

PM25
50534-4
Pg. 2 of 7

JUL 10 1990

Ralph P. Burton
Formosa ABC Corporation
5946 Daisley Road
P.O. Box 8000
Mentor, OH 44061-0000

BEST AVAILABLE COPY

Dear Mr. Burton

Subject: Amended Precautionary Statements
Daconil 2787 Fungicide
EPA Registration No. 50534-4
Bravo W-75
EPA Registration No. 50534-23
Your Submissions Dated November 7, 1989

The amendment referred to above, submitted in connection with registration under FIFRA is acceptable, provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

- Add "may" to the Note to Physician statement between the words "symptom" and "respond."

2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

A stamped copy of the labeling is enclosed for your records.

54314:I:Stone:LR-9:KENC:06/20/90:07/20/90:DD:sw:vd:ek:dj

Precautionary Review Section, Registration Support Branch has reviewed the subject submissions and has the following conclusions:

1) Precautionary change requests:

- a. Request to delete "May be a potential skin sensitizer", under Precautionary statements is justified. A dermal sensitization study conducted using Technical chlorothalonil (MRID #144112, Lab. #7020, 4-15-82) indicated a non-sensitizer.
- b. You are justified in removing all statements from the following labels referring to "chlorothalonil" or "this product may produce temporary allergic side effects", or "Note to Physicians: Persons having an allergic reaction respond to treatment with antihistamines"
- c. The proposed addition to the label "Note to Physician: Persons having temporary irritation symptoms may respond to treatment with antihistamines or steroid creams and/or systemic steroids" is acceptable provided "may" is inserted into the phraseology.

The "Note to User: This product may produce mild bronchial irritation and temporary irritation of the skin characterized by redness or rash on exposed skin areas. Affected persons should call a physician", is also acceptable.

2) The product label amendments (deletion of references to "temporary allergic side effects), and the proposed "Note to Physician" and "Note to User", as outlined on the sample labels, do not require acute toxicity study support for implementation. Deletion of the statement "May be a potential skin sensitizer", was adequately supported by dermal sensitization study MRID #144112, Lab. #7020, 4-15-82.

3) A current acute toxicity profile (for the subject products follows:

Acute oral - Bravo 90 DG (50534-157 - 90% A.I.).
 Acc. #253856, May 16, 1983
 Tox Cat. IV Guidelines

Acute dermal - bravo 90 Dd (50534-157 - 90.0% A.I.)
 Acc. #253856, May 16, 1983.
 Tox. Cat. IV Guidelines

Acute inhalation - Technical chlorothalonil MRID #00094942. This study listed as acceptable in Chlorothalonil Reg. Std. (no additional inhalation data needed). Tox. Cat. not given. The

BEST AVAILABLE COPY

ACCEPTED
with COMMENTS
in EPA Letter Dated:

JUL 10 1990

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

Net Contents



FERMENTA ASC

SPECIMEN LABEL

Daconil 2787[®] Fungicide

Active ingredient: Chlorothalunil (Tetrachloro-sophthalonitrile)*	75.0%
Inert ingredients:	25.0%
Total:	100.0%

*Covered under U.S. Patent No. 3,290,359 and No. 3,331,735

Fermenta ASC Corporation
5966 Heisley Road
P.O. Box 8000
Mentor, Ohio 44131-8000

EPA Reg. No. 30534-4
EPA Est. No. 35982-TX-1 3202-4020-9080-8705

BEST AVAILABLE COPY

A Broad-Spectrum Fungicide For Use on Golf Course Tees, Greens and Fairways, Ornamental Turfgrass and Ornamentals.

Read entire label carefully and use only as directed.

General Information

Daconil 2787 Fungicide is formulated for use on golf course tees, greens and fairways, ornamental turfgrass and ornamental herbs, shrubs and trees. It is highly effective for the control of a broad spectrum of turf and ornamental plant diseases when it is used according to the directions on this product label. Thorough, uniform coverage of plant surfaces is essential for good disease control.

