

PM22

50534-189

1-26 File



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

MAR 7 1994

RALPH P. BURTON  
ISK BIOTECH CORP.  
5966 HEISLEY ROAD  
BOX 8000  
MENTOR, OH 44061

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 9/20/93 Response to PR Notice 93-7  
EPA Reg. No. 50534-189  
CHLOROTHALONIL 75 WP

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

**WHAT THIS ACCEPTANCE MEANS:**

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

**WHAT YOU NEED TO DO NEXT:**

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



**Recycled/Recyclable**  
Printed with Soy/Canola Ink on paper that  
contains at least 50% recycled fiber

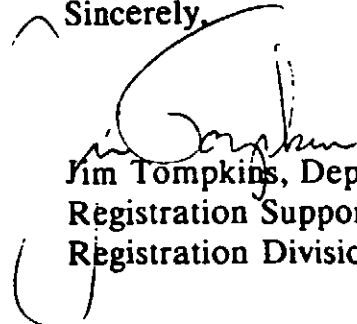
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs (7505C)  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief  
Registration Support Branch  
Registration Division (7505W)

Attachment

30/24

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division

Ralph P Burton  
ISK BIOTECH CORP  
5966 HEISLEY ROAD BOX 8000  
MENTOR OH 44061

Comment for: EPA Reg Nr.50534-189  
CHLOROTHALONIL 75 WP

The following specific comments pertain to your WPS  
labeling submission concerning the product  
cited above:

Correct the typographical errors circled on your proposed  
label.

1 of 26

(Front Panel)

Net Contents  
(ISK Biotech Logo)

# CHLOROTHALONIL 75 WP

**A BROAD SPECTRUM FUNGICIDE  
(75% WETTABLE POWDER)**

<b>Active Ingredient:</b>	
Chlorothalonil (tetrachloroisophthalonitrile)	75.0%
<b>Inert Ingredients:</b> . . . . .	<u>25.0%</u>
<b>Total:</b> . . . . .	100.0%

**KEEP OUT OF REACH OF CHILDREN**

## DANGER - PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted in detalle. (If you do not understand the label, find someone to explain it to you in detail.)

~~—Precaucion al Usuario: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente.—~~

See side panel for additional precautionary statements.

ISK Biotech Corporation  
5966 Heisley Road, P.O. Box 8000  
Mentor, Ohio 44061-8000

**BEST AVAILABLE COPY**

EPA Reg. No. 50534-189

EPA Est. No. 35982-TX-1

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

MAR 7 1994

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

50534-189

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### DANGER

Corrosive, causes severe eye damage. May cause skin irritation. May be a potential skin sensitizer.

~~Do not get in eyes. Wear goggles or face shield when handling this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.~~ Avoid prolonged contact with skin.

Do not take internally.

Avoid breathing dust or spray mist.

~~Do not apply this product in such a manner as to directly, or through drift, expose workers or other persons. The area being treated must be vacated by unprotected persons.~~

Note to the User: This product may produce temporary allergic side effects characterized by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas. Persons having allergic reaction should contact a physician.

#### First Aid

In case of contact with eyes, immediately flush eyes with plenty of water and continue for 15 minutes. Seek medical attention for eyes immediately.

Wash exposed areas of skin with soap and warm water after handling or using.

Note to physician: Persons having an allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids.

### ENVIRONMENTAL HAZARDS

This product is toxic to fish, aquatic invertebrates, and marine/estuarine organisms. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. 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 when disposing of equipment washwaters. Do not apply when weather conditions favor drift from treated areas.

Apply only to areas specified on label.

**BEST AVAILABLE COPY**

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## DIRECTIONS FOR USE

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

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**SEE ENCLOSED FOLDER FOR DIRECTIONS FOR USE**

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

**Storage:** Store in a dry place.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**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.

## WARRANTY AND LIMITATION OF DAMAGES

Seller warrants that this material conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use and Buyer assumes the risk of any use contrary to such directions. Seller makes no other express or implied warranty, including any other express or implied warranty of Fitness or of Merchantability, and no agent of Seller is authorized to do so. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material as to which a claim is made.

