

Ferbam Granuflo®

fungicide

ACTIVE INGREDIENT:

Ferbam (Ferric dimethyldithiocarbamate) _____ 76.0%

OTHER INGREDIENTS _____ 24.0%

TOTAL 100.0%

Intended for Agricultural or Commercial Use Only

EPA Reg. No. 45728-7

EPA Est. No. 32557-BEL-1

**KEEP OUT OF REACH OF CHILDREN
WARNING — AVISO**

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 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.
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 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 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.

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 US LLC, toll free at (800) 223-3258 from 9:00 AM to 5:00 PM Eastern time.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

May be fatal if inhaled. Harmful if absorbed through the skin. Causes moderate eye irritation. Do not breathe spray mist or vapor. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

All mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirts,
- Long pants,
- Chemical resistant gloves
- A NIOSH-approved TC-21C Powered Air Purifying Respirator (PAPA) or any N, R, P or HE filter when applying with air blast equipment.

Note: Do not use "N-series" filter if applied with oil.

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.

Engineering Control Statements:

When handlers use closed systems, or 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.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide 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 when cleaning equipment or disposing of equipment washwaters. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas.

PHYSICAL OR CHEMICAL HAZARDS

Keep packages or dust away from sparks, flames or hot surfaces.

GENERAL USE INFORMATION

Ferbam Granuflo® Fungicide (76% water-dispersible granules) is a broad spectrum fungicide for the control of certain diseases in fruit trees and berries. Do not apply in late season cover sprays where unsightly residues may affect the fresh fruit finish of light-skinned apple and pear varieties. Taminco US LLC recommends the use of Thiram Granuflo or Ziram Granuflo Fungicide in late-season fresh fruit sprays.

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.

MIXING INSTRUCTIONS

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

Fill the spray tank one-fourth to one-third full with clean water. Start agitation (proper agitation creates a rippling or rolling action on the liquid surface). Slowly add Ferbam Granuflo® Fungicide at the recommended rate. Add water to fill spray tank. Mix thoroughly and apply at once. Maintain sufficient agitation during mixing and spraying operations to ensure a uniform spray mixture.

IMPORTANT: When spraying, thorough coverage is necessary to provide good disease control. Make new dilutions for each spraying. Consult State Agricultural Experiment Station recommendations or State Extension Service Specialist for spray schedules for timing and frequency of applications in your area.

When tank mixing other products with Ferbam Granuflo® Fungicide, follow the proper sequence of adding products to the spray tank. Wettable powders or water-dispersible granules should be added to the water in the tank first, followed by flowable products, with emulsifiable concentrates added last. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

Ferbam Granuflo® Fungicide is compatible with most commonly used insecticides and fungicides except Bordeaux mixture, lime, sulfur, fixed copper, and hydrated lime. When preparing tank mixes, user should consult spray compatibility charts or State Extension Service Specialist prior to actual use. To assure the compatibility of Ferbam Granuflo® Fungicide with other products, pour the products into a small container of water in the correct proportions. After thorough mixing, let stand for 5 minutes. If the combination remains mixed or can be re-mixed readily, the mixture is compatible.

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 24 hours.

Personal Protective Equipment (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
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material

OBSERVE ALL CAUTIONS AND LIMITATIONS ON LABELING OF ALL PRODUCTS USED IN MIXTURES. BEFORE TANK MIXING FERBAM GRANUFLO® FUNGICIDE WITH OTHER REGISTERED PRODUCTS FOR ANY USE ON THIS LABEL, READ THE LABEL OF THE TANK MIX PARTNER TO BE CERTAIN IT IS LABELED FOR USE ON THE PARTICULAR CROP AND THAT USE PATTERNS ARE COMPATIBLE WITH THOSE OF FERBAM GRANUFLO® FUNGICIDE.

APPLICATION EQUIPMENT

Aerial application is prohibited.

