

PM 19 352-552

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (H7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg. Number:  
352-552

Date of Issuance:  
09-18-95

NOTICE OF PESTICIDE:  
  x   Registration  
       Reregistration

Term of Issuance: Conditional  
Expires 09/18/98

Name of Pesticide Product: DuPont  
Fortress® 5G Granular  
Insecticide

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):  
E.I. du Pont de Nemours & Company  
Agricultural Products  
Walker's Mill, Barley Mill Plaza  
P.O. Box 80038  
Wilmington, Delaware 19880-0038

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.

The Agency is conditionally registering the above referenced product under the authority of Section 3(c)(7)(C) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended. This allows a 3-year time limited registration for use only through the SmartBox™ system, on corn, to expire automatically on September 18, 1998. In addition, during the period that this registration is effective, it will be subject to the conditions listed below. To maintain your registration you must:

1. Submit the following required new studies; and/or additional studies DuPont intends to conduct, repeat, or upgrade which are needed to refine the Agency's risk assessment (with prior Agency approval of protocols for all studies):
  - A new acute neurotoxicity study with Fortress® Technical, by the gavage route, in the rat -- which includes a histopathological exam (following perfusion); evaluation of plasma, erythrocyte, and brain cholinesterase activities following a single dose of the test material; and, body temperature evaluations;
  - A neurotoxic esterase (NTE) study in the hen, including an assay of NTE activity (as per the 1991 Neurotoxicity Guidelines);
  - A repeat-dose dermal toxicity study (that includes monitoring of cholinesterase) conducted with the Fortress® 5G product;

Signature of Approving Official:  
*DHE*

Date:  
SEP 18 1995

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--A repeat-dose inhalation toxicity study (that includes monitoring of cholinesterase) conducted with the Technical material;

--An exposure study for Fortress® 5G with measurements of chlorothoxyfos concentrations in the air and dermal exposure to loaders during the transfer of the SmartBox™ (with 5G product) system. Plus, a study in which the measurement of chlorethoxyfos concentration inside the tractor cab, during application of the 5G product, while the applicator is being monitored for both dermal and inhalation exposure;

--Calculations of the evaporate flux to upgrade the Field Volatility study to acceptable (to give a more practical rate of volatilization with respect to time as opposed to instantaneous measurements); and,

--(Repeated) Fish early life-stage with Sheepshead minnow study.

2. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

3. Make the following label change:

a. Revise the EPA Registration Number to read, "EPA Reg. No. 352-552".

4. Submit two copies of the revised final printed label for the record.

You should note that if you fail to satisfy any of the conditions imposed on this registration, e.g. you fail to submit the required data or the data submitted were not generated in accordance with the applicable Agency guidelines and/or approved Agency protocols, EPA may issue a Notice to Cancel this registration under Section 6(e) of FIFRA.

You should also note that, regardless of whether you satisfy all application conditions, this conditional registration will expire automatically on September 18, 1998. Sales and distribution of the subject product bearing labeling for use on corn after September 18, 1998 will be illegal.

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The Agency will not renew or extend this registration; and/or issue a full registration under Section 3 of FIFRA, until the additional data have been submitted, reviewed and found acceptable.

Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely yours,

DHE

Dennis H. Edwards, Jr.  
Product Manager 19  
Insecticide & Rodenticide Branch  
Registration Division (7505C)

Enclosure

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**RESTRICTED USE PESTICIDE**

**DUE TO ACUTE HUMAN, AVIAN, AND AQUATIC INVERTEBRATE TOXICITY**

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.



**Fortress® 5G**

granular insecticide

**For Use On Corn Only**

Available only in the SMARTBOX, a closed handling and application system.

To control corn rootworms, wireworms, cutworms, seed corn maggots, white grubs and symphylans on field corn, seed corn, sweet corn, and popcorn.

<u>Active Ingredient</u>	<u>By Weight</u>
Chlorethoxyfos:	
Phosphorothioic acid, O,O-diethyl	
O-(1,2,2,2-tetrachloroethyl)ester	5.0%
<u>Inert Ingredients</u>	<u>95.0%</u>
TOTAL	100.0%

Contains 5.0 lbs active ingredient per 100 lbs of granular insecticide.

