



Defiant®

Turf Fungicide and Animal Repellent

ACTIVE INGREDIENT:

Thiram (Tetramethylthiuram disulfide).....75.0%
 OTHER INGREDIENTS.....25.0%
 TOTAL 100.0%

EPA Reg. No. 45728-21

EPA Est. No. 32557-BEL-1

KEEP OUT OF REACH OF CHILDREN CAUTION

**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	
IF SWALLOWED	<ul style="list-style-type: none"> ◆ 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 IN EYES	<ul style="list-style-type: none"> ◆ Hold eye open and rinse slowly and gently with water for 15-20 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 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.
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 mouth-to-mouth if possible. ◆ Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For Emergencies involving a Spill, Leak, Fire, Exposure, or Accident, Contact: CHEMTREC at (800) 424-9300. For product usage information, phone Taminco, Inc., toll free at (800) 426-3820 from 9:00 AM to 5:00 PM Eastern time.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, inhaled or absorbed through skin. Do not get in eyes, on skin or on clothing. Avoid inhaling spray mist. Do not use or store near food or feed. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

The consumption of alcoholic beverages increases the toxic effects of Thiram.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- *Long-sleeved shirt and long pants
- *Chemical-resistant gloves made of waterproof material and goggles or face shield
- *Shoes plus socks
- *Chemical-resistant headgear for overhead exposure

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

<p>User Safety Recommendations: User should:</p> <ul style="list-style-type: none"> *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.
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Personal Protection Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering control statements:

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.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. Drift or runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

GENERAL PRODUCT INFORMATION

Defiant® is a broad-spectrum fungicide for plant disease control in the culture of **Peaches**. Defiant® is a broad-spectrum fungicide for use on **Turf** (parks, golf courses, rights-of-way, commercial landscapes, etc.) to control Dollar Spot, Brown Patch and Fusarium Patch. When used as a **Seed Protectant**, Defiant® will usually increase crop stands and yields by reducing seedling losses from seed decay, damping-off or seedling blights. When used as a **Repellent**, Defiant® can protect trees, vines, nursery stock, shrubs and ornamentals from rabbit, deer and rodent depredation.

Taminco, Inc.'s recommendations for the use of this product are based upon tests believed to be reliable. FAILURE TO FOLLOW DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, OR ILLEGAL RESIDUES.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Not for use on turf being grown for sale or other commercial use such as sod, or for commercial seed production, or for research purposes.

Not for use on residential lawns or turf.

CHEMIGATION: Do not apply this product through any type of irrigation system.

GENERAL RECOMMENDATIONS

Be sure spray equipment is clean before use. If it is contaminated with any material, crop injury or sprayer clogging may result. Calibrate spray equipment before use.

For agricultural foliar applications use recommended rates for dilute, concentrate and aerial applications. Ground application is preferred, especially when full canopy of foliage exists. For dilute application, use Defiant® at the recommended rate listed in the "per 100 gallons" column of the Specific Applications table. For concentrate ground application, apply the recommended rate listed in the "per acre" column of the Specific Applications table in a minimum of 20 gallons per acre. For aerial application, apply the recommended rate listed in the "per acre" column of the Specific Applications table in a minimum of 10 gallons per acre. Applications of Defiant® fungicide are most effective when made before infection periods. Under low disease conditions, minimum label rates should be used; however, maximum label rates and shortened spray schedules are recommended for severe or threatening disease conditions. If you are not familiar with such conditions, get advice from your state agricultural extension service.

IMPORTANT: When spraying, thorough coverage is necessary to provide good disease control. Addition of a spreader/sticker to the finished spray mixture may improve coverage. Make fresh spray mixtures for each application.

MIXING INSTRUCTIONS

To mix, fill the spray tank about 2/3 full of water, and with agitator running, slowly sift in the recommended amount of Defiant®. Finish filling the tank with water and continue agitation until thoroughly mixed. Continue agitation and apply immediately.

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 (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 24 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:

**Long-sleeved shirt and long pants

**Chemical-resistant gloves made of waterproof material and goggles or face shield

**Shoes plus socks

**Chemical-resistant headgear for overhead exposure

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box only 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.

Non-Residential Turf Use: Do not enter or allow others to enter treated areas until sprays have dried.

