



GROUP 1 FUNGICIDE

T-Bird® 4.5L

Systemic Turf and Ornamentals Fungicide

ACTIVE INGREDIENT:

Thiophanate-methyl (dimethyl [(1,2-phenylene)-bis (iminocarbonothioyl)] bis [carbamate])* 46.2%

OTHER INGREDIENTS: 53.8%

TOTAL: 100.0%

*Also known as dimethyl 4,4-o-phenylenebis [3-thioallophanate]
*4.5 lbs. Active Ingredient per Gallon

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID

If inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

For medical emergency, call the Rocky Mountain Poison Control Center at 1-866-673-6671. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.

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EPA Reg. No. 70506-251



FUNGICIDE

NET CONTENTS: 2.5 Gallons

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Avoid breathing spray mist. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are nitrile and butyl rubber. If you want more options, follow the instructions for Category C, on an EPA chemical-resistance category selection chart.

Handlers mixing, loading and applying the product as a dip must wear:

- Coveralls over long sleeved shirt and long pants,
- Chemical-resistant gloves made out of any waterproof material,
- Chemical-resistant footwear plus socks,
- A chemical-resistant apron.

All other mixers and loaders and applicators must wear:

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical-resistant gloves for all mixers and loaders and for applicators using hand held equipment, and
- Chemical-resistant apron for mixers, loaders and other handlers exposed to the concentrate.

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, 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 CONTROL STATEMENT

When handlers use enclosed cabs 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/PPE 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.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

DIRECTIONS FOR USE

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

For use only by certified applicators or those under their immediate supervision. Do not apply with fixed wing or rotary aircraft. Not for use on turf being grown for sale or other commercial use as sod. Do not apply to home orchards/backyard fruit trees. Do not use fruit or nuts from treated ornamental trees for food or feed. Do not graze animals on treated turf. Do not feed clippings to livestock or poultry.

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 (WPS), 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 level (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, or water, is:

- Coveralls over long sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear made of any waterproof material, plus socks
- Chemical-resistant headgear for over head exposures

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of 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 areas without protective clothing until spray has dried.

PRODUCT INFORMATION

Apply Phoenix T-Bird 4.5L with ground equipment only, using sufficient volume of spray to provide thorough coverage. Add required amount of Phoenix T-Bird 4.5L to partially filled tank agitated by mechanical or hydraulic means and then add remaining required amount of water. Continuous agitation is required to keep the material in suspension. Do not tank mix with copper-containing materials or with highly alkaline pesticides, such as Bordeaux mixture or lime sulfur. No claim of compatibility with other pesticides is implied. Use the higher rates under conditions of severe disease pressure. Also, see local State Extension Service recommendations for application schedules. Chemigation instructions follow Directions for Use. Do not apply through any irrigation system unless these instructions are followed.

IMPORTANT: If, after using Phoenix T-Bird 4.5L as recommended, treatment is not effective, a tolerant strain of fungi may be present. Consult your local United Phosphorus, Inc. representative, your State Agricultural Experiment Station, or your State Agricultural Extension Service for advice on the prompt use of some other suitable fungicide.

TURF

For use on all fine turf applications such as industrial lawns, athletic fields, home lawns (by professional applicators), cemeteries, golf course greens, tees, and fairways of Bentgrasses, Blue Grasses, Bermudagrasses, Fescues, Ryegrasses, St. Augustine grasses or their mixtures. Phoenix T-Bird 4.5L is not phytotoxic to any of the above mentioned grasses when used in accordance with the label. Phoenix T-Bird 4.5L is to be used for the prevention and control of the below mentioned diseases (provides both curative and protective action). Apply recommended amounts in sufficient water to obtain thorough coverage, usually three to five gallons per 1,000 square feet of turf area. When treating golf greens, always treat aprons and approaches. Use the highest recommended rate under conditions of severe disease pressure.

FUSARIUM BLIGHT (*Fusarium roseum*), **SUMMER PATCH** (*Magnaporthe poae*), **NECROTIC RING SPOT** (*Leptosphaeria korrae*) – Apply Phoenix T-Bird 4.5L at 5 fluid ounces per 1,000 square feet. Water into the root zone by irrigating with one inch of water immediately after application. Make two applications at 14 day intervals, beginning applications when the disease first appears.

GRAY LEAF SPOT* (*Pyricularia grisea*) – Apply Phoenix T-Bird 4.5L at 3 1/2 to 5 fluid ounces per 1,000 square feet beginning when conditions are favorable for disease development. Continue at 14 day intervals. Spray should dry on leaf surfaces with no watering in.

DOLLAR SPOT (*Sclerotinia homoeocarpa*), **ANTHRACNOSE** (*Collettricum graminicola*) – Apply Phoenix T-Bird 4.5L at 1 to 2 fluid ounces per 1,000 square feet beginning when the disease first appears. Spray should dry on leaf surfaces with no watering in. Continue at 14 day intervals through the season or as needed.

