

228-678

12/17/2009

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U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA Reg. Number:
228-678

Date of Issuance:
DEC 17 2009

NOTICE OF PESTICIDE:
 Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:

Name of Pesticide Product:
Nufarm TDZ + Diuron SC
Cotton Defoliant

Name and Address of Registrant (include ZIP Code):
Nufarm Americas Inc.
150 Harvester Drive, Suite 200
Burr Ridge, IL 60527

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is reregistered in accordance with FIFRA provided that you:

- 1) Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.

Signature of Approving Official:

Joanne Miller
Senior Registration Specialist
Herbicide Branch, Team 23
Registration Division (7505P)

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Date:

DEC 17 2009

2) Based on toxicity ranking per the acute toxicity review, the First Aid statements should be placed on the label in the following order:

“IF ON SKIN OR CLOTHING:...
IF IN EYES:...
IF SWALLOWED:...
IF INHALED:...”

3) Per the acute toxicity review, the text “Do not get in eyes or on clothing” appearing in the Hazards to Humans and Domestic Animals statements must be revised to read “Do not get in eyes, on skin, or on clothing.”

4) Per the acute toxicity review, the third paragraph of the handler PPE section must be revised to read as specified below. Revisions are noted in **bold type**.

“Mixers, loaders, and other applicators and other handlers must wear:
Coveralls over **long-sleeved shirt and long pants**,
Chemical-resistant footwear plus socks,
Goggles or faceshield,
Chemical-resistant gloves,
Chemical-resistant headgear for overhead exposure,
Chemical-resistant apron when mixing, loading, or cleaning equipment or spills,
A NIOSH approved particulate filtering respirator equipped with N, R, or P class filter media.
The respirator should have a NIOSH approval number prefix TC-84A. It is recommended that you require that the respirator wearer be fit tested, and trained in the use, maintenance, and limitations of the respirator.

See engineering controls for additional requirements.”

The first two paragraphs are acceptable and must remain on the label.

Note: The text “except for ground boom applicators” must be deleted from the respirator text appearing on the label.

5) Per the Thidiazuron RED, the following revisions are needed to the Environmental Hazard section:

- Delete “For terrestrial uses” from the first sentence of this section.
- Add “or rinsate” to the end of the sentence “Do not contaminate water when disposing of equipment washwater or rinsate.”

6) Add the following aerial restriction to the **Citrus Areas in the Rio Grande valley of Texas**

section:

“Thidiazuron products can not be applied by air within 5 miles upwind of citrus in flush (burst of new growth, as in springtime).

7) Per the Thidiazuron and Diuron REDs, add the following:

“Maximum application rate is 0.3 lbs ai per acre per year.
Maximum of 2 applications per year.
The minimum retreatment interval is 21 days.”

8) Change “General Information” to “product information”. Change “the spray boom should be mounted” to “the spray boom must be mounted” page 4.

A stamped copy of the label is enclosed for your records. You must submit one copy of the final printed label before you release the product for shipment. Products shipped after 12 months from the date of this letter or the next printing of the label whichever occurs first, must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA. Your release for shipment of the product constitutes acceptance of these conditions. This label supersedes all other previously accepted labels. If you have any questions please call Erik Kraft at 703-308-9358 or email at Kraft.Erik@epa.gov.

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Nufarm TDZ + Diuron SC Cotton Defoliant

COTTON DEFOLIANT
FOR AGRICULTURAL USE ONLY

ACTIVE INGREDIENTS:

Thidiazuron: N-phenyl-N'-1,2,3-thidiazol-5-ylurea 12.0%

Diuron: 3-(3,4-dichlorophenyl)-1,1-dimethylurea 6.0%

OTHER INGREDIENTS: 82.0%

TOTAL: 100.0%

Contains 1 lb. Thidiazuron per gallon and 0.5 lb. Diuron per gallon.

**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 this label, find someone to explain it to you in detail.)

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300
For Medical Emergencies Only, Call (877) 325-1840

EPA REG. NO. 228-678
EPA EST. NO. _____

**ACCEPTED
with COMMENTS
In EPA Letter Dated:**

DEC 17 2009

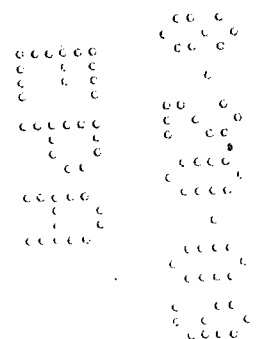
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

228-678

MANUFACTURED FOR
NUFARM AMERICAS INC.
150 HARVESTER DRIVE
BURR RIDGE, IL 60527



NET CONTENTS _____ GALS. (_____ Liters)



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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

DANGER

Corrosive. Causes irreversible eye damage. Causes skin burns. Harmful if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of polyethylene or polyvinyl chloride. If you want more options follow the instructions for Category A on an EPA chemical-resistance category selection chart.