(Insert Label)

LOGO

# CHLOROTHALONIL 75 WP

**A BROAD SPECTRUM FUNGICIDE  
75% WETTABLE POWDER**

<b>Active Ingredient:</b>	
Chorothalonil (tetrachloroisophthalonitrile) .	75.0%
<b>Inert Ingredients:</b> . . . . .	<u>25.0%</u>
<b>Total</b> . . . . .	100.0%

**KEEP OUT OF REACH OF CHILDREN**

**DANGER - PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted in detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**See side panel for additional precautionary statements.**

**See Directions for Use Inside This Folder**

**CROP**

**DISEASE**

- Bean (Snap): Rust
- Cole Crops: Alternaria leaf spot (Southeastern States only), downy mildew, and ring spot on brussels sprouts (California only).
- Carrot: Early blight and late blight.
- Celery: Early blight, late blight, basal stalk rot, and suppression of pink rot.
- Corn (Sweet): Helminthosporium leaf blight
- Cucumber: Target spot (Florida only), anthracnose, downy mildew, gummy stem blight, leaf blight, scab, fruit rot suppression, and powdery mildew (except in Southwestern States).
- Cantaloupe: Anthracnose, downy mildew, gummy stem blight.
- Muskmelon: Cercospora leaf spot, leaf blight, scab and
- Honeydew: powdery mildew (except in Southwestern States).
- Watermelon: Same as cantaloupe except powdery mildew.
- Squash, Pumpkin:
- Onion: Botrytis leaf blight (blast), purple blotch and suppression of downy mildew.
- Peanut: Early leafspot (Cercospora), late leafspot (Cercosporidium) and rust.
- Potato: Early blight, late blight. Botrytis vine rot.
- Tomato: Early blight, late blight, gray leaf spot, gray leaf mold, anthracnose, Rhizoctonia fruit rot, Botrytis gray mold, and Alternaria fruit rot or blackmold (California only).
- Conifers: Lophodermium needlecast. Scirrhia brown spot. Scleroderris canker. Sirococcus tip blight, Phoma spp., Rhizosphaera needlecast (spruces) and Swiss needlecast and Rhabdocline needlecast (Douglas-fir). Cyclaneusma (pines).
- Turf: Helminthosporium leaf spot and melting out. Curvularia leaf spot, dollar spot, brown patch, gray leaf spot, stem rust of bluegrass, copper spot, red thread.
- Dichondra Lawns: Alternaria leaf spot (California only).
- Roses: Black spot and Botrytis blight.
- Chrysanthemums: Ascochyta ray blight and gray mold.
- Geraniums: Botrytis blight.
- Iris: Botrytis blight and leaf spot.
- Zinnias: Powdery mildew.

See Directions For Use



**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER**

Corrosive, causes severe eye damage. May cause skin irritation. May be a potential skin sensitizer.

~~Do not get in eyes. Wear goggles or face shield when handling this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.~~  
Avoid prolonged contact with skin.

Do not take internally.

Avoid breathing dust or spray mist.

~~Do not apply this product in such a manner as to directly, or through drift, expose workers or other persons. The area being treated must be vacated by unprotected persons.~~

Note to User: This product may produce temporary allergic side effects characterized by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas. Persons having allergic reaction should contact a physician.

**FIRST AID**

In case of contact with eyes, immediately flush eyes with plenty of water and continue for 15 minutes. Seek medical attention for eyes immediately.

Wash exposed areas of skin with soap and warm water after handling or using.

Note to Physician: Persons having an allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids.

**Personal Protective Equipment (PPE):**

~~WPS USES: Applicators and other handlers who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR Part 170) — in general, agricultural-plant uses are covered — must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, protective eyewear, and a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).~~

*retain this language*

~~NON-WPS USES: Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) — in general, only agricultural-plant uses are covered — must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, and protective eyewear.~~

*retain this language*

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**BEST AVAILABLE COPY**

**User Safety Recommendations**

Users should:

- \* Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- \* Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**ENVIRONMENTAL HAZARDS**

This product is toxic to fish, aquatic invertebrates, and marine/estuarine organisms. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. 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 when disposing of equipment washwaters. Do not apply when weather conditions favor drift from treated areas.