RUST* (*Puccinia*, *Uromyces*) – Apply Phoenix T-Bird 4.5L at 3 1/2 to 5 fluid ounces per 1,000 square feet when disease first appears; repeat applications at 14 days. Make rotations and/or tank mix combinations with products containing the active ingredient chlorothalonil, such as Phoenix Pegasus™ brand products.

LARGE BROWN PATCH (*Rhizoctonia solani*), **COPPER SPOT** (*Gloeocercospora sorghi*), **RED THREAD** (*Corticium fuciforme*), **FUSARIUM PATCH** (*Fusarium nivale*) – Apply Phoenix T-Bird 4.5L at 1 to 2 fluid ounces per 1,000 square feet beginning when the disease first appears and continue at 14 day intervals through the season or as needed. Spray should dry on leaf surfaces with no “watering in”.

STRIPE SMUT (*Ustilago striiformis*) – Apply Phoenix T-Bird 4.5L at 5 to 10 fluid ounces per 1,000 square feet. Water into the root zone by irrigating with one inch of water immediately after application. Make two applications at 14 to 21 day intervals. Begin applications when the disease first appears, either in the spring or fall.

Observe the maximum individual application rates and maximal seasonal application limits in the Phoenix T-Bird 4.5L Maximum Application Rates Table.

*Not for use in California.

Phoenix T-Bird 4.5L Maximum Application Rates Table

Site	Maximum Individual Application Rate per Acre or per 1,000 Square Feet	Minimum Retreat Interval in Days	Maximum Seasonal Total of Thiophanate-methyl a.i.	Maximum Seasonal Total of Phoenix T-Bird 4.5L per Acre or per 1,000 Square Feet
Residential/Public Areas	77.5 Fl. Oz./Acre or 1.8 Fl. Oz./ 1,000 Square Feet	14 Days	10.88 lbs. a.i./acre	310 Fl. Oz./Acre or 7.12 Fl. Oz./ 1,000 Square Feet
Golf Course Greens/ Tees/Aprons	233 Fl. Oz./Acre or 5.35 Fl. Oz./ 1,000 Square Feet	14 Days	21.8 lbs. a.i./acre	620 Fl. Oz./Acre or 14.23 Fl. Oz./ 1,000 Square Feet
Golf Course Fairways	155 Fl. Oz./Acre or 3.56 Fl. Oz./ 1,000 Square Feet	-	5.45 lbs. a.i./acre	155 Fl. Oz./Acre or 3.56 Fl. Oz./ 1,000 Square Feet
FL Golf Course Fairways Overseeded	77.5 Fl. Oz./Acre or 1.8 Fl. Oz./ 1,000 Square Feet	-	2.72 lbs. a.i./acre	77.5 Fl. Oz./Acre or 1.8 Fl. Oz./ 1,000 Square Feet

ORNAMENTALS (FIELD and GREENHOUSE)

Phoenix T-Bird 4.5L is a broad spectrum systemic fungicide which controls a variety of diseases on woody herbaceous ornamental crops. Phoenix T-Bird 4.5L is also effective as a preplant dip on cutting and bulbs. Phoenix T-Bird 4.5L may be used to control the listed diseases on ornamental fruit and nut trees.

FOLIAR SPRAY

PLANT TYPES AND DISEASES CONTROLLED¹

DISEASE(S)

Anthracnose
Ascochyta Blight
Black Spot
Botrytis (Gray Mold)
Cercospora Leaf Spot
Corynespora Leaf Spot
Didymellina Leaf Spot
Diplodea Tip Blight
(*Diplodea piea*)
Ovulinia
Entomosporium Leaf Spot
Phomopsis Blight
Powdery Mildew
Ramularia Leaf Spot
Scab
Septoria Leaf Spots

PLANT TYPES

woody ornamentals, shade trees²
herbaceous ornamentals
Roses
woody and herbaceous ornamentals
woody and herbaceous ornamentals
ligustrum
Iris
shade and ornamental trees

azalea, rhododendron³
woody and herbaceous ornamentals
woody and herbaceous ornamentals
woody and herbaceous ornamentals, ornamental fruit and nut trees
herbaceous ornamentals
pyracantha, flowering crab, ornamental fruit and nut trees
woody and herbaceous ornamentals

KEY TO NOTES:

¹ The re-entry interval for ornamentals is 12 hours.

² Begin at bud break and make 2 or 3 additional applications at 10 to 14 day intervals.

³ Begin treatment as flowers open. Addition of a surfactant to the spray mixture improves distribution of the spray on hard-to-wet plants such as roses.

