

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JUN 28 1993

Kemira Biotech  
c/o E.R. Butts International, Inc.  
555 Clinton Avenue  
P.O. Box 3337  
Bridgeport, CT 06605-0337

Dear Dr. Butts:

Subject: Mycostop  
EPA Reg. Nos. 64137-1, -2, -3, and -4  
Your Submissions of May 28 and June 2, 1993

The amendments referred to above, submitted in connection with registration under FIFRA are acceptable. The revised confidential statement of formula has been entered into the file for the products and a stamped copy of each label is enclosed for your records.

Note that this acceptance of your label does not relieve you of your obligation to comply with the Worker Protection Standard (WPS). If any of your products are covered by the WPS, you are required to submit, and receive the Agency's approval by April 21, 1994, of a revised label reflecting the required label statements of 40 CFR 156, published in the FEDERAL REGISTER on August 21, 1992 (57 FR 38102). Further guidance will be issued. According to 40 CFR 156, subpart K, specifically section 156.200(c)(3): "No product to which this subpart applies shall be distributed or sold without amended labeling by any registrant after April 21, 1994."

Sincerely yours,

Clarence O. Lewis, III  
Acting Product Manager (21)  
Fungicide-Herbicide Branch  
Registration Division (H-7505C)

Enclosure

		CONCURRENCES				
SYMBOL	H7505C; C. Grable; cg: 6/28/93					
SURNAME	Grable, C. Lewis					
DATE	6/28/93 6/28/93					

3-1-1

# MYCOSTOP®

## BIOFUNGICIDE FOR ORNAMENTAL CROPS

### GROWN IN GREENHOUSE OR FIELD

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**ACTIVE INGREDIENTS:** Dried spores and mycellum of ray fungus (*Streptomyces griseoviridis* Strain K61)\*.....30%  
**INERT INGREDIENTS**.....70%  
**TOTAL 100%**

\*10<sup>8</sup> cfu (colony forming units) per 1g of product

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**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Avoid breathing dust or spray mist. Avoid contact with skin and eyes. Use a dust/mist filter respirator (MSHA/NIOSH approval prefix TC-21C) when handling the product.

#### STATEMENT OF PRACTICAL TREATMENT

In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

#### EMERGENCY INFORMATION

For spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by disposal of equipment wash waters.

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Use Before ( Date )

Net Contents: \_\_\_\_\_

**ACCEPTED**  
**with COMMENTS**  
in EPA Letter Date:

JUN 28 1993

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act as  
amended, for the pesticide  
registered under EPA Reg. No.

64137-4

**Kemira Biotech**  
**Porkkalankatu 3**  
**P.O. Box 330**  
**00101 Helsinki, Finland**

E.P.A. Registration No. 64137-4  
E.P.A. Establishment No. 64137-FI-001  
Made in Finland  
KB3-O

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

MYCOSTOP is used for the control of seed rots, root and stem rots and wilt diseases of ornamental crops caused by *Fusarium*, *Alternaria*, and *Phomopsis*. MYCOSTOP has also shown suppression of *Botrytis* Gray Mold, and *Pythium* and *Phytophthora* root rots in greenhouse ornamentals. Ornamental crops for which MYCOSTOP is recommended include:

### FLORAL AND FOLIAGE ORNAMENTALS

African violet	Coral Bells	Geranium	Lupine	Saintpaulia
Ajuga	Crossandra	Gerbera	Marigold	Saxifraga
Alyssum	Croton	Gladlolus	Mathiola	Scindapsus
Anthurium	Cyclamen	Gynura	Monarda	Senecio
Artemesia	Daffodil	Gypsophila	Narcissus	Shasta daisy
Aster	Delphinium	Harestall grass	Nasturtium	Sinningia
Begonia	Dianthus	Hoya	Orchid	Snapdragon
Blanket flower	Dieffenbachia	Hyacinth	Peperomia	Statice
Bleeding heart	Dracena	Impatiens	Petunia	Sweet pea
Calceolaria	Dusty Miller	Pelargonium	Philodendron	Tulip
Carnation	Easter lily	Ivy	Phlox	Verbena
Chrysanthemum	Episcia	Kalanchoe	Poppy	Violet
Cineraria	Euphorbia	Larkspur	Pilea	Zinnia
Coleus	Fuchsia	Liatris	Primrose	
Columbine	Gazania	Lily	Primula	

### WOODY ORNAMENTALS

Almond (flowering)	Chokecherry	Hydrangea	Plum	Schefflera
Azalea	Crape myrtle	Pine	Poinsettia	Spruce
Camellia	Elm	Juniper	Polyscias	Vinca
Cedar	Euonymous	Oregon grape	Protea	
Cherry (ornamental)	Ficus	Pachysandra	Redwood	
	Flr	Palm (areca)	Rhododendron	

### SEED TREATMENT

MYCOSTOP is applied as a seed treatment at a dose rate of 0.08 oz./lb. (5 g/kg) of seed. Do not treat seeds of Dusty Miller with MYCOSTOP. To apply add MYCOSTOP to the seeds in a clean container. Close lid and shake container until seeds become evenly coated with MYCOSTOP powder.

Treated seeds should be sown without delay, but at the latest, within a week, if kept cool and dry.

