70506-9

01/30/2002

JAN 30 2002

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Mr. Robert S. Butz, Ph.D. Agent for United Phosphorous, Inc. ChemReg 2239-H Tacketts Mill Drive Lake Ridge, VA 22192-3026

Dear Dr. Butz:

Subject: Amendment- storage and disposal statement Tengard AG EPA Registration Number 70506-9 Your submission dated January 16, 2002

The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(7)(a), is acceptable provided that you:

- Submit and/or cite all data or other material required for registration/reregistration of your product under FIFRA section 3(c)(5) or FIFRA section 4 when the Agency requires all registrants of similar products to submit such data.
- 2. Submit two (2) copies of your final printed labeling before you release the product for shipment.

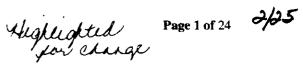
If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

Sincerely,

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

Enclosure



# **RESTRICTED USE PESTICIDE** Due to Toxicity to Fish and Aquatic Organisms

For retall 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

# **TENGARD AG Insecticide**

EPA Reg. No. 70506-9

EPA Est. No. 53883-TX-002

Active Ingredient	
Permethrin*	
Other Ingredients**	<u>63.2%</u>
TOTAL	

\*cis/trans ratio: Max. 42% (±) cis and min. 58% (±) trans \*\* Contains petroleum distillates.

Contains 3.2 pounds permethrin per gallon as an emulsifiable concentrate.

# **KEEP OUT OF REACH OF CHILDREN**

# CAUTION

IF SWALLOWED	Immediately call a poison control center or doctor
	<ul> <li>* Do not induct vomiting unless told to do so by a poison control center or doctor</li> </ul>
	Do not give any liquid to the person.
	Do not give anything by mouth to an unconscious person
IF ON SKIN OR	Take off contaminated clothing
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> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> </ul>
	<ul> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye</li> </ul>
	Call a poison control center or doctor for treatment advice
IF INHALED	Move person to fresh air
	<ul> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth if possible</li> </ul>
	Call a poison control center or doctor for further treatment advice
	FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL
	1-800-F-A-S-T-M-E-D (327-8633)

NOTE TO PHYSICIAN: Contains petroleum distillate – vomiting may cause aspiration pneumonia

United Phosphorus Inc. 423 Riverview Plaza Trenton, NJ 08611

Net Contents:

ACCEPTED JAN 3 0 2002 Under the Federal Insecticide. Fungicide, and Rodenticilde Act as amended, for the pesticide registered under

EPA Reg. No. 7/1.50

### PRECAUTIONARY STATEMENTS.

### Hazards to Humans & Domestic Animals.

**CAUTION.** Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Do not allow people or pets on treated surfaces until the spray has dried. Do not touch treated surfaces until the spray has dried.

### **Environmental Hazards**

This product is highly toxic to bees exposed to treatment and for 3 days following treatment. Do not apply this pesticide to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period. The 3 day limitation does not apply if the applicator operates in a state with a formal, state-approved bee protection program, and the applicator follows all applicable requirements of the state-approved program designed to ensure that managed bees are not present in the treatment area during this time period.

This product is extremely toxic to 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. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas.

### **Physical/Chemical Hazards**

Do not use or store near heat or open flame.

### Personal Protection Equipment (PPE)

All pesticide handlers (mixers, loaders, and applicators) must wear long-sleeved shirt and long pants, socks, shoes, and chemical-resistant gloves. After the product is diluted in accordance with label directions for use, and/or when mixing and loading using a closed spray tank transfer system such as U-Turn, or an in-line injector system, shirt, pants, socks, shoes, and waterproof gloves are sufficient.

Follow manufacturer's instruction for cleaning/maintaining PPE. If no such instructions are available for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### User Safety Recommendations:

Users should:

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

## **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.

**Resistance:** Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local agricultural advisor for the best alternative method of control for your area.

## **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 on this product that are covered by Worker Protection Standard.

Do not enter or allow worker entry to 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 over long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as barrier laminate or butyl rubber.
- Shoes plus socks.

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### Chemigation

Apply this product only through the following types of sprinkler irrigation: center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform distribution of treated water. For questions concerning calibration consult the equipment manufacturer or your local State Extension Service representative. A person knowledgeable of the chemigation system and responsible for its operation, or person under the supervision of the person responsible, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitter with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

TENGARD AG should be applied continuously for the duration of the water application. TENGARD AG should be diluted in sufficient volume to ensure accurate application of the area to be treated. When using chemigation, a minimum of 0.1 inch per acre of irrigation water is recommended. Agitation generally is not required when a suitable diluent is used. A diluent test should be conducted to ensure that phase separation will not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

### **Commercial Impregnation and Application on Dry Bulk Fertilizers**

TENGARD AG may be impregnated on dry bulk fertilizers. When applied as directed, TENGARD AG /dry bulk fertilizer mixtures provide insect control equal to that provided by the same rates of TENGARD AG applied in water.

