

42750-226

3/13/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

Morris Gaskins
Registrations Manager
Albaugh, Inc.
P.O. Box 2127
Valdosta, GA 31604-2127

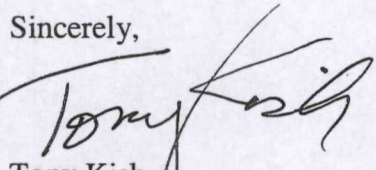
MAR 13 2012

Subject: Thiabendazole 4.1 FL AG
EPA Reg. No. 42750-226
Basic CSF and Label Amendment
Update Product Density & Label Rates
EPA Decision Number 456454

Dear Mr. Gaskins:

The basic Confidential Statements of Formula (CSF) dated 11/21/11 and revised label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended, is acceptable. This CSF and label supersedes all CSFs and labels previously accepted for this product.

One copy of the label stamped "Accepted" and the Product Chemistry Review (DP396509) is enclosed for your records. If you have any questions, please contact Tawanda Maignan by phone at (703) 308-8050 or via email at maignan.tawanda@epa.gov.

Sincerely,

Tony Kish
Product Manager (22)
Fungicide Branch
Registration Division (7504P)

Enclosure(s)

2019

THIABENDAZOLE 4.1 FL AG
Fungicide

ACTIVE INGREDIENT:	
Thiabendazole: 2-(4-thiazolyl)benzimidazole*	42.3%
OTHER INGREDIENTS:	57.7%
TOTAL:	100.0%

4.0 lbs. active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

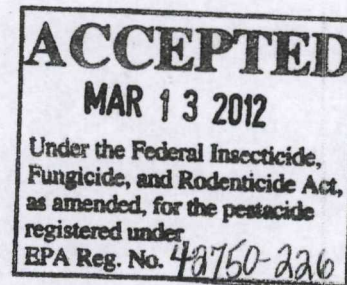
FIRST AID	
IF SWALLOWED	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by 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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER	
For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call 1-800-888-8372	

EPA Reg. No. 42750-226

EPA Est. xxxxxx-xx-xxx

NET CONTENTS: _____

MANUFACTURED FOR:
Albaugh, Inc.
Ankeny, IA 50021



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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed. Causes eye and skin irritation. Avoid contact with eyes, skin, and clothing. Wash thoroughly with soap and water after handling.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt
- Long pants
- Shoes plus socks

In addition to the above, handlers making application to mushroom houses using hand held sprayers must wear chemical resistant gloves.

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.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticides get inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not apply when weather conditions favor runoff or drift from the target area. Do not apply directly to water, 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 waste.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during clean-up procedures and disposal of wastes.

NOT FOR USE IN FORMULATING AGRICULTURAL PESTICIDES.

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.

Manual seed treatments are prohibited.

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
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, AND/OR ILLEGAL RESIDUES,

GENERAL INFORMATION

THIABENDAZOLE 4.1 FL AG is a systemic fungicide which aids in the control of many important plant diseases. If treatment is not effective following use of THIABENDAZOLE 4.1 FL AG as recommended, a tolerant strain of fungus may be present. Consideration should be given to prompt use of other suitable non-benzimidazole fungicides. THIABENDAZOLE 4.1 FL AG is not for use in formulating agricultural products.

CROP USE DIRECTIONS

GENERAL - SHAKE OR STIR WELL BEFORE USE.

Clean equipment before using THIABENDAZOLE 4.1 FL AG. When THIABENDAZOLE 4.1 FL AG is dispersed in water, the resulting suspension must be constantly agitated. Avoid foaming.

Use the higher recommended rates under conditions of heavier disease pressure for citrus sprays and soybean treatments.

Compatibility information for THIABENDAZOLE 4.1 FL AG with other chemicals is limited. Consult your supplier or agricultural experiment station for specific recommendations.

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

CARROTS –

Botrytis Cinerea Gray Mold and Sclerotinia sclerotiorum (Sclerotinia Rot): Dip carrots, before storage, for 5-10 seconds in a suspension containing 41 fl. oz. of THIABENDAZOLE 4.1 FL AG per 100 gals, of water. Replenish the suspension when the volume is too low or when it becomes dirty.

The runoff and wastes from the dipping operation should not be discarded in a drainage which could contaminate public water systems.

CITRUS (One Application Only) –

Blue mold (*Penicillium digitatum*), Green mold (*Penicillium italicum*), and stem end rot (*Diplodia natalensis*): Dip, flood, or spray harvested fruit with a suspension of product in water, wax/oil emulsion, or aqueous dilution of a wax/oil emulsion. Rate will vary according to application method; please refer to the following for specific rates for citrus blue mold control.

Citrus Bin Dips, Floods and Drenches

Use 26 fl. oz. of product in 100 gallons of water to provide 1,000 ppm TBZ. Citrus must be drenched for three (3) minutes. Use one (1) gallon of diluted mixture per 1,500 - 2,000 lbs. citrus or 100 gallons of diluted mixture for about 30 bins. Avoid excessive foaming, use antifoam if needed.

