



U.S. ENVIRONMENTAL PROTECTION AGENCY
 OFFICE OF PESTICIDE PROGRAMS
 120 Pennsylvania Ave., N.W.
 Washington, DC 20460-0001

EPA Reg. Number
228-393

Date of Issuance
 NOV 8 2002

Term of Issuance
 Conditional

Name of Pesticide Product
 Riverdale Resound 90DF

NOTICE OF PESTICIDE

X Registration
 _____ Reregistration
 (under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Riverdale Chemical Company
 1333 Burr Ridge Parkway, Suite 125A
 Burr Ridge, IL 60427-0866 Attn: Russell Sawyer

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby reregistered under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or approval of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is registered in accordance with FIFRA Sec. 3 (c)(7) (A) provided that you comply with the following requirements.

1. Submit/cite all data required for the registration of your product when the Agency requires all registrants of similar product to submit data.
2. Make the changes to the labeling that are listed below before you release the product for shipment:
 - a. Revise the EPA Registration Number to read: "EPA Reg. No.228-393".

Signature of Approving Official:

[Handwritten Signature]

Cynthia Giles Parker
 Product Manager (22)
 Fungicide Branch, Registration Division (7505C)

Date:

NOV 8 2002

b. Under the "Agricultural Use Requirements" statement the last sentence, the word "lease" must be changed to "least."

c. Under the heading "Importance of Droplet Size", first sentence, the word "ay" must be changed to "way."

d. Under the heading "Controlling Droplet Size", second paragraph, second sentence, the word "an" must be changed to "and."

e. Under the heading "Swath Adjustment", first sentence, the word "coss" must be changed to "cross."

f. On page 8, fourth sentence, the word "wet" must be changed to "set".

g. Under the heading "Storage and Disposal", add the word "Pesticide" before the subheading "Storage" (Pesticide Storage). Move the last sentence "Do not contaminate water, feed or food stuff by storage or disposal." directly under the Storage and Disposal heading. This general statement applies to both Storage and Disposal.

3. Submit one copy of your final printed labels before you release the product for shipment.

4. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of your label is enclosed.

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RIVERDALE®

RESOUND™ 90DF

A 90% Water Dispersible Granular Turf and Ornamental Fungicide for the control of broad spectrum plant diseases on Golf Courses, Ornamentals, such as Turf Grass, Herbs, Shrubs and Trees.

ACTIVE INGREDIENT:

Chlorothalonil (tetrachloroisophthalonitrile)	90.0%
INERT INGREDIENTS:	10.0%
TOTAL	100.0%

Riverdale is a Registered Trademark of Riverdale Chemical Co.
Resound is a Trademark of Riverdale Chemical Co.

KEEP OUT OF REACH OF CHILDREN

DANGER - PELIGRO

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

SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY AND FIRST AID STATEMENTS

EPA REG. NO. 228-GOG

NET WEIGHT 5 LBS

EPA EST. NO. 228-IL-1

MANUFACTURED BY

RIVERDALE CHEMICAL COMPANY

BURR RIDGE, ILLINOIS 60527-0866

ACCEPTED
with COMMENTS
In EPA Letter Dated:

NOV 8 2002

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

228-393

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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER - PELIGRO**

Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Avoid breathing dust or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions characterized by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas.

PERSONAL PROTECTIVE EQUIPMENT (PPE): Applicators and other handlers must wear long-sleeved shirt, long pants, chemical resistant gloves, shoes, socks and protective eyewear. For exposures in enclosed areas, use a respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter. 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.

ENGINEERING CONTROLS STATEMENT: 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.

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. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRST AID STATEMENT

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: Persons having an allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids. Probable mucosal damage may contraindicate the use of gastric lavage.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic invertebrates and wildlife. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high-water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. This product must not be applied within 150 feet (for aerial and air blast applications) or 25 feet (for ground applications) of marine/estuarine water bodies unless there is an untreated buffer area of that width between the area to be treated and the water body. Do not contaminate water when disposing of equipment washwater or rinsate.

This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

This chemical can contaminate surface water through spray drift. Under some conditions, it may also have a high potential for runoff into surface water for several days to weeks after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS. 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, chemical resistant gloves, shoes plus socks and protective eyewear.

Special Eye Irritation Provisions: This product is a severe eye irritant. Although the restricted-entry interval expires after 12 hours, for the next 6-1/2 days entry is permitted only when the following safety measures are provided:

(1) At least one container designed specifically for flushing eyes must be available in operating condition at the WPS-required decontamination site intended for workers entering the treated area.