The TENGARD AG /fertilizer mixtures may be surface applied or shallow incorporated. The higher rate should be used if incorporation is used.

Impregnation: Apply using a minimum of 200 pounds of dry bulk fertilizer per acre and up to a maximum of 450 pounds per acre with the recommended amount of TENGARD AG per acre. Use a closed rotary-drum mixer or a similar type of closed blender equipped with suitable spray equipment. The spray nozzle(s) should be position to provide a uniform, fine spray pattern over the tumbling fertilizer for thorough coverage. The physical properties of fertilizers vary particularly in liquid absorption capacity. When absorptivity is sufficient, simply spray impregnation of the fertilizer with TENGARD AG provides a satisfactory, dry mixture. If the absorptive capacity is inadequate, the use of a highly absorptive powder is required to provide a dry, flowable mixture. Microcel E (Johnson Manville Product Corporation) is a recommended absorbent powder. Generally less than 2% by weight of Microcel E is required. DO NOT impregnate TENGARD AG onto straight coated ammonium nitrate or straight limestone because these materials will not absorb the insecticide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with TENGARD AG.

The amount of TENGARD AG actually required in the preparation of individual fertilizer mixtures should be determined carefully for each production operation. This is necessary to ensure that the amount of pesticide actually contained in the mixture applied to the soil represents the correct rat of use. Bulk fertilizer impregnated with TENGARD AG should be applied immediately, not stored.

All individual state regulations relating to bulk dry fertilizer blending, registration, labeling and application of the mixtures are the responsibility of the individual and/or company selling the fertilizer and TENGARD AG mixture.

### **GENERAL USE INFORMATION**

#### Important:

TENGARD AG is toxic to fish. Exercise care when making applications near ponds, lakes, streams, reservoirs and other aquatic environments where fish are present.

For advice concerning current control practices with relation to specific local conditions, consult your local State Cooperative Extension or regulatory agencies.

TENGARD AG is formulated as an emulsifiable concentrate (EC) formulation and is to be diluted with water and applied as an emulsion. When tank mixing as an emulsion with other products, observe all precautions and limitations on the labels of each product in the mixture.

TENGARD AG can be tank-mixed with natural pyrethrin-containing products or Insect Growth Regulators (IGRs). Do not tank mix with dichlorvos (DDVP) or other furnigant products.

## **DIRECTIONS FOR APPLICATION**

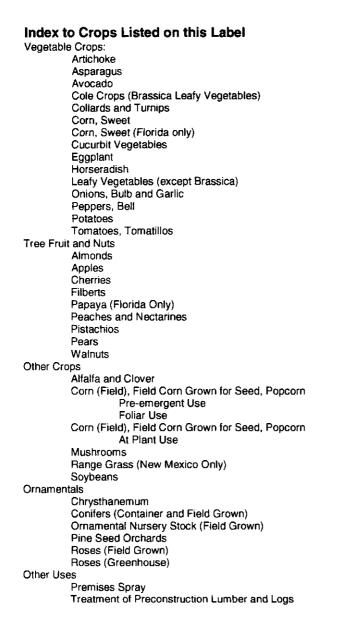
Unless otherwise directed by registered supplemental labeling, follow the Directions for Use in each crop group section.

TENGARD AG is a 3.2 pounds per gallon formulation of the insecticide permethrin. Apply TENGARD AG when insects appear or feeding is noticed. The higher rate should be used as pest populations increase. Repeat the application as necessary to maintain control. Use sufficient water to obtain full coverage. With the exception of crops listed below, rotational crops should not be planted within 60 days of last application.

This label must be in the possession of the user at the time of application.

### RATE CONVERSION CHART

POUNDS ACTIVE PER ACRE	FORMULATION OUNCES PER ACRE
0.05	2.0
0.10	4.0
0.15	6.0
0.20	8.0
0.25	10.0
0.30	12.0
0.40	16.0



# **VEGETABLE CROPS**

ARTICHOKE				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	
Artichoke	Artichoke plume moth Leafminers	4 - 12 (0.1 - 0.3)	Do not apply more than 5 applications or 1.5 pounds of active ingredient per acre per season.	

Applications may be made up to harvest.

