



SIPCAM AGRO USA, INC.

**ECHO**®**Ultimate****TURF AND ORNAMENTAL FUNGICIDE**

ACTIVE INGREDIENT: Chlorothalonil (tetrachloroisophthalonitrile).....	82.5%
OTHER INGREDIENTS: .....	17.5%
TOTAL: .....	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 en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**FIRST AID**

<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have affected person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>

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

<b>Emergency phone numbers:</b>	(800) 858-7378 NPIC (human and animal health) (800) 424-9300 CHEMTREC (transportation and spills)
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**NOTES TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Persons having a temporary allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids.

MANUFACTURED FOR  
**SIPCAM AGRO USA, INC.**  
300 COLONIAL CENTER PKWY, SUITE 230  
ROSWELL GA 30076

Net Contents: 5 pounds

EPA REG. NO. 60063-3

EPA Est. No. 065387-AR-002 (Lot No. begins with BP)

EPA Est. No. 352-GA-002 (Lot No. begins with DV)

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(103007) 7/08

# PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### DANGER - PELIGRO

Corrosive. Causes irreversible eye damage. DO NOT get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Wash thoroughly with soap and water after handling. Avoid contact with eyes, skin or clothing. Do not breathe spray mist.

### Personal Protective Equipment (PPE):

Mixers, loaders, applicators and all other handlers must wear:

- Long-sleeved shirt and long pants;
- Shoes plus socks;
- Protective eye wear;
- Chemical-resistant gloves made of waterproof material, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyethylene, polyvinyl chloride, or viton; if you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart;
- A NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P, or HE prefilter.

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them.

### Engineering Controls:

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 PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### ENVIRONMENTAL HAZARDS

This product 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 from treated areas may be hazardous to aquatic organisms in neighboring areas. DO NOT contaminate water when disposing of equipment washwater or rinsate.

Chlorothalonil can contaminate surface water through spray drift. DO NOT apply when weather conditions favor drift from treated areas. 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.

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

## DIRECTIONS FOR USE

### General Precautions and Restrictions

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, or pets, either directly or through drift. Only protected handlers may be in the area during applications. 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 12 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.

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:

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.

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):

Do not enter or allow others to enter into treated areas until spray deposits have dried.

This product must not be applied within 150 feet (for aerial and air-blast applications), or 25 feet (for ground applications) from marine/estuarine water bodies unless there is an untreated buffer area of that width between the area to be treated and the water body.

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.

The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor. 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.

## **Aerial Drift Advisory Information**

### **INFORMATION ON 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 conditions (see Wind, Temperature).

### **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- Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. 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 parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from 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 the largest droplets and the lowest drift potential.

### **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 HEIGHT**

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.

### **SWATH ADJUSTMENT**

When applications are made with a crosswind, 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, small drops, etc.).

### **WIND**

Drift potential is lowest between wind speeds of 2-10 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 spray drift.

### **TEMPERATURE AND HUMIDITY**

When making applications in low relative humidity, set up equipment to produce 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 concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## **Integrated Pest Management**

ECHO is an excellent disease control agent when used according to label directions for control of a broad spectrum of plant diseases. ECHO is recommended for use in programs that are compatible with the principles of Integrated Pest Management (IPM), including the use of disease resistant crop varieties, cultural practices, pest scouting and disease forecasting systems which reduce unnecessary applications of pesticides.

## **Fungicide Resistance Management**

ECHO is effective for strategic use in programs that attempt to minimize disease resistance to fungicides. Some other fungicides which are at risk from disease resistance exhibit a single-site mode of fungicidal action. ECHO, with a multi-site mode of action, may be used to delay or prevent the development of resistance to single-site fungicides. Consult with your federal or state Cooperative Extension Service representatives for guidance on the proper use of ECHO in programs which seek to minimize the occurrence of disease resistance to other fungicides.

## **Mixing, Loading and Applying**

ECHO is intended to be diluted into water, then applied to crops by typical agricultural spraying techniques. **Always apply ECHO in sufficient water to obtain thorough, uniform coverage of foliage and crop surfaces intended to be protected from disease.** Spray volume to be used will vary with crop and amount of plant growth. Spray volume should normally range from 20 to 150 gallons per acre (200 to 1400 liters per hectare) for dilute sprays and 5 to 10 gallons per acre (50 to 100 liters per hectare) for concentrate ground sprays and aircraft applications. Both ground and aircraft methods of application are recommended unless specific directions are given for a crop.