(2) Workers must be informed, in a manner they can understand: that residues in the treated area may be highly irritating to their eyes, that they should take precautions, such as refraining from rubbing their eyes, to keep the residues out of their eyes, that if they do get residues in their eyes, they should immediately flush their eyes using the eyeflush container that is located at the decontamination site or using other readily available clean water, and how to operate the eyeflush container.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Do not enter or allow others to enter treated area until spray has dried.

GENERAL INFORMATION

Resound 90DF is an excellent fungicide when used according to label directions for control for a broad spectrum of plant diseases. Resound 90DF can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control. Do not combine Resound 90DF in the spray tank with pesticides, surfactants or fertilizers, unless prior use has shown the combination physically compatible, effective and noninjurious under conditions of use. Use of this product on home lawns is prohibited. Sod farm turf treated with chlorothalonil prior to harvest must be mechanically cut, rolled and harvested.

Dosage rates on this label indicate pounds of Resound 90DF per acre unless otherwise stated. Under conditions favoring disease development the high rate specified and shortest application interval should be used. 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. Both ground and aircraft methods of application are recommended unless specific directions for ground application only are given for a crop. Application through sprinkler irrigation systems is recommended for some crops which are specified on the label below. Follow application and calibration instructions.

APPLICATION AND CALIBRATION TECHNIQUES FOR SPRINKLER IRRIGATION

Apply this product only through the following types of irrigation systems. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration you should contact State Experiment Station specialists, equipment manufacturers, or other experts. 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 for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

- A. Center Pivot, Travelér, Big Gun, Motorized Lateral Move, End Tow, and Side (Wheel)Roll Irrigation Equipment: Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank of injection equipment with water. Operate system for one complete circle for center pivot or one complete run for the other recommended equipment, measuring time required, amount of water injected, and acreage contained in circle or run. Mix recommended amount of 90DF for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run, but continue to operate irrigation system until Resound 90DF has been cleared from last sprinkler head. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur.

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- B. Solid Set and Hand Move Irrigation Equipment: 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 Resound 90DF for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer or injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that Resound 90DF will remain in suspension during the injection cycle. Resound 90DF 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 Resound 90DF is cleared from last sprinkler head.

SAFETY DEVICES

1. The systems designated above 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.
2. All pesticide injection pipelines must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

SYSTEMS CONNECTED TO PUBLIC WATER SOURCES

Public water system means a system for the provision of 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, backflow 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 and of the fill pipe and the top of overflow rim of the reservoir tank of at least twice the inside diameter of fill pipe. 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.

For additional instructions on safety precautions, refer to statements 2, 3, 4, 6 and 7 in the section of Safety Devices.

POSTING INSTRUCTIONS

Posting of areas to be chemigated is required when 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 when chemigated area is open for the public, such as golf courses or retail greenhouses. This sign is in addition to any sign posted to comply with Worker Protection Standard.

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

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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 soils 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.

SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

[This section is advisory in nature and does not supersede the mandatory label requirements.]

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversion section of this table).

Controlling Droplet Size

Volume-Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure-Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy protection. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of nozzles-Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation-Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

Nozzle Type-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

Boom Length-For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application-Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

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Swath Adjustment

When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature And Humidity

When making applications in low relative humidity, set up equipment to product larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

For each site listed below, the listed maximum individual and seasonal applications rates must not be exceeded and the listed minimum retreatment intervals must not be decreased (reduced).

Site	Maximum individual application rate in lbs ai/A (minimum retreatment interval in days = maximum seasonal total in lbs ai/A/season)
Conifers	4.1 (21 or 7 for seed beds only) = 16.5
Golf course:	
greens	11.3 (14) + 7.3 (7) = 73
tees	11.3 (14) + 7.3 (7) = 52
fairways	11.3 (1 application) + 7.3 (7) = 26
Sod farm	11.3 (one application) + 7.3 (7) = 26
Turf (general)	11.3 (one application) + 8.2 (7) = 26
Ornamentals	1.55 (7) = 36.4 (seasonal maximum applies to field-grown only)
roses	1.1 (7) = 36.4 (seasonal maximum applies to field-grown only)
pachysandra	3.1 (7) = 36.4 (seasonal maximum applies to field-grown only)

TURF AND ORNAMENTALS

Resound 90DF is formulated for use on golf course tees, greens and fairways, ornamental turfgrass, including Sod farms; 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.