I. FOLIAR SPRAY-HYDRAULIC APPLICATION

Mixing Instructions: Add required amount of Phoenix T-Bird 4.5L to partially filled tank agitated by mechanical or hydraulic means and then add remaining required amount of water. Maintain continuous agitation to keep the material in suspension and apply with properly calibrated spray equipment. Apply until leaves glisten, but not to point of runoff.

Application Rates and Timing for Diseases: Begin applications when disease first appears and repeat at 10 to 14 day intervals, during the growing season. Shorten the interval during humid, rainy weather.

Ground Application: Use 20 fluid ounces of Phoenix T-Bird 4.5L per 100 gallons of water. For control of Powdery Mildew and Botrytis (Gray Mold), use 10 fluid ounces of Phoenix T-Bird 4.5L per 100 gallons of water, or 1 teaspoonful per 2 gallons of water.

II. DRENCH

PLANT TYPES AND DISEASES CONTROLLED

DISEASE(S)

Botrytis
Fusarium
Sclerotinia stem, crown & roots
Cylindrocladium rot
Thielaviopsis rot

PLANT TYPES

herbaceous annuals, perennials and bedding plants
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woody ornamentals (such as azaleas, rhododendrons, conifers, poinsettias)
woody ornamentals (such as azaleas, rhododendrons, conifers, poinsettias)

NOTE: Phoenix T-Bird 4.5L does not control Pythium spp. or Phytophthora spp.

Mixing Instructions: Add required amount of Phoenix T-Bird 4.5L to partially filled tank agitated by mechanical or hydraulic means and then add remaining required amount of water. Maintain continuous agitation to keep the material in suspension.

Application Rates and Timing for Disease Control: Use 10 to 20 fluid ounces of Phoenix T-Bird 4.5L per 100 gallons of water. Apply as a drench or heavy spray to 800 sq. ft. of bench area (1 to 2 pints per square foot) after transplanting into propagation beds or containers. Repeat at 2 to 4 week intervals during periods favorable for disease.

PREPLANT DIP TREATMENT

PLANT TYPES AND DISEASES CONTROLLED

DISEASE(S)

All diseases listed under drench treatment
Fusarium and Penicillium rots

PLANT TYPES

plants or cuttings of woody and herbaceous ornamentals
bulbs (Easter Lily, Tulip, Gladiolus, Daffodil, Iris)

Application Rates and Timing for Disease Control:

Plants or Cuttings – Use 20 fluid ounces of Phoenix T-Bird 4.5L per 100 gallons of water, immerse plants or cuttings for 10 to 15 minutes; remove and allow to drain. Wear rubber gloves.

Bulbs – Use 33 fluid ounces of Phoenix T-Bird 4.5L per 100 gallons of water, or 2 teaspoonfuls of Phoenix T-Bird 4.5L per gallon of water. Soak cleaned bulbs for 15 to 30 minutes in warm dip (80° to 85°F) preferably within 48 hours after digging. Dry bulbs after treatment. If bulbs are for forcing, treat bulbs that have been heat-cured.

CHEMIGATION INSTRUCTIONS NOT FOR USE IN CALIFORNIA

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move. 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 any questions about calibrations, you should contact State Extension Service specialists, equipment manufacturers or other experts.

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

Do not connect chemigation system to any public water system. Public water system means a system for the provision 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.

SYSTEM REQUIREMENTS

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements.

- The system must contain a functional check, valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

INSTRUCTIONS FOR SPRINKLER (OVERHEAD) IRRIGATION:

- Observe the requirements in the System Requirements section above.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Maintain a gently continuous agitation in mix tank during mixing and application to assure a uniform suspension.
- Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time.
- Application of more than recommended quantities of irrigation water per acre may result in decreased product performance. Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product cannot be flushed and must be dismantled and drained. In a center pivot system, block the nozzle set nearest the well/pivot/injection unit to prevent spray being applied to this area.
- When sprinkler distribution patterns do not overlap sufficiently, unacceptable disease control may result.
- Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.
- Phoenix T-Bird 4.5L may be applied in conjunction with chemically neutral liquid fertilizers. Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide, resulting in reduced performance and should be avoided.
- Check local restrictions and requirements regarding sprinkler irrigation applications, as they may vary from state to state.

SPRAY PREPARATION

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.

Prepare a suspension of Phoenix T-Bird 4.5L in a mix tank. Fill the tank with 1/2 or 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of Phoenix T-Bird 4.5L and then the remaining volume of water.

APPLICATION INSTRUCTIONS

Set sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of Phoenix T-Bird 4.5L into the irrigation water line so as to deliver the desired rate per acre. The suspension of Phoenix T-Bird 4.5L should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

NOTE: When treatment with Phoenix T-Bird 4.5L has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in the original container in a dry area. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling sweep up spillage and dispose of in accordance with the Pesticide Disposal instructions listed below.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be used 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 HANDLING: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

IMPORTANT INFORMATION READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

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