Add the required amount of Daconil 2787 to the spray tank while filling with water. Keep agitator running when filling spray tank and during spray operations.

Do not combine Daconil 2787 in the spray tank with pesticides, surfactants or fertilizers unless your prior use has shown the combination physically compatible, effective and noninjurious under your conditions of use.

Precautionary Statements

Hazards to Humans and Domestic Animals

Danger

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

Do not get in eyes. Wear goggles or eye shield when handling this product. In case of contact with eyes, flush with plenty of water immediately for 15 minutes. Seek medical attention for eyes immediately.

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

Do not take internally.

Avoid breathing dust or spray mist.

~~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 consult a physician.~~

First Aid:

~~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 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. Do not apply when weather conditions favor drift from treated areas.

Apply only to areas specified on label.

Directions For Use

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

~~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 consult a physician.~~

Note to User: Wear long sleeve shirt, long pants, and gloves while mixing, loading and applying this product.

Turf: Do not mow or water after treatment until spray deposit on turfgrass is thoroughly dry. Daconil 2787 should always be used in conjunction with good turf management practices.

Golf Course Fairways: Apply Daconil 2787 Fungicide 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 14 - 21 Days	2-3/4 to 5-1/2 lb 5-1/2 to 10 lb
Helminthosporium leaf spot	7 - 10 Days 14 - 21 Days	5-1/2 lb 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 lb

Note to User: This product may produce mild bronchial irritation and temporary irritation of the skin characterized by redness or rash on exposed skin areas. Affected persons should consult a physician.

Note to Physician: Persons having temporary irritation symptoms respond to treatment with antihistamines or steroid creams and/or systemic steroids.

Golf Course Tees and Greens and Ornamental Turfgrass: Apply Daconil 2787 Fungicide 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.

Disease	Interval of Application	RATE Ounces Per 1,000 sq. ft.	
		Preventive*	Curative**
Anthracnose	7-14 Days	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	2-8	6-8
Stem rot of bluegrass	7-14	4-6	6-8
DICHOMYIA 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.

BEST AVAILABLE COPY

Turfgrasses: 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 Daconil 2787 Fungicide per 1,000 square feet of turf area. Application must be made before 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 Daconil 2787 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 (Geriachia or Fusarium patch) is likely to occur, apply Daconil 2787 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 1,000 square feet of turf area.

Fusarium (Geriachia) 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 Daconil 2787 Fungicide 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 & Company, Inc.

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

Ornamentals and Conifers: Apply Daconil 2787 Fungicide 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 spot 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.

Daconil 2787 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 Daconil 2787 in greenhouses.

Use of Daconil 2787 is recommended for disease control on the ornamentals and conifers listed in the tables below. Use of Daconil 2787 is not recommended for species that are not listed.

Ornamentals:

Species	Diseases Controlled	Suggested First Application
BROADLEAF SHRUBS AND TREES:		
Ash (Fraxinus)	Cercospora Cercosporium Cylindrosporium leafspots	Spring bud break
Azalea* Rhododendron*	Phytophthora die-back, Ovulina flower blight	New leaf emergence Early bloom
Bucheye Horseshoevine	Leaf blotch Anthracnose	Spring bud break
Cherry - Laurel	Cercospora leafspot	Petal fall
Crabapple	Scab Cedar-apple rust Sphaeropegia leafspot	Spring bud break
Dogwood	Septoria leafspot	Early bloom
Eucalyptus	Anthracnose	Spring bud break
Furzevine	Scab	Spring bud break
Flowering Almond Dunce Sand Cherry	Monilia blossom/ branch blight	Early bloom
Heathorn	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, Achnopora leafspot Anthracnose	Dormant budswell
Oregon - Grape (Mahonia)	Rust	Spring bud break
Prunus	Fabraea (Entomosporium) leafspot	Spring bud break
Pieris (Andromeda)	Phytophthora die-back	New leaf emergence
Postal	Morsallonia leafspot	Spring bud break
Privet	Cercospora leafspot	Prolonged wet conditions
Sycamore Planetree	Anthracnose	Spring bud break
Viburnum	Powdery mildew	Mid-summer