Mixing Procedures: Be sure sprayer is clean and not contaminated with any other materials,

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or sprayer clogging or crop injury may result. Fill tank 1/4 full with clean water; start agitation. Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. Pour product directly from container into tank. Let it wet and settle into water. Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. Finish filling tank. Maintain agitation during operation. Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent of this label.

TURF: Do not mow or water after treatment until spray deposit on turfgrass is thoroughly dry; Resound 90DF should always be used in conjunction with good turf management practices.

Golf Course Tees and Greens and Ornamental Turfgrass: Apply 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.

Golf Course Tees and Greens and Ornamental Turfgrass: Apply 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.

Do not use Resound 90DF through sprinkler irrigation equipment on golf courses.

DISEASE	APPLICATION INTERVAL	APPLICATION RATES PER ACRE
Sclerotinia Dollar Spot	7 to 10 days 14 to 21 days	2-1/4 to 4-1/2 lbs. 4-1/2 to 8 lbs.
Helminthosporium Leafspot	7 to 10 days 14 to 21 days	4-1/2 lbs. 4-1/2 to 8lbs.
Rhizoctonia Brown Patch	7 to 14 days	4-1/2 to 8 lbs.
Anthracnose	7 to 14 days	7 to 14 lbs.

DISEASE	APPLICATION INTERVAL	RATE	
		Ounces Per 1,000 Square Feet	
		Preventive*	Curative**
Anthracnose	7 to 14 days	2-1/2 to 5	-
Copper Spot	7 to 10 days	3-1/2 to 5	5 to 6-1/2
Curvularia Leaf Spot	7 to 10 days	1-3/4 to 3-1/2	3-1/2 to 6-1/2
Dollar Spot	7 to 14 days	1-3/4 to 3-1/2	3-1/2 to 6-1/2
Gray Leafspot	7 to 10 days	1-3/4 to 3-1/2	3-1/2 to 6-1/2
Helminthosporium Leafspot and Melting Out	7 to 10 days	1-3/4 to 3-1/2	3-1/2 to 6-1/2
Large Brown Patch	7 to 10 days	1-3/4 to 3-1/2	3-1/2 to 6-1/2
Red Thread	7 to 10 days	1-3/4 to 5	5 to 6-1/2
Stem Rust of Bluegrass	7 to 14 days	3-1/2 to 5	5 to 6-1/2
Dichondra: Alternaria Leafspot (California only)	7 to 14 days	3-1/2 to 5	5 to 6-1/2

*Recommended rates for preventing disease establishment; use lower rate 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 indicted rate should be applied under severe conditions.

Turfgrasses - Gray snow mold caused by *Typhla* spp.: Apply in sufficient water to obtain adequate coverage (2 to 10 gallons per 12,000 square feet). Apply 4-1/2 to 9 ounces of Resound 90DF 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, reapply at 4-1/2 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 at 4-1/2 ounces per 1,000 square feet in combination with Chipco 26019 50WP at 4 ounces per 1,000 square feet for turf area.

Fusarium (Gerlachia) Patch: For control of *Fusarium* patch only in areas where snow cover is intermittent or lacking during the winter, apply 4-1/2 to 8 ounces per 1,000 square feet 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.

Ornamentals and Conifers: Apply Resound 90DF at a rate of 1-1/4 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.

Aerial application to conifers is permitted although ground applications generally give better coverage. If application with ground equipment is not feasible, Resound 90DF may be applied aerially to forest stands in 10 to 20 gallons of water and to Christmas trees in 10 to 50 gallons of water.

Resound 90DF may be used in greenhouses. Do not use mistblowers or high pressure spray equipment when making applications in greenhouses.

ORNAMENTALS

SPECIES	DISEASES CONTROLLED	SUGGESTED FIRST APPLICATION
BROADLEAF SHRUBS AND TREES:		
Ash (<i>Fraxinus</i>)	<i>Cercospora</i> , <i>Cercosporidium</i> , <i>Cylindrosporium</i> leafspots	Spring bud break
Azalea*	<i>Phytophthora</i> die-back,	New leaf emergence:
Rhododendron*	<i>Ovulinia</i> flower blight	Early bloom,
Buckeye, Horsechestnut	Leaf blotch, Anthracnose	Spring bud break
Cherry-Laurel	<i>Cercospora</i> leafspot	Petal fall
Crabapple	Scab, Cedar-apple rust, <i>Sphaeropsis</i> Leafspot	Spring bud break
Dogwood	<i>Septoria</i> leafspot	Early bloom
Euonymus	Anthracnose	Spring bud break
Firethorn	Scab	Spring bud break
Flowering Almond, Quince, Sand Cherry	<i>Monilinia</i> blossom/branch blight	Early bloom
Hawthorn		Pre-bloom
Holly	Rust, <i>Fabraea</i> leafspot	Warm, Moist conditions
Mountain Laurel	<i>Rhizoctonia</i> web blight	Spring bud break
Oak (red group only)	<i>Cercospora</i> leafspot <i>Taphrina</i> blister, <i>Actinopelte</i> leafspot, Anthracnose	Dormant budswell
Oregon-Grape (<i>Mahonia</i>)	Rust	Spring bud break
Photinia	<i>Fabraea</i> (<i>Entomosporium</i>) leafspot	Spring bud break
Pieris (<i>Andromeda</i>)	<i>Phytophthora</i> die-back	New leaf emergence