Slowly invert container several times to assure uniform mixture. Measure the required amount of ECHO and pour into the spray tank during filling. Keep agitator running when filling spray tank and during spray operations.

Do not use on greenhouse-grown crops except as directed in the Ornamental Plants section of this label.

## **Tank Mixing**

When tank mixing this product with other pesticides observe the more restrictive label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

Do not combine ECHO in sprayer tank with pesticides, surfactants or fertilizers, unless your prior use has shown the combination physically compatible, effective and noninjurious under your conditions of use. Do not combine ECHO with Dipel 4L, Foil, Triton AG-98, Triton B-1956 or Latron B-1956, as phytotoxicity may result from the combination when applied to the crops on this label. DO NOT tank mix Echo with oil, or with any adjuvants which contain oil as their principal ingredient. Do not use with Copper-Count N in concentrated spray suspensions.

Dipel is a registered trademark of Abbott Laboratories;

Foil is a registered trademark of Ecogen, Inc.;

Latron and B-1956 are trademarks of Rohm and Haas Company;

Copper-Count is a registered trademark of Mineral Research and Development Corporation.

## **Applications Through Sprinkler Irrigation Systems (Chemigation)**

Application through sprinkler irrigation systems is recommended only for those specific crops for which the notation "chemigation OK" is listed on this label.

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.

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 ECHO 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 applica-

tion may occur. DO NOT apply when wind speed favors drift beyond the area intended for treatment.

ECHO 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 metering pump, such as a positive displacement injection pump of either diaphragm or piston type, constructed of materials that are compatible with pesticides, fitted with a system interlock, and capable of injection at pressures approximately 2 to 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 ECHO 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 ECHO 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 ECHO for acreage to be covered with water so that the total mixture of ECHO 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. No agitation should be required. ECHO 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 ECHO has been cleared from last sprinkler head.

## **Application Rates**

Dosage rates on this label indicate pounds of ECHO Ultimate per acre, unless otherwise stated. Under conditions favoring disease development, the high rate specified and shortest application interval should be used.

For each listed crop, the maximum total amount of chlorothalonil active ingredient (lbs a.i./A) which may be applied per acre of that crop (or crop group) during each growing season is given in bold print within a box beneath the crop name. For each crop use situation listed below, the listed maximum individual and seasonal application rates must not be exceeded and the listed minimum retreatment intervals must not be decreased.

## **CONIFERS**

Apply this product in sufficient water and with proper calibration to obtain uniform coverage of tree canopy. Application with ground equipment is preferable to aerial application because ground applications generally give better coverage of the tree canopy.

DO NOT allow livestock to graze in treated areas.

**DO NOT apply Echo within one week before or after application of oil or an oil-based pesticide.**

## CONIFERS

Crop	PHI (days)	Diseases	RATE PER Acre	Spray Volume (gallons/acre)	Application Directions
Conifers <b>16.5 lbs a.i./A</b>	N/A	Swiss needlecast	2.5 to 5 pounds	5 to 10 (concentrate ground or aircraft) to 100 (dilute)	Single application 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 needle-cast	1.36 to 2.5 pounds		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 disease development. For use in nursery beds, apply the highest rate specified on a 3 week schedule.
		Sirococcus tip blight	1.82 to 3.18 pounds		
		Rhizosphaera needlecast (spruces), Scirrhia brown spot (pines)	5 pounds		
		Cyclaneusma and Lophodermium needlecasts (pines)	2.5 to 5 pounds		
Rhabdocline needlecast (Douglas-fir)	1.36 to 2.5 pounds	Apply in early spring prior to bud-break. 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.			
					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.