Apply only to areas specified on label.

11-7-26

**CHLOROTHALONIL 75 WP  
A BROAD SPECTRUM FUNGICIDE**

Read entire label carefully and use only as directed.

**GENERAL INFORMATION**

**Chlorothalonil 75 WP** is an excellent fungicide when used according to label directions for control of a broad spectrum of plant diseases.

**Chlorothalonil 75 WP** can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control.

**Chlorothalonil 75 WP** is highly effective and widely recommended for the control of a number of important golf course turf and ornamental lawn diseases as well as a number of commonly occurring diseases of ornamentals.

Do not combine **Chlorothalonil 75 WP** in the spray tank with pesticides, surfactants or fertilizers, unless your prior use has shown the combination physically compatible and noninjurious under your conditions of use.

The required amount of **Chlorothalonil 75 WP** should always be added slowly into the spray tank during filling. With concentrate sprays, premix the required amount of **Chlorothalonil 75 WP** in a clean container and add to the spray tank as it is being filled. Keep agitator running when filling spray tank and during spray operations.

Do not use on greenhouse-grown food crops.

**DIRECTIONS FOR USE**

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, waterproof gloves, shoes plus socks, and protective eyewear.

~~Note to User: Wear goggles or face shield when handling this product. Wear long sleeve shirt, long pants, and gloves while mixing, loading and applying this product.~~

Dosage rates on this label indicate pounds of Chlorothalonil 75 WP per acre, unless otherwise stated. Applications should be made in sufficient water to obtain adequate coverage of foliage. Gallonage to be used will vary with crop and amount of plant growth. Spray volume usually will range from 20 to 150 gallons per acre for dilute sprays and 5 to 10 gallons per acre for concentrate ground sprays and aircraft applications.

~~Reentry Note to User: Do not enter treated area to perform hand labor within 24 hours of application unless protective clothing is worn.~~

~~Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.~~

~~Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Oral and written warnings must include the following information: "DANGER Area treated with Chlorothalonil 75 WP on (date of application). Do not enter without appropriate protective clothing for 24 hours. In case of accidental exposure, wash exposed area with plenty of water and get medical attention. For further information see 'Precautionary Statements' on the label."~~

**APPLICATION AND CALIBRATION TECHNIQUES FOR SPRINKLER IRRIGATION ON, REGISTERED CROPS, SOD FARMS, ORNAMENTAL PLANTS, SHRUBS AND TREES:**

Apply Chlorothalonil 75 WP only through center pivot, motorized lateral move, traveling gun, solid set or portable (side roll, end tow or hand move) irrigation system(s). Do not apply this product through any other type of irrigation system. Do not use Chlorothalonil 75 WP through sprinkler irrigation equipment on golf courses.

Crop injury, lack of effectiveness, or illegal pesticides residues in the crop can result from non-uniform distribution of treated water.

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

Do not apply this product through irrigation systems connected to a public water system. '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 per year.

Controls for both irrigation water and pesticide injection systems must be functionally interlocked, so as to automatically terminate pesticide injection when the irrigation water pump motor stops. A person knowledgeable of the irrigation system and responsible for its operation shall be present so as to discontinue pesticide injection and make necessary adjustments, should the need arise.

The irrigation water pipeline must be fitted with a functional, automatic, quick-closing check valve to prevent the flow of irrigation water back toward the water source. The pipeline must also be fitted with a vacuum relief valve and low pressure drain, located between the irrigation water pump and the check valve, to prevent back-siphoning of irrigation water into the water source.

**BEST AVAILABLE COPY**

Always inject Chlorothalonil 75 WP into irrigation water after it discharges from the irrigation pump and after it passes through the check valve. Never inject pesticides into the intake line on the suction side of the pump.

Pesticide injection equipment must be fitted with a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump. Interlock this valve to the power system, so as to prevent fluid from being withdrawn from the chemical supply tank when the irrigation system is either automatically or manually turned off.

