

5481-493

1/19/2001

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JAN 19 2001

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Jon C. Wood  
Regulatory Manager  
Amvac Chemical Corporation  
4695 MacArthur Court, Suite 1250  
Newport Beach, CA 92660

Subject: Amendment - Update First Aid Statements and Response to Interim Tolerance  
Reassessment Evaluation and Risk Management Document  
Fortress 5G Granular Insecticide  
EPA Registration No. 5481-493

Fortress 2.5G Granular Insecticide  
EPA Registration No. 5481-494  
Your submissions dated September 29, 2000

Dear Mr. Wood:

The labeling referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable subject to the comments listed below. Stamped copies of the labeling are enclosed for your records.

All required studies outlined in the Fortress Registration Notices, dated September 18, 1995, were submitted to the Agency and found acceptable. Therefore, the conditions of registration have been satisfied. However, since the Agency has not addressed cumulative effects of other organophosphates as a class, the registration will remain conditional without an expiration date until a cumulative assessment for all organophosphates has been completed.

Fortress 5G Granular Insecticide  
EPA Registration No. 5481-493

1. Revise the Precautionary Statements section of the label to read: "Fatal if swallowed. May be fatal if inhaled. Causes moderate eye irritation. Harmful if absorbed through the skin. Do not breathe dust. Avoid contact with skin, eyes, or clothing. Wear a mask or pesticide respirator jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash clothing before reuse."

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SPROAT  
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2. Under the Environmental Hazards section of your label, please revise the sentence "Do not contaminate water..." to read "Do not contaminate water when cleaning equipment or disposing of equipment washwaters."
3. Correct "Users" to "User" in "User Safety Recommendations".

Fortress 2.5G Granular Insecticide  
EPA Registration No. 5481-494

1. Change the signal word from "Danger" to "Warning" on the front of the label and under the Precautionary Statements section. Delete the skull and crossbones and the word "Poison". This product is in toxicity category II for oral toxicity, therefore the signal word would only be "Warning".
2. Under the Precautionary Statements section of the label, replace the paragraph beginning with "May be fatal" with the following statements: "Harmful if absorbed through the skin. Causes moderate eye irritation. Wear a mask or pesticide respirator jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse."
3. Under the Environmental Hazards section of your label, please revise the sentence "Do not contaminate water..." to read "Do not contaminate water when cleaning equipment or disposing of equipment washwaters."
4. Correct "Users" to "User" in "User Safety Recommendations".
5. As indicated in our January 6, 1998 letter regarding storage stability, the loss of active ingredient in storage would render this product in efficacious. Your label should bear a two-year expiration date in compliance with 40 CFR 156.10(g)(6).

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e).

If you have any questions, please call Dr. William Sproat of my team at 703-308-8587.

Sincerely,



George T. LaRocca  
Product Manager 13  
Insecticide Branch  
Registration Division (7505C)

Enclosure

cc: Deanna Scher, SRRD

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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<sup>®</sup> 5G granular insecticide

**For Use On Corn Only**

KEEP OUT OF REACH OF CHILDREN

DANGER



PELIGRO

POISON

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.)

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>	95.0%
TOTAL	100.0%

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

EPA REG. NO. 5481-493

EPA EST. NO. 34704-CO-1

ACCEPTED WITH COMMENTS  
in EPA Letter dated

JAN 19 2001

5481-493

### FIRST AID

<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

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### Emergency Telephone Number

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Questions? Call 1-323-264-3910.

### Note to Physician

ATROPINE IS THE EMERGENCY ANTIDOTE FOR FORTRESS INSECTICIDE POISONING. 2-PAM IS ALSO ANTIDOTAL AND MAY BE USED IN CONJUNCTION WITH ATROPINE. CALL A PHYSICIAN AT ONCE IN ALL CASES OF SUSPECTED POISONING.

#### 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, consciousness 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 1-323-264-3910.

## 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.

Do not attempt to open or tamper with the container. Do not attempt to repair the SMARTBOX application system. If repairs are necessary, contact your Sales Representative or the manufacturer of the application system.

### Personal Protective Equipment (PPE)

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

Loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves (except for applicators) such as barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, Polyvinyl Chloride (PVC) ≥14 mils, or Viton ≥14 mils

### User Safety Requirements

Follow manufacturer's instructions for cleaning/maintaining PPE. All washable PPE should be washed in detergent and hot water prior to reuse. Keep and wash PPE separately from other laundry.

### Engineering Controls

IMPORTANT: The SmartBox system when used correctly qualifies as a closed loading system under the WPS. Loaders using the SmartBox system must:

- Wear the PPE specified above for loaders
- In addition to wearing the required PPE, have immediately available for use in case of an emergency
  - Chemical-resistant apron
  - Chemical-resistant footwear, and
  - NIOSH-approved respirator with either (1) an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), (2) a canister approved for pesticides (MSHA/NIOSH approval prefix TC-14G), or (3) an organic-vapor (OV) cartridge or canister with any N, R, P, or HE prefilter.

Applicators must be in enclosed cabs and must:

- Wear the PPE specified above for applicators
- In addition to wearing the required PPE, have available for use coveralls, chemical-resistant gloves, and protective eyewear if it is necessary to exit the cab and contact pesticide-treated surfaces in the treated area
- Remove PPE that was worn in the treated area before reentering the cab, and
- Store all PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

### Users 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 the outside of the gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### 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.

### 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.

**Double Notification:** Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

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, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, Polyvinyl Chloride (PVC) ≥14 mils, or Viton ≥14 mils
- Shoes plus socks.

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

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## 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<sup>®</sup>, Basis<sup>®</sup> and all other corn herbicides may be applied to FORTRESS-treated corn.

### Application Rate

- APPLY FORTRESS 5G AT 3.0 OZ. PER 1,000 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<sup>®</sup> 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.

### 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 non-corrosive to equipment and is nonflammable.

### Crop Rotational Intervals

- Corn..... 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 1,000 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 and calibration.

Do not attempt to open or tamper with the container. Do not attempt to repair the SMARTBOX application system. If repairs are necessary, contact your AMVAC Sales Representative or the manufacturer of the application system.

### Resistance

Some insects are known to develop resistance to products used repeatedly for control. When this occurs, the recommended dosages fail to suppress the pest population below the economic threshold. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of active classes of insecticides on succeeding generations and targeting the most susceptible life stage. Consult your local agricultural authorities for details.

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### **Integrated Pest Management**

AMVAC recommends the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

### **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.

### **LIMITED WARRANTY AND DISCLAIMER**

The manufacturer warrants (a) that this product conform to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

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AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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