APPLICATION THROUGH IRRIGATION SYSTEMS

Ferbam Granuflo® Fungicide alone or in combination with other fungicides which are registered for application through irrigation systems, may be applied through irrigation systems. Apply this product only through center pivot, solid set, moving wheel, micro-sprinkler or drip irrigation systems. Do not apply this product through any other type or 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 Specialist, 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.

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.

OPERATING INSTRUCTIONS (SPRINKLER AND DRIP IRRIGATION SYSTEMS)

- 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 backflow.
- 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 a 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.
- Do not apply when wind speed favors drift beyond the area intended (applies to sprinkler systems).

APPLICATION INSTRUCTIONS

Ferbam Granuflo® Fungicide must be applied on the schedule specified in the specific crop use recommendations, not according to the irrigation schedule. With the exception of cranberries, Ferbam Granuflo® Fungicide has not been sufficiently tested when applied through irrigation systems to assure consistent product performance for all labeled uses. The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler or drip irrigation equipment. Users should check with State and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler or drip irrigation equipment.

- Center pivot irrigation equipment. (Use only with drive systems which provide uniform water distribution).
- Determine the size of the area to be treated.
- Determine the time required to apply 1/4 inch of water over the area to be treated when the system and injection equipment are operated at normal pressures recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated capacity.
- Using water, determine the injection pump output when operated at normal line pressure.

Determine the amount of Ferbam Granuflo® Fungicide required to treat the area covered by the irrigation system.

- Add the required amount of Ferbam Granuflo® Fungicide and sufficient water to meet the injection time requirements to the solution tank.
- Maintain constant solution tank agitation during the injection period.
- Continue to operate the system until the Ferbam Granuflo® Fungicide solution has cleared the sprinkler head.

SOLID SET AND MOVING WHEEL IRRIGATION EQUIPMENT

- Determine the acreage covered by the sprinklers.
- Fill injector solution tank with water and adjust flow rate to use the contents over a 10 to 30 minute interval.
- Determine the amount of Ferbam Granuflo® Fungicide required to treat the area covered by the irrigation system.
- Add the required amount of Ferbam Granuflo® Fungicide into the same quantity of water used to calibrate the injection period.
- Operate the system at the same pressure and time interval established during calibration.
- Inject Ferbam Granuflo® Fungicide at the end of the irrigation cycle or as a separate application to maximize the effectiveness of the fungicide.
- Stop injection equipment after treatment is completed. Continue to operate the system until the Ferbam Granuflo® Fungicide solution has cleared the last sprinkler head.

MICRO-SPRINKLER OR DRIP IRRIGATION SYSTEMS

GENERAL INSTRUCTIONS

- Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters in the system are putting out the same amount of water.
- Only pressure injection or venturi equipment are recommended.
- Figure the area to be treated in each irrigation run.
- Measure the output of each of the emitters or drip tubes closest to and farthest from the injector site.
- For calibration, substitute a concentrated detergent (such as Wisk) or a soluble fertilizer for the Ferbam Granuflo® Fungicide in the injector tank. The detergent will bubble as it leaves the emitters. The time period over which bubbles occur should be checked for both the closest and farthest emitters. If these times are not within two minutes of each other, adjust the dilution ratio and/or the injection rate.
- If a soluble fertilizer is used, measure the time intervals with a salt bridge. If a drip system is being calibrated, substitute soluble fertilizer for the Ferbam Granuflo® Fungicide in the injector and measure the time intervals with a salt bridge.