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

Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur. Do not apply when wind speed favors drift beyond the area intended for treatment.

Posting of areas to be chemigated is required when: 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads; or 2) when the chemigated area is open to the public, such as retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

This sign is in addition to any sign posted to comply with the Worker Protection Standard.

**Chlorothalonil 75 WP** may be used through two basic types of sprinkler irrigation systems as outlined in Sections A and B below. Determine which type of system is in place, then refer to the appropriate directions provided for each type.

**A. Center Pivot, Motorized Lateral Move and Traveling Gun Irrigation Equipment**

For injection of pesticides, these continuously moving systems must use a positive displacement injection pump, of either diaphragm or piston type, constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock and capable of injection at pressures approximately 2 - 3 times those encountered within the irrigation water line. Venturi applicator units cannot be used on these systems.

Fill chemical supply tank of injection equipment with water. Operate system for one complete revolution or run across the field, measuring time required, amount of water injected, and acreage covered. Thoroughly mix recommended amount of **Chlorothalonil 75 WP** for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run. Mixture in the chemical supply tank must be continuously agitated during the injection run. Shut off injection equipment after one revolution or run, but continue to operate irrigation system until **Chlorothalonil 75 WP** has been cleared from last sprinkler head.

**B. Solid Set and Portable (Wheel Move, Side Roll, End Tow or Hand Move) Irrigation Equipment**

With stationary systems, an effectively designed in-line venturi applicator unit is preferred which is constructed of materials that are compatible with pesticides; however, a positive displacement pump can also be used.

Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of **Chlorothalonil 75 WP** for acreage to be covered with water so that the total mixture of **Chlorothalonil 75 WP** plus water in the injection tank is equal to the quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Agitation is recommended. **Chlorothalonil 75 WP** can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until **Chlorothalonil 75 WP** has been cleared from last sprinkler head.

**Bean (Snap): Rust**—Use 3 lbs. per acre in sufficient water to obtain adequate coverage. Begin applications during early bloom stage or when disease first threatens and repeat at weekly intervals or as necessary to maintain control. Do not apply within 7 days of harvest. Do not graze treated areas or feed treated plant parts to livestock.

**Cabbage, Cauliflower, Broccoli, Brussels Sprouts:** Alternaria leaf spot (Southeastern States only) and downy mildew—Use 1 1/2 lbs. per acre in sufficient water to obtain adequate coverage. Begin applications after transplants are set in field, or shortly after emergence of field-seeded crop or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control. Ring spot in field-seeded brussels sprouts (California only)—Use 2 lbs. per acre. Begin applications at time of early sprout development or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control.

**Carrot:** Early blight and late blight—Use 1 1/2 to 2 lbs. per acre in sufficient water to obtain adequate coverage. Start applications when disease threatens and repeat at 7 to 10 day intervals or as necessary to maintain control.

**Celery:** Early blight, late blight, basal stalk rot (*Rhizoctonia solani*)—Use 1 to 1 1/2 lbs. per acre on a 3 to 5 day spray schedule, or use 2 to 3 lbs. per acre on a 7 day schedule. Suppression of pink rot—Use 3 lbs. per acre on a 7 day schedule. Start applications when transplants are set in the field. Apply Chlorothalonil 75 WP in sufficient water to obtain adequate coverage. Do not apply within 7 days of harvest.

For control of early blight and late blight in celery seedbeds, use 1 1/2 to 2 lbs. Chlorothalonil 75 WP per 100 gallons of water and apply 125 gallons per acre twice weekly or as needed to maintain control. Start applications shortly after crop emergence. Use the higher rate under severe disease conditions.

**Corn (Sweet):** Helminthosporium leaf blight—Use 1 1/2 to 2 lbs. per acre in sufficient water to obtain adequate coverage. Begin applications when conditions favor disease development and repeat at 4 to 7 day intervals or as required to maintain control. Do not apply within 14 days of harvest. For use on fresh market crop only. Do not apply to sweet corn to be processed. Do not allow livestock to graze in treated fields. Do not ensile treated corn or use as livestock forage.