### SOIL SPRAY AND DRENCH APPLICATIONS

#### MIXING INSTRUCTIONS

To make a suspension of MYCOSTOP, mix in a small volume of water such as 0.25-1.0 gallon and let stand for about 30 minutes. Agitate as needed to get product to evenly disperse before diluting to final volume. Do not tank mix MYCOSTOP with any pesticides or with concentrated fertilizers.

#### TRANSPLANT DIP

MYCOSTOP can be applied by dipping roots of transplants such as carnations or chrysanthemums in a suspension shortly before planting. A suspension of 0.01 [(0.18 oz./13 gal.) (5 g/50 liters)] to 0.1% [(0.18 oz./1.3 gal.) (5 g/5 liters)] is recommended. Use the higher rate for higher disease pressure.

## TRANSPLANTS, POT and FLOWERING PLANT TREATMENT

MYCOSTOP can be applied by spraying or drenching a suspension on the soil or growing medium using 0.01-0.1% suspension. Follow with one-quarter to one-half inch of water on the same day.

- **Soil Spray** - Prepare a 0.1% [(0.18 oz./1.3 gal.)(5 g per 5 liters)(5 g per 1.3 gal.)] concentrate suspension and apply 2-4 gal. in an injector, proportioner, or sprayer to 800 ft<sup>2</sup> of raised surface area (e.g. raised beds, containers, bags, pots). Follow with irrigation to improve penetration of the organism into the root zone. Repeat every 2-6 weeks as needed for disease control. Use the higher rate and more frequent application for high disease pressure.
- **Drench** - Prepare a 0.01% [(0.18 oz./13 gal.)(5 g per 50 liters)(5 g per 13 gal.)] dilute suspension and apply 20-40 gal. to 800 ft<sup>2</sup> of raised surface area (e.g. raised beds, containers, bags, pots). This suspension may be fed through an injector, proportioner, or sprayer for better distribution. Follow with irrigation to saturate the soil or potting mix. Repeat every 2-6 weeks as needed for disease control. Use the higher rate and more frequent application for high disease pressure.

## SIDE-DRESS APPLICATION

Apply 0.5-1.0 lb. MYCOSTOP/treated acre (0.5-1.0 MYCOSTOP kg/treated hectare) in 25-100 gals. of water as a side dress application to the plant bed. Direct spray to base of plant and root zone. Repeat treatment every 2-4 weeks or as needed.

## BOTRYTIS SUPPRESSION ON GREENHOUSE ORNAMENTALS

A MYCOSTOP spray of 0.01-0.1% suspension to the foliage every 2-4 weeks will help suppress *Botrytis* infection. Direct spray to bottom of leaves and wet foliage to point of run off.

## INTEGRATED DISEASE CONTROL PROGRAMS

MYCOSTOP can be used in integrated disease control programs. However, it should not be tank mixed with any pesticide. MYCOSTOP can be used the same day, if registered and if not prohibited, with benomyl, thiophanate methyl, metalaxyl, vinclozolin, fosetyl-AI, and propamocarb hydrochloride. Pesticides not compatible with MYCOSTOP have a 4-day interval between applications.

## DRIP IRRIGATION - CHEMIGATION

Refer to supplemental labeling entitled "Supplemental Chemigation Labeling for MYCOSTOP Drip Irrigation" for use directions for chemigation. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed.

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## STORAGE AND DISPOSAL

Do not contaminate potable water, food or feed by storage or disposal.

**STORAGE:** MYCOSTOP consists of living microbes, which is packed in moisture and air proof unit packages. Store in a cool (below 8°C, 46°F), dry place. Use all contents in packet the same day. Do not store opened packets since product will lose its activity.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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## NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

# Supplemental Chemigation Labeling for MYCOSTOP<sup>®</sup> Drip Irrigation in Vegetable and Ornamental Crops

(For MYCOSTOP EPA Registrations 64137- 2 and 64137-4)

## GENERAL

Apply MYCOSTOP only through drip irrigation system(s). Do not apply MYCOSTOP through any other type of irrigation system.

A pesticide supply tank is recommended. Continuous agitation of MYCOSTOP in the supply tank is required. Begin application of MYCOSTOP during the beginning of irrigation.

- On an area basis, use MYCOSTOP at 0.3-0.5 oz./800 ft<sup>2</sup> (1.0-2.0 g/10 m<sup>2</sup>). On an individual plant basis, use MYCOSTOP at 0.03-0.17 oz. (1.0-5.0 g) per 200 plants.
- Use higher rate and more frequent application for large plants and pots, and for high disease pressure.
- Apply in sufficient amount of water to move into root zone. Repeat every 2-6 weeks as needed for disease control.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of a responsible person, shall shut the system down and make necessary adjustments should the need arise.

## SPECIAL INSTRUCTIONS FOR USE OF PUBLIC WATER SOURCES

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices from public water systems are in place.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back-flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

## SPECIAL INSTRUCTIONS FOR DRIP IRRIGATION (CHEMIGATION) SYSTEMS

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking control to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

**Kemira Biotech, Porkkalankatu 3, P.O. Box 330, 00101 Helsinki, Finland**

**Revision - KB1-VOD**