STEP-BY-STEP INSTRUCTIONS

- Before starting to calibrate, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
- Make up an indicator solution of detergent or fertilizer, using the same ratio to be used when mixing Ferbam Granuflo® Fungicide.
- Set the injector to apply the indicator solution at the injection rate to be used in the actual Ferbam Granuflo® Fungicide.
- Attach a 5 inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Both emitters should be monitored to determine the time intervals that the indicator solutions are observed.
- Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected. Stop timing when the indicator solutions are no longer detected.
- If the period of detection of the indicator solution between the two emitters is within two minutes of each other, comparable coverage will be obtained. If it is not, make adjustments by increasing the dilution ratio, using more water per part of Ferbam Granuflo® Fungicide, or adjust the injector to a slower flow rate.
- Once the system is calibrated, dilute the needed amount of Ferbam Granuflo® Fungicide with water using a minimum of 10 parts water per 1 part Ferbam Granuflo® Fungicide.
- Do not begin to inject Ferbam Granuflo® Fungicide into the system until all emitters are producing equal flow rates or until the system is at full pressure.
- Inject the Ferbam Granuflo® Fungicide into the system at the end of the irrigation in 1/2 to 1 inch of irrigation water.

SPRAY DRIFT MANAGEMENT

This chemical can contaminate surface water through spray drift. A variety of factors including weather conditions (e.g. wind direction, wind speed, temperature, relative humidity) and method of application (e.g. ground and airblast) can influence adjustments when applying this product.

Do not allow this material to drift into neighboring crops or non-crop areas or use in a manner or at a time other than in accordance with label directions because animal, plant or crop injury, illegal residues or other undesirable results may occur.

Wind Speed:

Do not apply at wind speeds greater than 15 mph.

Temperature Inversions:

Do not make applications into areas of temperature inversion or stable atmospheric conditions.

For Ground Boom Applications:

- nozzle height no more than 10 feet above the ground or crop canopy
- wind speed is 10 mph or less at the application site and,
- medium or coarser spray according to ASAE572 definition for standard nozzles

NOTICE - READ CAREFULLY

Dealers Must Sell in Original Packages Only.

TERMS OF SALE OR USE:

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

Warranty: Taminco US LLC 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.

Directions and Recommendations: Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller and are assumed by the buyer at his own risk.

Use of Product: Taminco US LLC's recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made to the effect of such or the results to be obtained if not used in accordance with directions or established safe practice.

Damages: To the extent consistent with applicable law, the 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.

STORAGE AND DISPOSAL

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

Pesticide Storage: Keep away from fire and sparks.

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill: Avoid contact, isolate area and keep out animals and unprotected persons. Confine spills.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter, or commercial clay. Sweep up then follow pesticide disposal instructions. If dry material, cover to prevent dispersal. Sweep then dispose. Place damaged package in a holding container. Identify contents.

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 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 (20 lb. bags)

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or 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.

Container Disposal (10 lb. lined cardboard boxes)

Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then offer for recycling, if available, or dispose of liner in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. If box is contaminated and cannot be reused, dispose of it in the manner required for its liner.

FERBAM GRANUFLO® FUNGICIDE APPLICATION INFORMATION SPECIFIC TO CROP

Under low disease conditions, minimum label rates per application can be used, while maximum label rates and shortened spray schedules are recommended for severe or threatening conditions.