**Cucumber:** Target spot (Florida only), anthracnose and downy mildew—Use 1 1/2 to 2 lbs. per acre. Powdery mildew (except Southwestern States), gummy stem blight, leaf blight and scab—Use 2 to 3 lbs. per acre. For suppression of fruit rot (*Rhizoctonia solani*)—Use 3 lbs. per acre. Apply Chlorothalonil 75 WP in sufficient water to obtain adequate coverage. Begin applications when plants are in first true leaf stage or when conditions are favorable for disease development. Repeat applications at 7 day intervals. Under severe disease conditions, shorten spray interval.

**Cantaloupe, Muskmelon, Honeydew:** Anthracnose and downy mildew—Use 1 1/2 to 2 lbs. per acre. Powdery mildew (except in Southwestern States), Cercospora leaf spot, gummy stem blight, leaf blight and scab—Use 2 to 3 lbs. per acre. Apply Chlorothalonil 75 WP in sufficient water to obtain adequate coverage. Begin applications when plants are in first true leaf stage or when conditions are favorable for disease development. Repeat applications at 7 day intervals. Under severe disease conditions, shorten spray interval.

**Watermelon, Squash, Pumpkin:** Anthracnose and downy mildew—Use 1 1/2 to 2 lbs. per acre. Cercospora leaf spot, gummy stem blight and scab—Use 2 to 3 lbs. per acre. Apply Chlorothalonil 75 WP in sufficient water to obtain adequate coverage. Begin applications when plants are in first true leaf stage or when conditions are favorable for disease development. Repeat applications at 7 day intervals. Under severe disease conditions, shorten spray interval.

**Onion (green and dry bulb):** Botrytis leaf blight (blast), purple blotch and suppression of downy mildew—Use 1 1/2 to 3 lbs. per acre. Apply before disease appears and repeat at 7 to 10 day intervals. Under severe disease conditions, use the higher application rate and shorten the interval between applications. Do not apply on dry bulb onions within 7 days of harvest or on green onions within 14 days of harvest. Do not apply more than 3 times per season on green onions. Do not apply to sweet Spanish onions.

**Peanut:** Early leafspot (Cercospora), late leaf spot (Cercosporidium)—Use 1 to 1 1/2 lbs. per acre. Rust—Use 1 1/2 lbs. per acre. Apply Chlorothalonil 75 WP in sufficient water to obtain adequate coverage. Start applications when disease first appears and repeat at 10 to 14 day intervals or as necessary to maintain control. Under severe disease conditions, use the 1 1/2 lbs. per acre rate. Do not apply within 14 days of harvest. Do not allow livestock to graze treated areas. Do not feed hay or threshings from treated fields to livestock.

**Potato:** Early blight, late blight, Botrytis vine rot (Botrytis spp.)—Use 1 to 1 1/2 lbs. per acre in sufficient water to obtain adequate coverage. Begin applications when plants are 6 inches high or when disease threatens and continue at 7 to 10 day intervals or as needed to maintain disease control. Under severe disease conditions, use the 1 1/2 lbs. per acre rate and shorten spray interval.

**Tomato:** Early blight, late blight, gray leaf spot and gray leaf mold—Use 1 1/2 to 2 lbs. per acre. Anthracnose—Use 2 to 3 lbs. per acre. Rhizoctonia fruit rot and Botrytis gray mold—Use 3 lbs. per acre. Apply Chlorothalonil 75 WP in sufficient water to obtain adequate coverage. Begin applications when disease threatens and repeat at 7 to 10 day intervals. Under severe disease conditions, shorten spray interval. Alternaria fruit rot or blackmold (California only)—Make three applications at the rate of 3 lbs. per acre on a 10 to 14 day schedule beginning 5 to 6 weeks before anticipated harvest.



### ORNAMENTAL TURF

Do not mow or water after treatment until greens or turfgrasses are thoroughly dry. A 24 hour waiting period following treatment is preferred. **CHLOROTHALONIL 75 WP** should always be used in conjunction with good turf management practices.

