



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

August 1, 2019

Christopher Davis
Registration Manager
AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660

Subject: Notification per PRN 98-10 – Change of Primary Brand Name from Fortress 2.5G Granular Insecticide to Chlorethoxyfos 2.5G Granular Insecticide and Other Minor Edits
Product Name: Chlorethoxyfos 2.5G Granular Insecticide
EPA Registration Number: 5481-494
Application Date: August 10, 2018
Decision Number: 545227

Dear Mr. Davis:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, you may contact please contact Briana Hanlon at (703) 347-8337 or by email at hanlon.briana@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Walsh".

Michael Walsh, Product Manager 11
Invertebrate & Vertebrate Branch 2
Registration Division
Office of Pesticide Programs

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.

Chlorethoxyfos 2.5G

Granular Insecticide

FOR USE ON CORN ONLY

NOTIFICATION

5481-494
 The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated: 08/01/2019

TO CONTROL CORN ROOTWORMS, WIREWORMS, CUTWORMS, SEEDCORN MAGGOTS, WHITE GRUBS, GRAPE COLASPIS AND SYMPHYLANS ON FIELD CORN, SEEDCORN, SWEET CORN, AND POPCORN.

ACTIVE INGREDIENT:	By Weight
Chlorethoxyfos: Phosphorothioic acid, O,O-diethyl O-(1,2,2,2-tetrachloroethyl)ester	2.5%
INERT INGREDIENTS:	<u>97.5%</u>
TOTAL	100.0%

STOP! READ LABEL BEFORE USE
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 this label, find someone to explain it to you in detail.)

FIRST AID Organophosphate	
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 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 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.

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-494
EPA Est. No. 5481-AL-1

Net Weight: 50 lbs.



FIRST AID (Cont.)

Organophosphate

EMERGENCY INFORMATION

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:

Transportation: CHEMTREC.....1-800-424-9300

Other: AMVAC.....1-323-264-3910

NOTE TO PHYSICIAN

This product is an organophosphate insecticide. ATROPINE IS THE EMERGENCY ANTIDOTE FOR **CHLORETHOXYFOS** INSECTICIDE POISONING. 2-PAM is also antidotal and may be used in conjunction with atropine.

WARNING SYMPTOMS

Chlorethoxyfos 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 1-323-264-3910.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING: 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.

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

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

- Loaders must also wear a respirator with 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), or a NIOSH approved respirator with an (OV) cartridge, or a canister with with any N, R, P or HE prefilter.

See Engineering Controls for additional requirements

User Safety Requirements

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

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.

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 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 cleaning equipment or disposing of equipment washwaters. Apply this product only as specified on this label.

Granules lying on the soil surface at loading areas and in turning areas at row ends must be incorporated into the top one-inch of soil using suitable incorporation equipment to remove the possible hazard to birds and other wildlife.

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.

AGRICULTURAL USE REQUIREMENTS (Cont.)

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.

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

When emptying bags, pour downwind and allow the minimum of free fall of granules. Do not pour at face level and do not allow dust to reach the breathing zone.

GENERAL INFORMATION

Chlorethoxyfos 2.5G 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, seedcorn maggots, white grubs, grape colaspis and symphylans.

Herbicide Compatibility Information

All registered corn herbicides may be applied to **Chlorethoxyfos**-treated corn.

Recommended Applications

Crop	Pest	Dosage
Field Corn Seedcorn Sweet Corn Popcorn	Corn Rootworm -Northern -Western -Southern	7.5 to 9.0 ounces per 1,000 feet of row
	Cutworms Wireworms White Grubs Seedcorn Maggots Grape Colaspis Symphylans	6.0 to 7.5 ounces per 1,000 feet of row

Application

Chlorethoxyfos 2.5G should be applied with a granular pesticide applicator properly calibrated to assure accurate placement and proper application rate. For optimal control of labeled pests apply **Chlorethoxyfos 2.5G** in-furrow at planting. **Chlorethoxyfos 2.5G** may also be applied as a T-band with incorporation into the top one-inch of soil. DO NOT apply as a surface band behind the press wheel.