All pilots and flaggers must wear:

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

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

- Coveralls worn over short-sleeved shirt and long pants
- Chemical resistant footwear plus socks
- Chemical-resistant gloves
- Except for ground boom applicators, a NIOSH approved particulate filtering respirator equipped with N, R, or P class filter media. The respirator should have a NIOSH approval number prefix TC-84A. It is recommended that you require the respirator wearer be fit tested, and trained in the use, maintenance, and limitations of this respirator.
- Protective eyewear (goggles, face shield or shielded safety glasses)
- Chemical-resistant apron when mixing, loading, or cleaning equipment or spills.

See Engineering Controls for Additional Requirements.

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 PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

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.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (6)].

Flaggers supporting aerial applications must use an enclosed cab that meets the definition in the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240 (d) (5)] for dermal protection. In addition, flaggers must wear long-sleeved shirt, long pants, shoes and socks.

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.

FIRST AID	
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 by mouth-to-mouth, if possible. • Call a poison control center or doctor for further 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 the 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. You may also contact 1-877-325-1840 for emergency medical treatment information.	
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

ENVIRONMENTAL HAZARDS

For terrestrial uses, 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. Do not apply when weather conditions favor drift from the target area. Apply this product only as specified on this label.

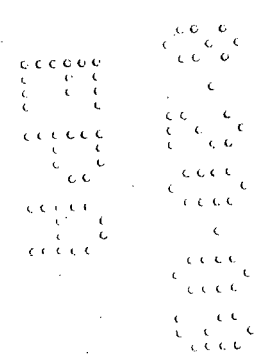
This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

This chemical has properties and characteristics associated with chemicals detected in groundwater. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

In case of spillage, cover with an absorbent such as soda ash, lime, clay, or sawdust. Sweep up and bury. Wash area thoroughly with detergent and water.

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.



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 intervals. 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:

- Coveralls
- Chemical-resistant gloves such as barrier laminate or butyl rubber
- Chemical-resistant footwear plus socks
- Protective eyewear

GENERAL INFORMATION

This product is used as a defoliant to aid in preparing cotton for harvest and can be used effectively under warm and cool weather conditions.

DRIFT REDUCTION PRACTICES

To reduce the potential for drift to non-target crops or foliage during applications, especially under windy conditions, follow these specified practices:

- Do not apply this product by ground or air when wind speeds exceed ten (10) miles per hour at the time of application.
- Use nozzle pressures of between 20 and 30 psi.
- Do not apply this product when a temperature inversion is present or when conditions favor an inversion before application is completed.
- Use the largest nozzle orifice possible that will deliver the proper deposition and coverage of product.
- Do not make ground applications of this product within 100 feet of growing lettuce.
- Do not make aerial application of this product within 0.5 miles of growing lettuce.
- **Citrus Areas in the Rio Grande Valley of Texas:** Do not make aerial applications of this product within 5 miles downwind of the point of application when citrus are in flush (burst of new growth, as in springtime). Do not make ground applications of this product within 0.5 miles downwind of the application point when citrus are in flush.

REQUIREMENTS FOR REDUCING SPRAY DRIFT FOR DIURON GROUND AND AERIAL APPLICATIONS:

Use best practices to avoid drift to all other crops and non-target areas. Do not apply when conditions favor drift from target areas. The interaction of many equipment and weather related factors determine the potential for spray drift. Avoiding spray drift at the application site is the responsibility of the applicator. The applicator must follow the most restrictive precautions to avoid drift, including those found in this labeling as well as applicable state and local regulations and ordinances.

A drift control agent may reduce drift, however, it may also decrease weed control. Make aerial or ground applications only when the wind speed is less than or equal to 10 miles per hour. Do not make aerial or ground applications into temperature inversions. Apply with medium or coarser spray (according to ASAE standard 572) for standard nozzles. Additional requirements for ground applications: When applying to crops, apply with nozzle height no more than 2 feet above the ground or crop canopy.

Additional requirements for aerial applications: The spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The boom length must not exceed 75% of the wingspan or 90% of rotor blade diameter. Use upwind swath displacement. When applying to crops, do not release spray at a height greater than 6 to 10 feet above the ground or crop canopy. Do not apply by air if sensitive nontarget crops are within 100 feet of the application site.

DIRECTIONS FOR MIXING

Do not prepare more spray solution than required for one day's use. To prepare a spray solution of this product, follow these instructions:

- Fill the spray tank 1/2 full with clean water. Agitate the water and continue agitation through the mixing operation.

- Add this product to the tank followed by the remaining amount of water.
- Maintain agitation of the spray solution during application.

DIRECTIONS FOR CLEANING OF EQUIPMENT

Immediately after an application of this product, clean all mixing and spray equipment with a cleaner and water. After spraying is completed at the end of the day, rinse the interior of the tank with fresh water. Partially refill the tank with fresh water and flush the boom and hoses. These rinses will prevent deposits of dried pesticide residues that can remain in the application equipment.

Residues of this product that remain in the spray equipment may injure desirable crops if the equipment is used later to make applications to crops other than cotton. Nufarm accepts no liability for damage to crops due to inadequately cleaned equipment.

