Human experience

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

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

### Aquatic toxicity

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Not toxic or pathogenic to fish  
(no-observed-effect level (NOEL) =  $5 \times 10^6$  cfu/ml, Rainbow trout).  
Not toxic or pathogenic to daphnia  
(no-observed-effect level (NOEL) =  $10^4$  cfu/ml, Daphnia magna).  
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).

**Mobility**

Streptomyces griseoviridis is a natural habitant of soil.

**Persistence / degradability****Biological degradability**

Like other naturally occurring soil microbes.

**Bioaccumulative potential**

Do not accumulate.

**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****Land transport****ADR/RID**

Not classified as dangerous in the meaning of transport regulations.

**Sea transport****IMDG**

Not classified as dangerous in the meaning of transport regulations.

**Air transport****ICAO/IATA**

Not classified as dangerous in the meaning of transport regulations.

**15. REGULATORY INFORMATION**

Classification according to European directive on classification of hazardous preparations 90/492/EEC.

**Information on the warning label****Letter code of the warning symbol and indications of danger for the preparation**

Xn Harmful

**Names of the ingredients given on the warning label**

Dried spores and mycelium of Streptomyces griseoviridis.

**R-phrase(s)**

R42/43 May cause sensitization by inhalation and skin contact.

**S-phrase(s)**

S2 Keep out of reach of children.  
S13 Keep away from food, drink and animal feeding stuffs.  
S22 Do not breathe 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.

**16. OTHER INFORMATION****Text of R phrases mentioned in Section 2**

R42/43 May cause sensitization by inhalation and skin contact.

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**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.

**Literary reference**

Regulations, databases, literature, own tests.