Species	Diseases Controlled	Suggested First Application
BULBS AND FLOWERING PLANTS:		
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, Didymella leafspot	Cool, moist conditions
Lily	Botrytis gray mold	Pre-bloom
Petunia*	Phytophthora blight (lower phase), Botrytis blight	Pre-bloom
Rose (Use 1 lb per 100 gallons)	Black spot, Botrytis blight	Spring bud break
Stalce	Anthracnose, Cercospora, Alternaria, Botrytis leaf blights	Spring bud break
Zinnia	Powdery mildew	First sign of disease

* Decoloration of blooms has been noted on certain varieties when applications are made during flowering

Conifers:

Species	Diseases Controlled	Suggested First Application
FOLIAGE PLANTS:		
Dracaena	Fusarium leafspot	Pre-transplant
Pachysandra (Use 3 lb per 100 gallons)	Verticillium leaf blight	Spring bud break
Leatherleaf fern	Acochyta blight, Cercospora leafspot, Cylindrocladium leafspot, Rhizoctonia blight	Spring bud break
Parlor palm (Chamaedorea)	Bipolaris (Helmintho- sporium) leafspot	Cool, moist conditions
Prayer plant (Maranta)	Helminthosporium leafspot	Early propagation
Oyster plant (Pilea)	Tan leafspot	Early propagation
Syngonium	Cephalosporium leafspot	Warm, moist conditions
Philodendron	Phytophthora blight Decylaria leafspot	Moist conditions

Diseases Controlled	Recommended Rate/Acre	Application Directions
Sclerotinia Canker (pinus), Sweet Needlecast and Rhoditeche Needlecast (Douglas-fir)	1-1/2 to 2-3/4 lb	Make 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 disease development. For use in nursery beds, apply the highest rate specified on a 3 week schedule.
Sarcococca Tip Blight	2 to 3-1/2 lb	
Rhizoglyphus Needlecast (spruce) Scirrhia brown spot (pine)	5-1/2 lb	
Lophodermium Needlecast	1-1/2 to 2-3/4 lb	North Central and Northeastern States. Begin applications in mid-July to early August before infection occurs. Make additional applications at 3 to 4 week intervals until conditions no longer favor disease development. For use in nursery beds, apply 2-3/4 lb per acre on a 3 week schedule.
Botrytis seedling blight, Phoma twig blight	1-1/2 to 2-3/4 lb	Begin application in nursery beds when seedlings are 4 inches tall and when cool, moist conditions favor disease development. Make additional applications at 7 to 14 day intervals as long as disease favorable conditions persist.

BEST AVAILABLE COPY

Application and Calibration Techniques for Sprinkler Irrigation on Sod Farms, Ornamental Herbs, Shrubs and Trees:

Apply this product only through center pivot, motorized lateral move, traveling gun, solid set and portable (wheel move, 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 Dacoon 2787 Fungicide through sprinkler irrigation equipment on golf courses.

Crop injury, lack of effectiveness, or illegal pesticide 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 treated 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 treated irrigation water into the water source.

Always inject DACOON 2787 FUNGICIDE 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 check 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.

Dacoon 2787 Fungicide 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 Travelling 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 Dacoon 2787 Fungicide 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 Dacoon 2787 Fungicide 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 Dacoon 2787 Fungicide for acreage to be covered with water so that the total mixture of Dacoon 2787 Fungicide 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. Dacoon 2787 Fungicide 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 Dacoon 2787 Fungicide has been cleared from last sprinkler head.

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 rinse 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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or 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 except in writing with a specific reference to this warranty. 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.

This package is sold by weight, not by volume. Some settling of contents may have occurred during shipping and handling.

Fermenta ASC Corporation
5966 Hensley Road, P.O. Box 8000
Mentor, Ohio 44061-8000

EPA Reg No 50534-4
EPA Est No 35982-TX-1

Printed in U.S.A.

BEST AVAILABLE COPY