*(continued)*

## CONIFERS (continued)

Crop	PHI (days)	Diseases	RATE PER Acre	Spray Volume (gallons/acre)	Application Directions
Conifers <b>16.5 lbs a.i./A</b>	N/A	Botrytis seedling blight, Phoma twig blight	2.5 pounds	5 to 10 (concentrate ground or aircraft) to 100 (dilute)	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 disease favorable conditions persist.
		Autoecious needle rust (Weir's cushion rust) (spruces)	5 pounds		Begin applications when 10% of buds have broken and repeat twice thereafter at 7-10 day intervals.

## TURFGRASSES

Do not use on home lawns and turf sites associated with apartment buildings, daycare centers, playgrounds, recreational park athletic fields, athletic fields located on or next to schools (i.e., elementary, middle and high schools), campgrounds, churches, and theme parks. Sodfarm turf treated with chlorothalonil prior to harvest must be mechanically cut, rolled and harvested. Do not use for sodfarms at application rates greater than 13 pounds of active ingredient, per acre, per year. Do not apply more than the following totals of chlorothalonil active ingredient from all registered product sources to the indicated types of turfgrass:

TYPE OF TURFGRASS	TOTAL CHLOROTHALONIL ACTIVE INGREDIENT PER ACRE PER YEAR
Golf Course Greens	73 lbs
Golf Course Tees	52 lbs
Golf Course Fairways	26 lbs
Sod Farms	13 lbs
Other Turf	26 lbs

Apply ECHO in 90 to 450 gallons of water per acre on golf course greens and tees, and 30 to 100 gallons of water per acre on fairways, lawns and other turfgrass. Apply with ground equipment only.

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. DO NOT mow or irrigate after treatment until spray deposit on turfgrass is thoroughly dry. ECHO should always be used in conjunction with good turf management practices.

DISEASES* CONTROLLED	INTERVAL OF APPLICATION	GOLF COURSE GREENS & TEES RATE PER 1,000 SQ.FT.	GOLF COURSE FAIRWAYS, LAWNS & OTHER TURFGRASS RATE PER ACRE
1. Dollar spot 2. Brown patch 3. Leaf spot, Melting-out, Brown blight 4. Gray leaf spot	7-14 days	1.82 to 3.25 ounces (4.1 to 7.3 lbs a.i./acre)	5 to 8.9 pounds (4.1 to 7.3 lbs a.i./acre)

\*Diseases listed are caused by fungi, some of which are named as follows:

(continued)

## TURFGRASSES (continued)

DISEASES* CONTROLLED	INTERVAL OF APPLICATION	GOLF COURSE GREENS & TEES RATE PER 1,000 SQ.FT.	GOLF COURSE FAIRWAYS, LAWNS & OTHER TURFGRASS RATE PER ACRE
5. Red thread 6. Anthracnose 7. Copper spot 8. Stem rust (bluegrass) 9. Dichondra leaf spot	7 days or 14 days	3.25 ounces or 5 ounces (7.3 or 11.3 lbs a.i./acre)	8.9 pounds or 13.7 pounds (7.3 or 11.3 lbs a.i./acre)

\*Diseases listed are caused by fungi, some of which are named as follows:

1. Dollar spot: *Sclerotinia homeocarpa*; *Lanzia* or *Moellerodiscus* spp.
2. Brown patch: *Rhizoctonia solani*, *R. zeae*, *R. cerealis*
3. Leaf spots, Melting-out, Brown blight: *Drechslera* spp. (including *D. poae*, *D. siccans*), *Bipolaris sorokiniana*, *Curvularia* spp.
4. Gray leaf spot: *Pyricularia grisea*, *P. oryzae*
5. Red thread: *Laetisaria fuciformis*
6. Anthracnose: *Colletotrichum graminicola*
7. Copper spot: *Gloeocercospora sorghi*
8. Stem rust: *Puccinia graminis*
9. Dichondra leaf spot: *Alternaria* spp.

**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 ounces of ECHO Ultimate per 1,000 square feet of turf area (13.7 pounds per acre). Application must be made before snow cover in autumn. If snow cover is intermittent or lacking during the winter, re-apply ECHO at monthly intervals until Gray Snow Mold conditions no longer prevail. In areas where Pink Snow Mold (*Microdochium* or *Fusarium* patch) is likely to occur, apply ECHO Ultimate at 5 ounces in combination with products containing iprodione at 1.82 ounces active ingredient, per 1,000 square feet of turf area. Read and observe all label directions for products containing these active ingredients.