Poplar	Marssonina leafspot	Spring bud break
Privet	Cercospora leafspot	Prolonged wet conditions
Sycamore, Planetree	Anthrachnose	Spring bud break
Viburnum	Powdery mildew	Mid-summer
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, Didymellina leafspot, ink spot	Cool, moist conditions
Lily, Crocus, Daffodil, Narcissus, Tulip	Botrytis blossom blight, Didymellina leafspot, ink spot	Cool, moist conditions
Petunia*	Phytophthora blight (foliar phase), Botrytis blight	Pre-bloom
Rose (use 7/8 lb. Per 100 gallons)	Black spot, Botrytis blight	Spring budbreak
Statice	Anthrachnose, Cercospora, Alternaria, Botrytis leaf blights	Spring budbreak
Zinnia	Powdery mildew	First sign of disease

Discoloration of blooms has been noted on certain varieties when applications are made during glowing.

FOLIAGE PLANTS:

Dracaena	Fusarium leafspot	Pre-transplant
Pachysandra (use 2-1/4 lbs. Per 100 gallons)	Volutella leaf blight	Spring budbreak
Leatherleaf fern	Ascochyta blight, Cercospora leafspot, Cylindrocladium leafspot, Rhizoctonia blight	Spring budbreak
Parlor palm	Bipolaris (Helminthosporium) leafspot	Cool, moist conditions
Prayer plant (Maranta)	Helminthosporium leafspot	Early propagation

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Oyster plant (Rhoeo)	Tan leafspot	Early propagation
Syngonium	Cephalosporium leafspot	Warm, moist conditions
Philodendron	Phytophthora blight, Dactylaria leafspot	Moist conditions

CONIFERS:

DISEASES CONTROLLED	Resound 90DF RATE/ACRE	APPLICATION DIRECTIONS
Rhabdocline needlecast (Douglas-fir)	1-1/8 to 2-1/4 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.
Swiss needlecast	2-1/4 to 4-1/2 lbs.	Single application technique: In Christmas tree plantations or forest stands, make one application in the first spring when new shoot growth is 1/2 to 2 inches in length.
Scleroderris Canker (pines), Swiss Needlecast (Douglas-fir)	1-1/8 to 2-1/4 lbs.	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. In nursery beds, apply the highest rate specified on a 3 week schedule.
Sirococcus Tip Blight	1-3/4 to 3 lbs.	
Rhizosphaera Needlecast (spruces), Scirrhia brown spot (pines)	4-1/2 lbs.	
Cyclaneusma and Lophodermium needlecasts (pines)	2-1/4 to 4-1/2 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 occurrence of needle wetness.
Botrytis seedling blight, Phoma twig blight	1-1/8 to 2-1/4 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 day intervals as long as favorable disease conditions persist.

STORAGE AND DISPOSAL

STORAGE: Always use original container to store pesticides in a secure warehouse or storage building. This product should be stored in a cool, dry location. Do not store near open containers of seeds, fertilizers, insecticides, or fungicides. Container should be opened in a well ventilated area. All containers should be kept tightly sealed when not in use. Do not contaminate water, feed or foodstuff by storage or disposal.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixtures or rinsate is a violation of Federal law. If container is damaged or if pesticide has spilled, contain all spillage. Place in a closed, labeled container for proper disposal. 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

Riverdale Chemical Company warrants that this fungicide conforms to the chemical description on its label. When used in accordance with label directions under normal conditions, this fungicide is reasonably fit for its intended purposes. Since timing, method of application, weather, plant and soil conditions, mixtures with other chemicals, and factors affecting the use of this product are beyond our control, no warranty is given concerning the use of this product contrary to label directions or under conditions which are abnormal or not reasonably foreseeable. The user assumes all risks of any such use.

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