**Colf Course Fairways and Sod Farms:** Apply Chlorothalonil 75 WP in 30 to 40 gallons of water per acre. Begin applications when conditions favor disease development and repeat applications as long as these conditions persist. Under severe disease conditions use the highest rate and shortest interval corresponding with the application schedule selected from the table below.

Disease	Application Interval	Application Rate Per Acre
Sclerotinia dollar spot	7 - 10 Days	2-3/4 to 5-1/2 lb
	14 - 21 Days	5-1/2 to 10 lb
Helminthosporium leafspot	7 - 10 Days	5-1/2 lb
	14 - 21 Days	5-1/2 to 10 lb
Rhizoctonia brown patch	7 - 14 Days	5-1/2 to 10 lb
Anthracnose	7 - 14 Days	8 to 16 lbs

**Golf Course Tees and Greens and Ornamental Turgrass:** Apply Chlorothalonil 75 WP in an adequate amount of water to provide complete coverage. This amount may vary from 2 to 10 gallons per 1,000 square feet. See below for suggested rates and timing. Under severe disease conditions, use the curative rates and spray on a 7 day schedule.

Application	Interval of Preventive *	Rate	
		Ounces per 1,000 sq. ft. Curative	Disease
Anthracnose	7 - 14 day	3 - 6	—
Copper Spot	7 - 10	4 - 6	6 - 8
Curvularia leaf spot	7 - 10	2 - 4	4 - 8
Dollar spot	7 - 14	2 - 4	4 - 8
Gray leaf spot	7 - 10	2 - 4	4 - 8
Helminthosporium leaf spot and melting out	7 - 10	2 - 4	4 - 8
Large brown patch	7 - 10	2 - 4	4 - 8
Red thread	7 - 10	2 - 6	6 - 8
Stem rust of bluegrass	7 - 14	4 - 6	6 - 8
Dichondra Alternaria leaf spot (California only)	7 - 14	4 - 6	6 - 8

\* Recommended rates for preventing disease establishment, use lower rates when disease conditions are light to moderate, higher indicated rates when conditions are severe.

\*\* Rates for use on a 7 day schedule when disease is present. Higher indicated rate should be applied under severe conditions.

**TURFGRASS SNOW MOLDS:** Gray Snow Mold caused by Typhula spp. - Apply in sufficient water to obtain adequate coverage (2 to 10 gallons per 1,000 square feet). Apply 5-1/2 to 11 ounces of **Chlorothalonil 75 WP** per 1,000 square feet of turf area. Application must be made before snow cover in autumn. Use the higher rate if turf layer remains frozen prior to snow cover. If snow cover is intermittent or lacking during the winter, re-apply **Chlorothalonil 75 WP** at 5-1/2 ounces per 1,000 square feet at monthly intervals until gray snow mold conditions no longer prevail. In areas where pink snow mold (Gerlachia or Fusarium patch) is likely to occur, apply **Chlorothalonil 75 WP** at 5-1/2 ounces per 1,000 square feet in combination with either **Tersan\* 1991 50WP** at 2 ounces per 1,000 square feet or **Chipco\* 26019 50WP** at 4 ounces per 1,00 square feet of turf area.

**Fusarium (Gerlachia) Patch:** For control of Fusarium patch only in areas where snow cover is intermittent or lacking during the winter, apply 5-1/2 to 10 ounces of **Chlorothalonil 75 WP** per 1,000 sq. ft. of turf area. Begin applications in late autumn and re-apply at 21 to 28 day intervals until conditions favorable for Fusarium patch no longer prevail.

\*Tersan is a registered trademark of E.I. Dupont de Nemours & Co., Inc.

\*\* Chipco is a registered trademark of Rhone-Poulenc Inc.

**DIRECTIONS FOR USE ON CONIFER TREES**

Apply **Chlorothalonil 75 WP** in sufficient water and with proper calibration to obtain uniform coverage of tree canopy. Application through either ground equipment or aircraft is recommended except where otherwise indicated.