**Fusarium (Microdochium) Patch:** ECHO is effective against *Fusarium* patch only in areas where snow cover is intermittent or lacking during the winter. Apply 5 ounces of ECHO Ultimate 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.

**Algal scum:** Apply ECHO Ultimate at 1.82 to 3.25 ounces per 1,000 square feet on a 7 to 14 day schedule. When colonies of algae are well established, every attempt should be made to dry out the afflicted area. Once dry, spiking or verticutting should be done to enhance turfgrass recovery in conjunction with the use of ECHO. Several applications of ECHO at the high rate may be necessary for turfgrass recovery. When environmental conditions are favorable for algae growth, a preventive program with ECHO will suppress recolonization of the turf.

## ORNAMENTAL PLANTS

Apply ECHO Ultimate at a rate of 1.25 pounds per 100 gallons of water unless other directions are given in the tables below. Apply enough diluted spray per acre to provide thorough coverage of all plant parts that are intended to be protected from disease, generally ranging from 20 to 150 gallons per acre. Repeat applications at

7 to 14 day intervals until conditions are no longer favorable for disease. During periods when conditions favor severe disease incidence, generally cloudy or wet weather, apply ECHO at 7 day intervals. **DO NOT apply more than a total of 36.4 lbs chlorothalonil active ingredient per acre per growing season on field-grown ornamentals.**

Fruits and other structures which may be borne on treated plants **MUST NOT BE EATEN.**

This product may be used in greenhouses. DO NOT use mistblowers or high pressure spray equipment when making applications of this product in greenhouses.

ECHO is recommended for control of fungal diseases referred to by numbers in parentheses following each type of ornamental plant. The user should test for possible phytotoxic responses, using recommended rates on each type of ornamental plant on a small area prior to widespread use. Applications made during bloom may damage flowers and/or fruits.

## ORNAMENTALS RECOMMENDED FOR TREATMENT WITH ECHO

Broadleaf Shrubs and Trees	
Andromeda ( <i>Pieris</i> ) (4)	Holly (1)
Ash ( <i>Fraxinus</i> ) (1)	Lilac (5)
Aspen (1)	Magnolia (1)
Azalea (1,2,4)	Maple (1)
Buckeye, Horsechestnut (1)	Mountain laurel (1)
Camellia (2)	Oak (red group only) (1,7)
Cherry-laurel (1)	Oregon-grape ( <i>Mahonia</i> ) (6)
Crabapple (1,6)	Red-tip ( <i>Photinia</i> ) (1)
Dogwood (1)	Poplar (1)
Eucalyptus (3)	Privet ( <i>Ligustrum</i> ) (1)
Euonymus (1)	Rhododendron (1,2,4)
Firethorn ( <i>Pyracantha</i> ) (1)	Sand cherry (1,2)
Flowering almond (1,2)	Sequoia (1)
Flowering cherry (1,2)	Spirea (1)
Flowering peach (1,2)	Sycamore, Planetree (1)
Flowering plum (1,2)	Viburnum (5)
Flowering quince (1,2)	Walnut ( <i>Juglans</i> ) (1)
Hawthorn (1,6)	

Flowering <sup>a</sup> Plants and Bulbs	
Arabian violet (2)	Lily (1)
Begonia (1)	Marigold (1)
Carnation (1,2)	Narcissus (1)
Chrysanthemum (1,2)	Pansy (1)
Crocus (1)	Petunia (1,4)
Daffodil (1)	Phlox (1)
Daisy (1)	Poinsettia <sup>b</sup> (1)
Geranium (1,6)	Rose <sup>c</sup> (1)
Gladiolus (1,2)	Statice (1)
Hollyhock (6)	Tulip (1)
Hydrangea (foliage only) (1,6)	Zinnia (1,5)
Iris (1,2)	

- a/ Avoid applications during bloom period on plants where flower injury is unacceptable.  
 b/ Discontinue applications prior to bract formation; phytotoxicity is possible on the bracts.  
 c/ Use 0.9 pound of ECHO Ultimate per 100 gallons of water.