AGRICULTURAL APPLICATIONS (FOLIAR):

SPECIFIC APPLICATIONS FOR DEFIANT

FRUIT CROP	DISEASES	POUNDS DEFIANT®		DIRECTIONS FOR USE
		per acre	per 100 gal	
PEACHES	Brown Rot Blossom Blight and Fruit Rot (Monilinia spp.)	3.9 to 5.1 lbs	1.3 to 1.7 lbs ⁽¹⁾	For Blossom Blight, apply at 3-4 day intervals during bloom to protect blossoms. For Fruit Rot, apply at petal-fall, two weeks after petal-fall and in cover sprays at 7 day intervals if rot is apparent on green fruit. Do not apply within 7 days of harvest.
	Peach Leaf Curl (Taphrina deformans)	3.9 to 5.1 lbs	1.3 to 1.7 lbs ⁽¹⁾	Apply dormant applications post-harvest in late fall and/or in late winter prior to bud swell, at bloom and petal-fall.
	Rhizopus Rot (Rhizopus spp.)	3.9 to 5.1 lbs	1.3 to 1.7 lbs ⁽¹⁾	Apply at petal-fall, two weeks after petal-fall and in cover sprays at 7 day intervals if rot is apparent on green fruit. Do not apply within 7 days of harvest.
	Peach Scab (Cladosporium carpophilum)	3.9 to 5.1 lbs	1.3 to 1.7 lbs ⁽¹⁾	Apply at petal-fall and repeat 3 to 6 times at 10 to 14 day intervals as needed. Do not apply within 7 days of harvest.

(1) Based on dilute sprays of 300 gallons per acre.

DO NOT graze or feed cover crops from treated orchards.

TURF APPLICATIONS:

Defiant® prevents infestation of common turf diseases such as Dollar Spot, Brown Patch and Fusarium Patch during the Summer growing season and Snow Mold during the cool weather seasons. When used at curative rates, Defiant® will cure diseased turf infected with Dollar Spot and Brown Patch and can also prevent Fusarium Patch when two applications are made during the Fall through the Spring season.

SPECIFIC APPLICATIONS FOR DEFIANT®

TURF	DISEASES	OUNCES DEFIANT® per 1000 square feet	DIRECTIONS FOR USE
TURF	Dollar Spot (Sclerotinia homeocarpa) Brown Patch (Rhizoctonia Blight) (Rhizoctonia solani)	Preventative Rate: 2.5 to 3.0 oz	Apply recommended rate in 5 to 10 gallons water/1000 sq. ft. beginning in early Spring <u>before</u> disease symptoms appear. Repeat at 7 to 10 day intervals as needed when environmental conditions favor disease development. Do not apply more than 40 oz per 1000 sq.ft. during the Summer growing season.
		Curative Rate: 4.5 to 5.0 oz	Apply recommended rate in 5 to 10 gallons water/1000 sq. ft. after disease symptoms first appear. Repeat at 7 to 10 day intervals as needed. Do not apply more than 40 oz per 1000 sq.ft. during the Summer growing season.
	Fusarium Patch (Fusarium nivale) (Pink Snow Mold and Gerlachia Patch)	Preventative Rate: 8.0 oz	Apply recommended rate in 2 to 5 gallons water/1000 sq. ft. in late Fall immediately before expected permanent snow cover. As a follow-up to the late Fall application, a Spring application of 3.0 oz/1000 sq. ft. during Spring thaw and after runoff has ended may be necessary to aid in the prevention of Spring disease.

DO NOT graze or feed treated turf.

ANIMAL REPELLENCY APPLICATIONS:

When used according to label directions, Defiant® can protect trees, vines, nursery stock, shrubs and ornamentals from rabbit, deer and rodent depredation. One application will protect treated parts from 1 to 3 months, depending upon weather conditions. Defiant® can also be used as a repellent in deterring deer from moving into important areas such as airport runways as a result of local feeding and browsing. It can also deter migratory birds such as geese on golf courses and other turf areas. The addition of a latex based sticker prolongs the residual effectiveness of the treatment. Repellency is the result of rendering the treated plant parts distasteful.