EQUIPMENT CLEANING: This product is very acidic and can damage acrylic plastics, certain paints, and metals after prolonged exposure. Therefore, ensure that any exposed acrylic plastic-type materials (e.g., aircraft windshields) are washed thoroughly with soap and water within 1 hour of exposure to the spray droplets. When the application is completed, all metal parts of the aircraft and other spray equipment which were exposed to the spray solution should be washed thoroughly with soap and water.

ADJUVANTS

Do not add adjuvants to spray mixtures. Desiccation and/or leaf freezing during periods of high temperature may occur. Do not use other compounds that will desiccate leaf tissue.

TANK MIXES WITH OTHER COTTON DEFOLIANT PRODUCTS

The tank mix of this product with other cotton defoliant products can improve overall defoliation, and as an aid in accelerating the opening of mature, unopened cotton bolls. Best activity will be obtained where the tank mix is applied to mature cotton plants. Do not apply tank mix before sufficient unopened bolls have matured to produce the desired cotton yield.

For cotton produced in non-arid conditions, apply this product at a rate of 3.2 to 6.4 fl. oz. per acre plus other cotton defoliant products at a rate of 21 to 24 fl. oz. per acre.

USE DIRECTIONS

Refer to the table below for use rates and directions for application.

USE RATES AND APPLICAITON DIRECTIONS

Product oz. per Acre (lb. AI/A)	No. Acres treated by 1 gal of Product	Additional Instructions
6.4 oz./A (0.075 lb AI/A)	20 Acres	How to Apply: Apply this product using air or ground equipment. Use desired rate in 10-25 gallons of spray per acre by ground or 2-10 gallons per acre by air.
8.8 oz./A (0.10 lb AI/A)	15 Acres	When to Apply: Apply this product before harvest at a rate of 6.4 to 16.0 ounces of product per acre. After this application, an application of a cotton defoliant may be required, or a second application, but do not exceed more than 16 ounces (1 pint) of this product per Acre per season.
12.8 oz./A (0.15 lb AI/A)	10 Acres	Time application to occur when cotton plants are mature and when the last bolls have matured. Mature bolls are determined by squeezing the boll between thumb and finger: if the boll cannot be dented then it is mature. Other signs of boll maturity include when the boll is too hard to be sliced with a sharp knife, and when the seed coat has changed color to light brown.
16.0 oz./A (0.1875 lb AI/A)	8 Acres	Preharvest Interval: Do not harvest cotton seed less than 5 days after the last application.
4 - 6 oz./A. (0.047 - 0.07 lb AI/A) (CA ONLY)	32 - 21.3 Acres	For Use In California Only When to Apply: Apply 7 to 10 days before a defoliant application of this product or before application of a different defoliant. This product acts as a preconditioner and will enhance the activity of the defoliant. How to Apply: Apply this product using air or ground equipment. Use the desired rate in 10-25 gallons of spray per acre by ground or 2-10 gallons per acre by air.

PRECAUTIONS AND RESTRICTIONS

Spray drift from this product may reach desirable trees or crops other than the target crop of mature cotton, or cotton you desire to defoliate. Spray drift to non-target crops can cause crop injury or defoliation. Use extreme caution if this product is applied to adjacent fields of lettuce, citrus, or cantaloupe.

A reduction in the desired amount of defoliation and/or in the inhibition of plant growth may be observed when this product is applied under extremely cool or adverse conditions.

A rain event occurring within 12 hours of application may reduce effectiveness of this product.

Do not apply more than 16 oz. (1 pint) of this product per acre per season.

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

Do not feed foliage from treated cotton plants or gin trash to livestock.

Do not use immature crops for food or feed.

ROTATION CROP RESTRICTIONS

Refer to the following table for the amount of time which must elapse before planting crops in fields previously treated with this product. **Cover crops:** If small grains are planted earlier than 2 months after a product application or small grains are planted between the cotton plant rows which were treated with this product, then these crops can only be used as cover crops. Do not harvest the grain crops for food or feed.

Plantback Crop(s)	Rotation Crop Interval - Days (Months)
Corn Small grains Sorghum	30 days (1 month)
Cole crops Garlic Legumes (including alfalfa) Leafy vegetables (except lettuce) Root crops (except carrots and onions) Safflower Tomatoes Watermelon	60 days (2 months)
Lettuce	60 days (2 months) OR 270 days (9 months) (see footnote)
Carrots	90 days (3 months)
Onions	120 days (4 months)
Cantaloupe, Honeydew melon/Casaba melon, and Muskmelon Peppers	180 days (5 months)
All other crops	365 days (12 months)
Only rotate to lettuce 60 days after an application of this product if the soil is deep-plowed (to 12-15 inches). Otherwise, plant lettuce 270 days after the product application if the soil is disced to 4-6 inches.	

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for Injunctive relief in Washington Toxics Coalition, et. al. v. EP. C01-0132C, (W.D. WA). For further information, please refer to <http://www.epa.gov/espp/wtc/>.