When concentrate sprays are used the lower rate per acre of **Chlorothalonil 75 WP** listed may be used. The following spray volumes are recommended as gallons of spray per acre:

CROP	Spray Volume (Gallons per Acre)	
	DILUTE	CONCENTRATE
<b>CONIFERS:</b>		
Forest stands	Not used	10 to 20 (aircraft)
Christmas trees	100	10 to 50 (aircraft or ground equipment)
Nursery beds	100	5 to 10 (ground equipment only)

CROP	DISEASES	Chlorothalonil 75 WP		APPLICATION DIRECTIONS
		ACRE	100 GAL*	
Conifers	Swiss needlecast (Douglas-fir)	2 3/4 to 5 1/2 lbs	2 3/4 to 5 1/2 lbs	Single applicaton technique: In Christmas tree plantations or forest stands make one application in the spring when new shoot growth is 1/2 to 2 inches in length.
	Scleroderris canker (pines), Swiss needlecast (Douglas-fir)	1 1/2 to 2 3/4 lbs	1 1/2 to 2 3/4 lbs	Make the first application in spring when new shoot growth is 1/2 to 2 inches in length. Make additional applications at 3 to 4 week intervals until conditions no longer favor
	Sirococcus tip blight	2 to 3 1/2 lbs	2 to 3 1/2 lbs	disease development. For use in nursery beds, apply the highest
	Rhizosphaera needlecast (spruces), Scirrhia brown spot (pines)	5 1/2 lbs	5 1/2 lbs	rate specified on a 3 week schedule.

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Cyclaneusma and Lophodermium needlecasts (pines)	2 3/4 to 5 1/2 lbs	2 3/4 to 5 1/2 lbs	Apply in early spring prior to budbreak. Repeat applications at approximately 6 to 8 week intervals, until spore release ceases in late fall. Apply monthly during periods of frequent rainfall, and where Lophodermium infections occur during dormancy (Pacific Northwest). During drought periods, applications may be suspended, then resumed upon next occurrences of needle wetness.
Rhabdocline needlecast (Douglas-fir)	1 1/2 to 2 3/4 lbs	1 1/2 to 2 3/4 lbs	Apply at budbreak and repeat at 3 to 4 week intervals until needles are fully elongated and conditions no longer favor disease development. In plantations of mixed provenance, or when irregular budbreak occurs, apply weekly until all trees have broken bud, then every 3 to 4 weeks as specified above. In nursery beds, use the high rate on a 3 week schedule.
Botrytis seeding blight, Phoma twig blight	1 1/2 to 2 3/4 lbs	1 1/2 to 2 3/4 lbs	Begin applications in nursery beds when seedlings are 4 inches tall and when cool, moist conditions favor disease development. Make additional applications at 7 to 14 days intervals as long as disease favorable conditions persist.

\*Volumetric rates to be used only with full dilute spray volume specified on this label for tree crops.

**ORNAMENTALS, PLANTS, SHRUBS AND TREES:**

Apply Chlorothalonil 75 WP at rate of 1 1/2 pounds per 100 gallons of water unless other directions are given in the tables below. Begin applications as directed for each species and disease condition cited and repeat on a 7 to 14 day schedule until conditions are no longer favorable for disease development. During periods when conditions favor severe disease incidence, generally cloudy or wet weather, use the higher rate specified and the shortest indicated interval between applications.

~~Chlorothalonil 75 WP may be used in greenhouses. Applicators and attending personnel should wear protective clothing including long sleeves, gloves, goggles or eye shield plus a face-fitting respirator specifically designed to remove organic pesticide vapors and particles. Do not use mistblowers or high pressure spray equipment when making applications of Chlorothalonil 75 WP in greenhouses.~~

Use of Chlorothalonil 75 WP is recommended for disease control on the ornamentals listed in the tables below. Use of Chlorothalonil 75 WP is not recommended for species that are not listed.