Citrus Sprays

Use 52 – 91 fl. oz. product in 100 gallons of water, wax/oil emulsions, or an aqueous dilution of wax/oil emulsion to provide 2,000 - 3,500 ppm of TBZ. Keep the mixture under constant agitation. Apply at a rate of one gallon per 8,000-10,000 lbs. citrus fruit.

For sporulation control, apply 130 fl. oz. of product in 100 gal of water, wax/oil emulsion, or aqueous dilution of a wax/oil emulsion to provide 5000 ppm of thiabendazole. Apply at a rate of one gallon of diluted mixture per 8,000 - 10,000 lbs citrus fruit.

MUSHROOMS (*Agaricus* spp.) –

Dry Bubble (*Verticillium fungicola*), Wet Bubble (*Mycogone perniciosa*), Cobweb (*Dactylius dendroides*) and Green Mold (*Trichoderma* spp):

Addition to mushroom supplements –

To a finished batch of mushroom supplement, add up to 0.1% active ingredient (by weight) of THIABENDAZOLE 4.1 FL AG.

Applying to mushrooms –

Apply THIABENDAZOLE 4.1 FL AG as a drench during normal watering operations. Apply at spawning, casting, and between breaks. Up to 8 fl. oz./1,000 sq. ft can be applied at casting while a maximum of 4 fl. oz./1,000 sq. ft. can be applied at the other timings. Do not apply more than 20 fl. oz./1,000 sq. ft. of THIABENDAZOLE 4.1 FL AG per crop unless a supplement containing THIABENDAZOLE 4.1 FL AG has been used. If the supplement contains thiabendazole, refer to table below for maximum amount that can be applied to a crop. Do not apply within 12 hours prior to harvest.

Lbs supplement* Per 8,000 sq. ft.	Maximum amount of THIABENDAZOLE 4.1 FL AG per 1,000 sq. ft. per crop (fl. oz.)
800	17
1200	15
1400	14.5
1800	13
2200	11
2400	9

*Assumes at maximum rate of 0.1 % thiabendazole

NOTE: if you are unsure if the mushroom supplement that you are using contains thiabendazole, contact the manufacturer of the mushroom supplement.

ORNAMENTAL BULBS AND CORMS –

Fusarium Basal Rot and Penicillium Blue Mold: Clean and treat bulbs or corm within 24-48 hours of digging. Prepare suspension of 30 fl. oz. of THIABENDAZOLE 4.1 FL AG per 100 gals, of water. Submerge stock completely in dipping suspension. Suspension temperature should be 55-75°F (13-24°C). Discard suspension (1) when it becomes dirty, (2) after using five times, or (3) after 24 hours, whichever occurs first.

Fusarium (Bulbs and Corms): Dip bulbs 15-30 minutes, corms 15 minutes.

Blue Mold (Bulbs): Dip 10-15 minutes.

After treatment, dry bulbs or corms in a shaded, well-ventilated area. Curing or retarding may precede or follow treatment.

POTATO –

Fusarium Tuber Rot: Mist unwashed tubers on a conveyor line, with tumbling action, entering storage with 0.42 fl. oz. of THIABENDAZOLE 4.1 FL AG to each 2,000 Lbs. of tubers in sufficient water for complete coverage. If an additional treatment is necessary before shipping, mist the tubers at the same rate or dip the tubers for 20 seconds in a solution containing 0.42 fl. oz. of THIABENDAZOLE 4.1 FL AG per gallon of water. Do not treat seed potatoes after cutting.

THIABENDAZOLE 4.1 FL AG for potatoes should be used as part of an Integrated Management Program, which includes prevention of bruising during harvest and maintaining proper storage temperature and relative humidity. Neither cultural practices nor chemical measures will prevent Fusarium infection if potatoes are damaged or improperly stored.

POME FRUIT (Apples and Pears) –

Blue Mold Rot, Bull's Eye Rot, and Gray Mold (Nest Rot, Cluster Rot), Stem End and Neck Rot: Dip, flood, or spray harvested fruit with a suspension of 16 fl. oz. of THIABENDAZOLE 4.1 FL AG in 100 gals, of water. Do not treat for over 3 minutes. Treat apples only before and after storage for maximum decay control. Treat pears once.

SWEET POTATO "Seed Roots" –

Black Rot, Scurf, and Foot Rot: Dip the seed roots in a suspension containing 8 fl. oz. of THIABENDAZOLE 4.1 FL AG per 7.5 gals, of water (107 fl. oz. per 100 gals.). Treat the seed roots for 1-2 minutes and plant immediately. Discard the suspension when the volume is too low or when it becomes dirty. Do not use the treated roots for food or feed.

SEED TREATMENT

Treatment of highly mechanically scarred or damaged seed, or seed known to be of low vigor and poor quality, except for the purpose of curative control of existing disease pests, may result in reduced germination and/or reduction of seed and seedling vigor. Treat using equipment similar to that planned for treating the total seed lot. Conduct germination tests on a small portion of seed before committing the total seed lot to a selected seed treatment. Due to seed quality and seed storage conditions beyond the control of Albaugh, no claims are made to guarantee the germination of carry-over seed or propagating material for all crop seed.