EPA REG. NO. 352-XXX

EPA Est. No. 352-AL-1

U.S. Patent XXXXXX

**Keep Out of Reach of Children**

**DANGER POISON**  
**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.)

**Statement of Practical Treatment**

This product is an organophosphate insecticide. **ATROPINE IS THE EMERGENCY ANTIDOTE FOR FORTRESS INSECTICIDE POISONING.** PAM is also antidotal and may be used in conjunction with atropine. **CALL A PHYSICIAN AT ONCE IN ALL CASES OF SUSPECTED POISONING.**

**IF SWALLOWED :**

Induce vomiting immediately by giving two glasses of water and touching back of throat with finger. Call a physician.

**DO NOT INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.**

**IF INHALED :**

Remove patient to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if breathing has stopped. Get medical attention.

**IF ON SKIN :**

Immediately remove patient from vicinity of the insecticide, remove contaminated clothing and shoes, and wash skin thoroughly with soap and running water. Thoroughly wash contaminated clothing before reuse.

**IF IN EYES :**

Hold eyelids apart and immediately flush eyes with plenty of water. Get medical attention.

**IF WARNING SYMPTOMS APPEAR:**

(See WARNING SYMPTOMS Under "NOTE TO PHYSICIAN") Keep patient prone and quiet. Start artificial respiration immediately if patient is not breathing. Transport patient immediately to hospital.

For medical emergencies with this product, call toll free 1-800-441-3637.

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

**SEP 18 1995**

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 352-532

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**PRECAUTIONARY STATEMENTS**

*Hazards to Humans  
and Domestic Animals*

**DANGER**  **POISON**

**MAY BE FATAL IF SWALLOWED OR INHALED. DO NOT BREATHE DUST. DO NOT GET IN EYES, ON SKIN, ON CLOTHING, OR IN FOOTWEAR.**

Repeated exposure can lead to an asymptomatic increase in the susceptibility to poisoning. Avoid prolonged exposure to the product.

**PERSONAL PROTECTIVE EQUIPMENT**

Loaders of FORTRESS 5G in the SMARTBOX must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Waterproof gloves.
- Protective eyewear.
- An organic vapor (OV) respirator equipped with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

In order to avoid contaminating the enclosed cab, the waterproof gloves, OV respirator and protective eyewear should be removed and stored at the loading site, or, if that is not possible, stored outside the cab in a chemical resistant container (plastic bag). This PPE should not be re-used until properly cleaned.

Applicators must be in enclosed cabs and must wear:

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

If the applicator exits the cab to make a repair or adjustment to the planter, the following PPE, separate from the PPE used for loading, must be worn:

- Coveralls.
- Waterproof gloves.
- Protective eyewear.

Coveralls, waterproof gloves and protective eyewear should be removed and stored in a chemical resistant container (plastic bag), separate from the bag used to store loading PPE, outside the cab before re-entering the cab.

Follow manufacturer's instructions for cleaning/maintaining PPE. All washable PPE should be washed in detergent and hot water prior to re-use. 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 immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

(continued in next column)

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to wild mammals, birds, fish, and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsate. Apply this product only as specified on this label

**NOTE TO PHYSICIAN**

*Warning Symptoms*

FORTRESS is an organophosphate insecticide and is a cholinesterase inhibitor. Overexposure to this product may cause toxic signs and symptoms due to stimulation of the cholinergic nervous system.

Symptoms of poisoning may include weakness, headache, tightness in chest, blurred vision, non-reactive pin-point pupils, salivation, sweating, nausea, vomiting, diarrhea, muscle tremors and abdominal cramps. In severe cases, convulsions, unconsciousness and respiratory failure may occur.

*Treatment*

Atropine is the specific therapeutic antagonist of choice against this type of parasympathetic nervous stimulation. If warning symptoms appear, treatment should consist of parenteral atropine sulfate. This can be administered intramuscularly every 10 minutes until full atropinization (as indicated by dilated pupils, dry flushed skin and tachycardia) has been achieved and repeated thereafter whenever symptoms reappear. For infants and children, the dose of atropine sulfate is 0.05 mg/kg. For adults, 1 to 2 milligrams will be required for mild cases, but up to 4 mg may be needed for severe intoxication. 20 to 30 milligrams or more may be required during the first 24 hours.

Pralidoxime chloride (2-PAM chloride) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, an initial dose of 1 gram of 2-PAM should be injected, preferably as an infusion in 250 cc of saline over a 15- to 30-minute period. If this is not practical, 2-PAM may be administered slowly by intravenous injection as a 5 percent solution in water over not less than two minutes. After about an hour, a second dose of 1 gram of 2-PAM will be indicated if muscle weakness has not been relieved. For infants and children, the dose of 2-PAM is 20 - 50 mg/kg. Morphine is an improper treatment.