ASPARAGUS			
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS
Asparagus	Asparagus beetle Cutworms	2 – 4 (0.05 – 0.1)	Do not apply more than 0.4 pound of active ingredient per acre per season.
	Asparagus beetle Japanese beetle (Adult stage)* Lygus bugs Tarnished plant bug	<b>4</b> (0.1)	Post harvest application only. Apply to the fern stage of the asparagus plant after spear harvest when larval and adult stages are present. *Not for control of this insect in California

Apply by ground in a minimum of 10 gallons of water per acre. Use sufficient water to obtain full coverage of foliage.
Do not apply within 1 day of harvest.

AVOCADO				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	
Avocado	Avocado caterpillar Avocado lace bug Avocado leafhopper Avocado leafhopper Avocado leafroller Avocado looper Avocado tree girdler Avocado whitefly Brown soft scale Mirids Ornivorous looper Orange tortrix Scale crawlers Spanworm Thrips Twig borers	8 (0.2)	Do not apply more than 1.2 pounds of active ingredient per acre per season. Apply when insects first appear and repeat at 7 to 10 day intervals as needed to provide control.	

Do not apply within 7 days of harvest.

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CROP	TARGET PESTS	RATE FL OZ/A (LBS_A!/A)	REMARKS
Broccoli, Chinese Broccoli (gai lon, white flowering broccoli), Brussels Sprouts; Cauliflower; Cavalo broccoli, Kohlrabi	Cabbage looper Armyworm spp. Imported cabbageworm Diamondback moth Plant bugs Thrips Cabbage aphid*	2 - 4 (0.05 - 0.1)	Apply every 5 days as needed. Do not apply more than 0.8 pound of active ingredient per acre per season.
Cabbage, Chinese Cabbage (napa, tight-headed varieties only)	Cabbage looper Imported cabbageworm Diarnondback moth Southern white butterfly Cabbage aphid*	2 - 8 (0.05 - 0.2)	Apply every 5 - 10 days or as needed. Do not apply mor 1.0 pound of active ingredient per acre per season.
Cut	Armyworm spp. Cutworms Flea beetles	4 – 8 (0.1 – 0.2)	

\* Aids in the suppression only

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CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS
Collards (AR, AZ, GA, IL, NC, OK, SC, and TX only)	Beet armyworm Cabbage looper Corn earworm Cutworms Diamond back moth European corn borer Fall armyworm Green cloverworm Imported cabbageworm Leafhoppers Leafminer Southern armyworm Southern white butterfly Tobacco budworm Vegetable leafminer Aphids*	2 - 4 (0.05 - 0.1)	Apply with ground equipment only. Apply as needed. Do not exceed 8 applications. AR, TX: Do not apply more than 0.8 pound of active ingredient per acre per season.
Turnips (FL, GA, IL, IN, OK, SC, TX, and WA only)	Beet armyworm Cabbage looper Corn earworm Cutworms Diamond back moth European corn borer Fall armyworm Green cloverworm Imported cabbageworm Leafhoppers Leafminer Southern armyworm Southern armyworm Southern armyworm Southern armyworm Vegetable leafminer Aphids*	2 - 4 (0.05 - 0.1)	<ul> <li>Apply with ground equipment only. Apply as needed. Do not exceed 8 applications. Do not graze treated areas or feed crop refuse to livestock.</li> <li>TX, IN: Do not apply more than 0.8 pound of active ingredient per acre per season.</li> <li>SC, GA, FL, WA: Do not apply more than 0.4 pound of active ingredient per acre per season.</li> </ul>

CORN, SWEET			
CROP	TARGET PESTS	RATE FL OZ/A (LBS Al/A)	REMARKS
Corn, Sweet	Corn earworm Corn rootworm beetles" Cutworms European corn borer Fall armyworm Fiea beetle Hop vine borer Leathoppers Southern armyworm Stalk borers	4 - 8 (0.1 - 0.2)	Do not apply more 1.2 pounds of active ingredient per acre per season. Apply every 3 to 5 days or as needed. *Pest does not occur on this crop in California

Apply by air or ground equipment. By air, apply in a minimum of 2 gallons of water per acre. By ground, apply in a minimum of 10 gallons of water per acre. Use sufficient water to obtain full coverage of foliage. Do not apply within 1 day of harvest. .

CORN, SWEET (FLORIDA ONLY)				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	
Corn, Sweet	Aster leafhopper Corn earworm Cutworm European corn borer Fall armyworm Southern armyworm	4 - 10 (0.1 - 0.25)	Do not apply more 2.0 pounds of active ingredient per acre per season. Apply every 3 to 5 days or as needed.	