Applications To Vines, Tree Trunks and Dormant Plants:

Prepare a slurry of 1 pound of Defiant® in 3 quarts of water and apply as a full coverage spray to all portions of the plant to be protected. For greater retention and residual efficacy, add 1 pint of a latex based sticker to the spray solution.

Brush On Application:

Prepare a slurry of 1 pound of Defiant® in 3 quarts of water and apply with a paint-brush to stem parts and trunk parts to be protected. For greater retention and residual efficacy, add 1 fluid ounce of a latex based sticker into each quart volume of solution prepared.

Foliar Applications:

Prepare a slurry of 1 pound of Defiant® in 6 quarts of water and apply as a full coverage spray to all portions of the plant to be protected. For greater retention and residual efficacy, add 1 pint of a latex based sticker to the spray solution. **DO NOT** use wetting agents or surfactants as foliar damage may result. For best results, spray when temperatures are greater than 40° F and relative humidity is less than 70 percent. **DO NOT USE ON FRUIT FOR HUMAN CONSUMPTION.**

SEED PROTECTANT APPLICATIONS:

For control of damping-off, seed decay, seedling blights, covered kernel smut of sorghum and loose smut and bunt of wheat, etc., apply Defiant® at recommended dosages as a dry treatment or as a water-based slurry. Apply with other registered seed treatment insecticides and fungicides through commercial slurry or mist-type seed treatment equipment.

Treated seed must not be used for or mixed with food or animal feed, or processed for oil. Treat only those seeds needed for immediate use, minimizing the interval between treatment and planting. Do not store excess treated seeds beyond planting time. Seed treated with this product must be labeled in accord with all applicable requirements of the Federal Seed Act. Labels attached to treated seed must state "Treated seed must not be used for or mixed with food or animal feed, or processed for oil." and "Exposed treated seed may be hazardous to birds and other wildlife. Dispose of all excess treated seed and seed packaging by burial away from bodies of water."

Defiant® Seed Protectant Dosage Rates

TYPE OF SEED	OUNCES DEFIANT® per 100 lbs
Barley	2.7
Beans (dry and succulent)	1.3
Beans (Lima)	2.2
Beans (snap)	1.3
Beets (garden)	5.3
Canola	4.3
Cantaloupe, Cucumber, Pumpkin, Squash, Watermelon	3.0
Castor beans	3.0
Chicory	3.5
Conifers	21.5
Corn (field and sweet)	2.0
Cottonseed (reginned, fuzzy and acid-delinted)	3.0
Cowpeas	1.3
Eggplant	4.0
Flax	3.5
Grasses	5.3
Legumes (small-seeded)	5.3
Lentils	2.0
Millet	2.7
Oats	2.2
Okra	4.0
Onions	4.0
Peanuts (shelled and unshelled)	3.0
Peas	2.0
Rice	2.9
Rye	2.5
Safflower	2.7
Sesame	2.0
Sorghum	1.8
Soybeans	2.2
Sugar beets	5.3
Sunflowers	5.4
Triticale	2.2
Tomatoes	4.0
Wheat	2.2
Broccoli, Brussels Sprouts, Cabbage, Carrots, Cauliflower, Collards, Endive, Kale, Kohlrabi, Lettuce, Mustard, Peppers, Radish, Spinach, Swiss Chard, Turnip	5.3
Ornamental flower seeds, Ornamental foliage plants in the families Araliacea (scheffleras), Aracea (philodendrons) and Palmacea (palms)	5.4

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

Pesticide Storage

Store unused product in original container only. Store in a cool, dry area preferably locked and out of the reach of children and animals. Not for the use or storage in or around the home. Protect from excess heat.

Pesticide Disposal

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

Container Disposal

Completely empty container into application equipment. Do not reuse empty container. Then dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

TERMS OF SALE OR USE

On purchase of this product, buyer and user agree to the following conditions:

Warranty: Taminco, Inc. makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

Damages: Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.

Defiant® is a Registered Trademark of Taminco N.V., a Belgian corporation.

For Emergencies Involving a Spill, Leak, Fire, Exposure, or Accident, contact: CHEMTREC at (800) 424-9300.
For product usage information, phone Taminco, Inc., toll free at (800) 426-3820 from 9:00 AM to 5:00 PM Eastern time.

NET WEIGHT:



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