In-Furrow Application at Planting

Chlorethoxyfos 2.5G 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 that the granules drop into the open seed furrow and are completely covered with soil. In-furrow application provides optimal control of corn rootworms, wireworms, white grubs, seedcorn maggots, and grape colaspis.

T-Band Application at Planting

Chlorethoxyfos 2.5G can be applied in conventional, conservation or no-till corn as a T-band treatment. Apply the granules in a 4 to 5 inch band over the furrow behind the planter shoe and in front of the press wheel(s). Granules must be incorporated into the top one-inch of soil using tines, drag chains, or other suitable equipment. T-band application will enhance control of cutworms.

Further Application Information

- Granules exposed on the soil surface in the turn areas at the row ends and in loading areas must be incorporated into the top one-inch of soil immediately after treating fields by discing, harrowing or other suitable means.
- Granular application equipment must be properly calibrated to accurately apply **Chlorethoxyfos 2.5G**.
- 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.
- **Chlorethoxyfos 2.5G** is non-corrosive to equipment and is nonflammable.

Crop Rotational Intervals

- **Corn**.....Anytime
- **Other crops**30 days

Determining the Amount of **Chlorethoxyfos 2.5G** per acre

To determine the approximate amount of **Chlorethoxyfos 2.5G** needed per acre, select the use rate per 1,000 row feet and the row spacing.

Amount of Chlorethoxyfos 2.5G per 1,000 feet of row	Pounds of Chlorethoxyfos 2.5G Required Per Acre at Various Row Spacings						
	15" / twin row	20"	22"	30"	34"	36"	38"
6.0 oz.	13.0	9.8	8.9	6.5	5.8	5.5	5.2
7.5 oz.	16.3	12.3	11.1	8.2	7.2	6.8	6.5
9.0 oz.	19.6	14.7	13.4	9.8	8.6	8.2	7.8

CALIBRATION INSTRUCTIONS & GAUGE SETTINGS

Equipment Calibration

The following **equipment calibration procedures** should be performed to ensure that the proper amount of **CHLORETHOXYFOS 2.5 G** will be applied:

1. Fill insecticide hoppers with **CHLORETHOXYFOS 2.5G**.
2. Attach a collection container to each tube opening to catch the insecticide.
3. Set your planter to the initial gauge settings shown in the chart.
4. Measure off 250 ft of row and drive planter, while metering the insecticide, the premeasured distance at the speed at which you will be planting.
5. The target catch weight for each container (at the 7.5 oz recommended rate) is 1.88 oz of granules. Determine the amount caught in each row either by weight or by volumetric approximation of weight.
6. Repeat the calibration procedure above, as needed, until the insecticide caught in each container is as close as possible to the target amount.

Approximate Equipment Gauge Settings Chlorethoxyfos 2.5G at 7.5 oz per 1,000 ft of row					
Equipment	Speed in mph				
	4	5	6	7	8
Case International Harvester (Gate/Dial) -Old	<u>1</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
Case International Harvester (Gate/Dial) -New	8	0	1	3	5
Gandy	<u>1</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
John Deere MaxEmerge 2	9	0	2	4	6
	18	20	22	24	25
	22	26	28	35	39

(Models 7200-7300)					
John Deere 7000 MaxEmerge (Even) (0-10-20-30-40)	13	15	17	19	22
John Deere 7000 MaxEmerge (Odd) (5-15-25-35-45)	12	14	16	17	18
John Deere MaxEmerge Plus	22	26	30	35	39
Kinze (Old)	13	14	16	18	20
Kinze (New)	20	24	28	32	36
White Series 5100	9	13	15	17	20
White Series 6100	15	17	18	19	21

NOTE: These settings should be used as **starting points only**. Follow manufacturers recommendations for calibration of the specific equipment you are using or the calibration instructions above to make final adjustments. After initial calibration, recheck flow rate occasionally to make sure equipment wear, changing conditions, etc. have not caused a change in flow rate.

STORAGE AND DISPOSAL

PESTICIDE STORAGE: Store in a secure, locked, dry and temperate area where children, unauthorized persons or animals cannot enter. Store in original container. Keep the container closed 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.

PESTICIDE 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 DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Completely empty bag into application equipment

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms 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.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

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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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