Seed treatment with THIABENDAZOLE 4.1 FL AG fungicide will not provide postemergence protection of plants grown in or near infected fields.

Mixing Procedures

Apply THIABENDAZOLE 4.1 FL AG as a water-based slurry utilizing standard slurry seed treatment equipment which provides uniform seed coverage. Uneven or incomplete seed coverage may not give the desired level of disease control. Thoroughly mix the recommended amount of THIABENDAZOLE 4.1 FL AG into the required amount of water for the slurry treater and dilution rate to be used. Follow the manufacturer application instructions for the seed treatment equipment being used. Maintain constant agitation of the slurry during the treatment. Allow seed to dry before bagging.

Federal law requires that bags containing treated seed shall be labeled with the following information:

"This seed has been treated with thiabendazole fungicide. Do not use for feed, food, or oil purposes. Store away from feed and foodstuffs. Use an EPA-approved dye or colorant that imparts an unnatural color to the seed."

Mixing with other pesticides is limited to adequate physical compatibility and satisfactory phytotox test results.

SOYBEAN SEED TREATMENT

THIABENDAZOLE 4.1 FL AG is recommended for protection against pod and stem blight (Phomopsis spp.) on soybean seed to improve germination and early season seedling health. For protection against other seed and soil-borne diseases, it is recommended that a co-fungicide such as Apron® XL LS + Maxim® 4FS, or an Apron MAXX® brand fungicide, be used at EPA registered labeled rates and tank mixed in combination with THIABENDAZOLE 4.1 FL AG. Consult the label for appropriate use rates and follow all use instructions for the products. Utilized as a seed treatment for protection against seed borne and early season seedling pod and stem blight on soybean: Apply THIABENDAZOLE 4.1 FL AG at the rate of 0.08 to 0.16 fl. oz. per 100 lbs. of seed.

SEED TREATMENT FOR:

PEAS (Dry), CHICKPEA (garbanzo beans) (*Cicer arietinum*), LENTIL (*Lens esculenta*), PEAS (*Pisum spp.*), PIGEON PEAS (*Cajanus cajan*)

THIABENDAZOLE 4.1 FL AG fungicide is used to effectively suppress seed borne Ascochyta blight cause by the pathogen Ascochyta rabiei. THIABENDAZOLE 4.1 FL AG seed treatment must also be used to minimize the threat of highly infectious and limit spread of residue-borne and wind-borne infection of chickpeas and lentil crops by Ascochyta blight.

Chickpea Seed Treatment:

For slurry solutions in water, mix 2.04 fl. oz. of THIABENDAZOLE 4.1 FL AG fungicide in an equal amount of water (1:1) to provide adequate coverage and apply to 100 lbs. of seed. Keep dispersion under constant agitation. It is essential that thorough coverage of seed be obtained.

Lentil Seed Treatment:

For slurry solutions in water, mix 1.05 fl. oz. of THIABENDAZOLE 4.1 FL AG fungicide in an equal amount of water (1:1) to provide adequate coverage and apply to 100 lbs. of seed. Keep dispersion under constant agitation, it is essential that thorough coverage of seed be obtained.

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Peas Seed Treatment:

For a ready mix or slurry treaters, mix 1.02 fl. oz. of THIABENDAZOLE 4.1 FL AG fungicide in adequate water to provide complete coverage and apply to 100 lbs. of seed. Keep dispersion under constant agitation. It is essential that thorough coverage of seed be obtained.

For Export Use on Peas Seed:

THIABENDAZOLE 4.1 FL AG may be mixed with other registered seed treatment products in accordance with the importing Nation's Phytosanitary requirements.

Treated seed must be labeled "for Export Only"- Not to be Sold or Offered for Sale in the United States.

For best results against Ascochyta blight, plant chickpeas, peas or lentil seed treated with THIABENDAZOLE 4.1 FL AG fungicide as late in the spring as possible.

RESTRICTIONS AND LIMITATIONS FOR SEED TREATMENTS

- Maximum one application per season.
- The product is not to be tank mixed with any pesticide unless physical compatibility and phytotoxicity tests have been completed and proved to be satisfactory.
- Do not feed vines or hay grown from treated seed to livestock.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

PESTICIDE STORAGE: Store THIABENDAZOLE 4.1 FL AG in a cool, dry place away from food, drink, and animal feeding stuffs. Do not store below 32°F (0°C). Repeated product freezing and thawing should be avoided. Shake or stir product before use,

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility in accordance with Federal, State or local procedures under the Resource Conservation and Recovery Act.

CONTAINER DISPOSAL:

Non-refillable containers (1, 2.5, & 30 gallon): Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

(non-refillable <5 gallons): 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 ¼ 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.

(non-refillable >5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use for disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

REFILLABLE CONTAINER (>250 gallon): Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process 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.

CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently 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 ALBAUGH CROP PROTECTION, Inc. or Seller. To the extent permitted by applicable law. Buyer and User agree to hold ALBAUGH and Seller harmless for any claims relating to such factors.

ALBAUGH warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or ALBAUGH, and, (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, ALBAUGH MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

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