### Foliage Plants

Aglaonema (1)	Lipstick plant (1)
Areca palm (1)	Ming aralia (1)
Artemesia (1)	Oyster plant ( <i>Rhoeo</i> ) (1)
Boston fern ( <i>Nephrolepis</i> ) (1)	Pachysandra <sup>3</sup> (1)
Dracaena (1)	Parlor palm ( <i>Chamaedorea</i> ) (1)
Dumbcane ( <i>Dieffenbachia</i> ) (1)	Peperomia (1)
Fatsia ( <i>Aralia</i> ) (1)	Philodendron (1,4)
Ficus (1)	Prayer plant ( <i>Maranta</i> ) (1)
Florida ruffle fern (1)	Syngonium (1)
Leatherleaf fern (1)	Zebra plant ( <i>Aphelandra</i> ) (1)

- d/ Use 2.5 pounds of ECHO Ultimate per 100 gallons of water.

## DISEASES CONTROLLED WITH ECHO

### 1. Leafspots & Foliar Blights:

Actinopelte leafspot	Fusarium ( <i>Gibberella</i> ) leafspot
Alternaria leafspot or leaf blight	Gloeosporium black leafspot
Anthracnose ( <i>Gnomonia</i> , <i>Glomerella</i> , <i>Colletotrichum</i> , <i>Discula</i> ) blights	Marssonina leafspot
Black spot ( <i>Diplocarpon</i> )	Monilinia blossom blight, twig blight
Botrytis blights	Mycosphaerella ray blight
Cephalosporium leafspot	Myrothecium leafspot, brown rot
Cercospora leafspot	Phyllosticta leafspot
Cercosporidium leafspot	Ramularia leafspot
Shothole ( <i>Stigmina</i> )	Rhizoctonia web blight
Corynespora stem & leafspots	Scab ( <i>Venturia</i> )
Curvularia leafspot	Septoria leafspot
Dactylaria leafspot	Sphaeropsis leafspot
Didymellina leafspot	Stagonospora leaf scorch
Drechslera ( <i>Bipolaris</i> ) leafspots, inkspot	Tan leafspot ( <i>Curvularia</i> )
Fabraea ( <i>Entomosporium</i> ) leafspot	Volutella leaf blight

### 2. Flower Spots & Blights:

Botrytis flower spot, flower blight	Ovulinia flower blight
Curvularia flower spot	Rhizopus blossom blight
Monilinia blossom blight	Sclerotinia flower blight

### 3. Cylandrocladium stem canker

### 4. Phytophthora leaf blight, dieback

5. Powdery mildews:	
<i>Erysiphe cichoracearum</i> <i>Sphaerotheca fuliginea</i>	<i>Microsphaera</i> spp.

6. Rusts:	
<i>Gymnosporangium</i> spp. <i>Pucciniastrum hydrangeae</i>	<i>Puccinia</i> spp.

7. Taphrina blister	
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## STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

**Pesticide Storage:** Store in a cool place. Protect from excessive heat.

**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:** DO NOT reuse empty container. Triple rinse (or equivalent) and 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.

**Returnable Refillable Container:** If ECHO Ultimate is packaged in a returnable refillable container, then, after use, do not rinse container. Return container intact to point of purchase. This container must only be refilled with ECHO Ultimate. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Before refilling, inspect thoroughly for damage such as cracks, punctures, abrasions, and damaged or worn threads on closure devices. Check for leaks after refilling and before transport.

## WARRANTY AND LIMITATION OF DAMAGES

**CONDITIONS OF SALE:** To the extent consistent with applicable law, Sipcam Agro USA, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Sipcam Agro USA, Inc.. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SIPCAM AGRO USA, INC. DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SIPCAM AGRO USA, INC. SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, AND SIPCAM AGRO USA, INC.'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE. BUYER AND USER ACKNOWLEDGE AND ASSUME ALL RISKS AND LIABILITY RESULTING FROM HANDLING, STORAGE AND USE OF THIS PRODUCT. SIPCAM AGRO USA, INC. DOES NOT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, GUARANTEE OR REPRESENTATION CONCERNING THIS PRODUCT.**

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