Clear chest by postural drainage. Oxygen administration may be necessary. Observe patient continuously for 48 hours. Repeated exposure to cholinesterase inhibitors may, without warning, cause prolonged susceptibility to very small doses of any cholinesterase inhibitor. Allow no further exposure until cholinesterase regeneration has been attained as determined by blood test.

For medical emergencies involving this product, call toll free 1-800-441-3637.

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### 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 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 48 hours. The REI is 72 hours where average rainfall is less than 25 inches per year.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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.
- Waterproof gloves.
- Shoes plus socks.

Apply this product only as specified on this label.  
Do not apply this product through any type of irrigation system.

### General Information

FORTRESS 5G is a granular soil insecticide for use on corn (field, sweet, popcorn and seed) at planting for the control of northern, western and southern corn rootworms, wireworms, cutworms, seed corn maggots, white grubs and symphylans.

It is available only in the SMARTBOX, a closed handling and application system.

### Herbicide Compatibility Information

- Accent®, Basis® and other corn herbicides may be applied to FORTRESS treated corn.

### Application rate

APPLY "FORTRESS" 5G AT 3.0 OZ PER 1000 FEET OF ROW FOR ANY ROW SPACING.

### Application

FORTRESS 5G should be applied as a T-band over the planting row or applied in-furrow using the SMARTBOX system properly adjusted to assure accurate placement of the product. Both application methods are equally effective against corn rootworm. DO NOT apply as a surface band behind the press wheel.

#### T - Band application at planting:

- FORTRESS 5G can be applied in conventional, conservation or no-till corn as a T-band treatment. Place the granules in a band over the row behind the planter shoe and in front of the press wheel.
- Granules must be incorporated into the top one inch of soil using tines, chains or other suitable equipment.
- Optimal cutworm control can be obtained by applying FORTRESS 5G as a T-band treatment and incorporating into the top one inch of soil. Heavy infestations of cutworm may result in sufficient numbers of larvae surviving the treatment and damaging the corn. If this occurs, apply a rescue treatment with Asana® XL insecticide or another insecticide registered for this use.

#### In-furrow application at planting:

- FORTRESS 5G can be applied in conventional, conservation or no-till corn as an in-furrow treatment. Place the applicator tube either directly into or behind the planter shoe, so the granules drop into the seed furrow.
- The in-furrow application method provides optimal control of seed corn maggots, wireworms and white grubs.

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**Further Application Information:**

- Do not make more than one application per year.
- Under windy conditions the use of wind shields is recommended to ensure proper placement of granules.
- FORTRESS 5G is noncorrosive to equipment and is nonflammable.

**Crop Rotational Interval**

Com	Anytime
Other crops	30 days

**Determining the Amount of FORTRESS 5G per acre**

The following rate chart shows how much product is needed per acre when treated at 3.0 oz per 1000 ft of row.

ROW SPACING (inches)	"FORTRESS" 5G (lbs/A)
40	2.5
38	2.6
36	2.75
34	2.9
32	3.05
30	3.25

**For Example:**

10 acres of corn with 30 inch row spacing will require 32.5 Lbs.(10 A. x 3.25 lbs/A= 32.5 lbs)

10 acres of corn with 36 inch row spacing will require 27.5 Lbs.(10 A. x 2.75 lbs/A=27.5 lbs)

**SMARTBOX Information**

FORTRESS 5G must be applied with the SMARTBOX system. Please refer to the SMARTBOX manual for information on system operation.

**STORAGE AND DISPOSAL**

**STORAGE:** Store in a secure, locked, dry and temperate area where children, unauthorized persons or animals cannot enter. Keep the container capped when not in use. Do not transport or store near food or feed intended for human or animal consumption. Do not use or store in or around the home. Do not contaminate water, other pesticides, fertilizer, food or feed by storage or disposal.

**PRODUCT DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or container 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 RETURN:** DO NOT DISCARD THE CONTAINER. All SmartBox containers must be returned per instructions provided. Do not attempt to open or tamper with the container. Once empty, containers are not intended for reuse.

**NOTICE TO BUYER:** Purchase of this material does not confer any rights under patents of countries outside of the United States.

**NOTICE OF WARRANTY**

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. 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 weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of DuPont. In no case shall DuPont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. DUPONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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NET WT. 50 LB.