**ORNAMENTALS:**

Species	Diseases Controlled	Suggested First Application
<b>BROADLEAF SHRUBS AND TREES:</b>		
Ash (Fraxinus)	Cercospora Cercosporidium Cylindrosporium leafspots	Spring bud break
Azalea* Rhododendron*	Phytophthora die-back, Ovulinia flower blight	New leaf emergence Early bloom
Buckeye Horsechestnut	Leaf blotch Anthracnose	Spring bud break
Cherry - Laurel	Cercospora leafspot	Petal fall
Crabapple	Scab. Cedar-apple rust. Sphaeropsis leafspot	Spring bud break
Dogwood	Septoria leafspot	Early bloom
Euonymus	Anthracnose	Spring bud break
Firethorn	Scab	Spring bud break
Flowering Almond Quince Sand Cherry	Monilinia blossom/ branch blight	Early bloom

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Species	Diseases Controlled	Suggested First Application
Hawthorn	Rust, Fabraea leafspot	Pre-bloom
Holly	Rhizoctonia web blight	Warm, moist conditions
Mountain Laurel	Cercospora leafspot	Spring bud break
Oak (red group only)	Taphrina blister Actinopeite leafspot Anthracnose	Dormant budswell
Oregon-Grape (Mahonia)	Rust	Spring bud break
Photinia	Fabraea (Entomosporium) leafspot	Spring bud break
Pieris (Andromeda)	Phytophthora die-back	New leaf emergence
Poplar	Marssonina leafspot	Spring bud break
Privet	Cercospora leafspot	Prolonged wet conditions
Sycamore, Planetree	Anthracnose	Spring bud break
Viburnum	Powdery mildew	Mid-summer

\*Discoloration of blooms has been noted on certain varieties when applications are made during flowering.

Species	Diseases Controlled	Suggested First Application
<b>BULBS AND FLOWERING PLANTS:</b>		
Carnation	Alternaria leafspot/ branch rot: Botrytis flower blight	Transplant of cuttings; Cool, moist conditions
Chrysanthemum/ Daisy	Mycosphaerella ray blight, Septoria leafspot; Botrytis flower blight (gray mold)	Transplant of cuttings  Pre-bloom
Geranium	Botrytis blight, rust	Cool, moist conditions
Gladiolus	Curvularia leaf/ flower spot, Botrytis leaf/ flower spot	Early propagation
Hollyhock	Rust	Early seedling stage
Hydrangea* (foliage only)	Cercospora and Septoria leafspots, Rust	Early propagation
Iris	Botrytis blossom blight, Didymellina leafspot	Cool, moist conditions
Lily	Botrytis gray mold	Pre-bloom
Petunia*	Phytophthora blight (foliar phase), Botrytis blight	Pre-bloom
Rose (Use 1 lb per 100 gallons)	Black spot, Botrytis blight	Spring bud break
Statice	Anthracnose, Cerecospora, Alernaria, Botrytis leaf blights	Spring bud break
Zinnia	Powdery mildew	First sign of disease

\*Discoloration of blooms has been noted on certain varieties when applications are made during flowering.



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<b>Species</b>	<b>Diseases Controlled</b>	<b>Suggested First Application</b>
<b>FOLIAGE PLANTS:</b>		
Dracaena	Fusarium leafspot	Pre-transplant
Pachysandra (Use 3 lb per 100 gallons)	Volutella leaf blight	Spring bud break
Leatherleaf fern	Ascochyta blight, Cercospora leafspot, Cylindrocladium leafspot, Rhizoctonia blight	Spring bud break
Parlor palm (chamaedorea)	Bipolaris (Helminthosporium) leafspot	Cool, moist conditions
Prayer plant (Maranta)	Helminthosporium leafspot	Early propagation
Oyster plant (Rhoeo)	Tan leafspot	Early propagation
Syngonium	Cephalosporium leafspot	Warm, moist conditions
Philodendron	Phytophthora blight Dactylaria leafspot	Moist conditions

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## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

**Storage:** Store in a dry place.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**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.

## WARRANTY AND LIMITATION OF DAMAGES

Seller warrants that this material conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use and Buyer assumes the risk of any use contrary to such directions. Seller makes no other express or implied warranty, including any other express or implied warranty of Fitness or of Merchantability, and no agent of Seller is authorized to do so. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material as to which a claim is made.

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