CROPS*	DISEASES	POUNDS OF FERBAM GRANUFLO® FUNGICIDE PER ACRE	POUNDS OF FERBAM GRANUFLO® FUNGICIDE PER 100 GAL	DIRECTIONS FOR USE
APPLES	Apple Scab Cedar Apple Rust Sooty Blotch Black Rot Bitter Rot Sooty Blotch Fly Speck Brook's Spot	4.6	1.15 ⁽³⁾	<p>Fresh Market: Apply from pre-bloom through early cover sprays.</p> <p>Process Market: Apply from pre-bloom through cover sprays.</p> <p>Apply on a 7 to 10 day schedule or as needed. Do not apply more than 3 applications per year. The maximum single application rate is 4.6 lbs of Ferbam Granuflo® Fungicide (3.5 lbs a.i.)/A.</p> <p>Not recommended for bloom applications on russeting prone varieties.</p> <p>Not recommended for late-season cover sprays on fresh market fruit due to the potential for dark residual spots of Ferbam at harvest.</p> <p>Do not apply within 7 days of harvest.</p>
CITRUS: Grapefruit, Limes Lemons, Oranges Tangerines, Tangelos	Postbloom Fruit Drop Anthracnose Scab	7.9	1.98 ⁽³⁾	<p>Apply prior to disease development and continue on a 7 to 10 day schedule or as needed. Do not apply more than 3 applications per year. The maximum single application rate is 7.9 lbs of Ferbam Granuflo® Fungicide (6.0 lbs a.i.)/A.</p> <p>May be applied up to the day of harvest.</p>
CRANBERRIES	Fruit Rots Lophodermium Twig Blight	6.1	2.03 ⁽²⁾	<p>Apply early in blossoming period and repeat on a 7 to 10 day schedule or as needed. Do not apply more than 5 applications per year. The maximum single application rate is 6.1 lbs of Ferbam Granuflo® Fungicide (4.6 lbs a.i.)/A.</p> <p>Do not apply later than 28 days after mid-bloom.</p>
CRANBERRIES	Fairy Ring	9.0	9.0 ⁽¹⁾	<p>For spot treatment only: Treat an area 3 feet beyond the advancing line of dead vines and 2 feet within this line. Mix 9 lbs/100 gallons of water. Apply 1 gallon of this solution to each square foot. Apply on a 7 to 10 day schedule or as needed. Do not apply more than 3 applications per year. The maximum single application rate is 9.0 lbs of Ferbam Granuflo® Fungicide (6.84 lbs a.i.)/A.</p> <p>Do not use water from treated cranberry bogs for irrigating other crops.</p> <p>Do not apply later than 28 days after mid-bloom.</p>

FERBAM GRANUFLO® FUNGICIDE APPLICATION INFORMATION SPECIFIC TO CROP

Under low disease conditions, minimum label rates per application can be used, while maximum label rates and shortened spray schedules are recommended for severe or threatening conditions.

CROPS*	DISEASES	POUNDS OF FERBAM GRANUFLO® FUNGICIDE PER ACRE	POUNDS OF FERBAM GRANUFLO® FUNGICIDE PER 100 GAL	DIRECTIONS FOR USE
PEACHES AND NECTARINES	Leaf Curl	4.5	1.5 ⁽²⁾	Apply during the dormant period in the fall after leaves drop or in the spring before buds begin to swell. If Leaf Curl has been severe, make 2 applications, one in the fall and one in the spring during the dormant period. Do not apply more than 3 applications per year. The maximum single application rate is 4.5 lbs of Ferbam Granuflo® Fungicide (3.4 lbs a.i.)/A. Do not apply within 21 days of harvest.
PEARS	Scab Sooty Blotch Fabraea Leaf Blight Fruit Spot	4.6	1.53 lbs ⁽³⁾	Fresh Market: Apply from pre-bloom through early cover sprays. Process Market: Apply from pre-bloom through cover sprays. Apply on a 7 to 10 day schedule or as needed. Do not apply more than 3 applications per year. The maximum single application rate is 4.6 lbs of Ferbam Granuflo® Fungicide (3.5 lbs a.i.)/A. Not recommended for late-season cover sprays on fresh market fruit due to the potential for dark residual spots of Ferbam at harvest. Do not apply within 7 days of harvest.

* Not for use in California

⁽¹⁾ Based on dilute sprays of 100 gallons per acre.

⁽²⁾ Based on dilute sprays of 300 gallons per acre.

⁽³⁾ Based on dilute sprays of 400 gallons per acre.

For emergencies involving a spill, leak, fire, exposure, or accident, contact: CHEMTREC at (800) 424-9300. For product usage information, phone Taminco US LLC, toll free at (800) 223-3258 from 9:00 AM to 5:00 PM Eastern Time.

NET CONTENTS:

Granuflo is a trademark of Taminco bvba

Manufactured by:

Taminco US LLC
Two Windsor Plaza, Ste. 411
7540 Windsor Drive
Allentown, PA 18195