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		CUCURBIT	VEGETABLES
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS
Cucurbit vegetables*	Aphids Leafminers Squash bugs	8 (0.2)	Do not apply more than 1.6 pounds of active ingredient per acre per season.
	Cabbage looper Cucumber beetle (adult) Cutworms Leafhoppers Melonworm Pickleworm Plant bugs (including Lygus and Stink bugs) Rindworms Squash vine borer	4 - 8 (0.1 - 0.2)	
20 gallons of		ent water to obtain	um of 4 gallons of water per acre. By ground, apply in a minimum of full coverage of foliage.
Gherkin, Gourd ( balsam apple, bal cantaloupe, canta melon, pineapple squash, straightno	(edible) (includes hyotan, cu sam pear, bitter melon, Chir Noupe, casaba, crenshaw mu melon, Santa Claus melon, eck squash, vegetable marro	cuzza), Luffa spp lese cucumber), M elon, golden persh and snake melon), ow, zucchini), Wint	urd (Chinese preserving melon), Citron melon, Cucumber, . (includes hechima, Chinese okra), Momordica spp. (includes uskmelon (hybrids and/or cultivars of Cucumia melo, including true aw melon, honeydew melon, honey balls, mango melon, Persian Pumpkin; Summer Squash (includes crookneck squash, scallop er Squash (includes butternut squash, calabaza, hubbard squash, n (includes hybrids and/or varieties of Citrulius spp.)

		EGO	GPLANT
CROP	TARGET PESTS	RATE FL OZ/A (LBS Al/A)	REMARKS
Eggplant	Colorado potato beetle	8 (0.2)	Do not apply more 2.0 pounds of active ingredient per acre per season.
	Cabbage looper Flea beetles Vegetable leafminer	4 - 8 (0.1 - 0.2)	Apply as needed, using sufficient water to obtain uniform coverage.

• Apply by air or ground equipment. By air, apply in a minimum of 2 gallons of water per acre. By ground, apply in a minimum of 10 gallons of water per acre. Use sufficient water to obtain full coverage of foliage.

Do not apply within 3 days of harvest.

HORSERADISH				
TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS		
Imported crucifer weevil (Baris lepidii)	0.1% active solution (2 pt, 1 oz per 100 gallons)	As a spring preplant dip, soak sets for 30 minutes and air-dry before planting.		
	8 (0.2)	For foliar application, apply with ground equipment in a minimum spray volume of 20 gallons finished spray per acre. Make up to 3 foliar applications as needed to control weevil adults during oviposition.		
-	Imported crucifer weevil (Baris	TARGET PESTS     RATE FL OZ/A (LBS Al/A)       Imported crucifer weevil (Baris lepidii)     0.1% active solution (2 pt, 1 oz per 100 gallons)       8		

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		(LBS_AI/A)	
Be Co Cu Eu b Fal Gre Lea	hids et armyworm rn earworm tworms ropean corn oorer Il armyworm een cloverworm afminers uthern armyworm bacco budworm	4 - 8 (0.1 - 0.2)	Apply every 3-5 days or as needed. Do not apply more than 2.0 pounds of active ingredient per acre per season. For Spinach, do not apply more than 1.0 pound of active ingredient per acre per season.
Cal	alfa looper bbage looper afhoppers	2 - 8 (0.05 - 0.2)	

celery, Celtuce, Chervil, Chrysanthemum (edible-leaved and garland), Corn salad, Garden Cress, Upland Cress (yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Florence fennel (finochio), Head and Leaf Lettuce, Orach, Parsley, Garden Purstane, Winter Purslane, Radicchio (red chicory), Rhubarb, Swiss chard, Spinach (including New Zealand and vine, Malabar spinach, Indian spinach).

ONIONS, BULB and GARLIC				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	
Onion, bulb Garlic	Armyworms Onion thrips	6 - 12 (0.15 - 0.3)	Begin applications when pest appear and repeat as necessary to maintain control. Use the higher label rates as onion thrips	
	Cutworms Leafminers Onion maggots (adults) Stink bugs	4 - 12 (0.1 - 0.3)	population increases and avoid rescue situations. Do not apply more than 2.0 pounds active ingredient per acre per season.	

Apply by air or ground equipment. By air, apply in a minimum of 5 gallons of water per acre. By ground, apply in a minimum of 20 gallons of water per acre. Use sufficient water to obtain full coverage of foliage.
 Do not apply within 1 day of harvest.

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PEPPERS, BELL				
CROP	TARGET PESTS	RATE FL OZ/A (LBS Al/A)	REMARKS	
Peppers, bell	Cabbage looper Corn earworm Cutworms Flea beetle Pepper weevil Vegetable leafminer	4 - 8 (0.1 - 0.2)	Do not apply more than 1.6 pounds of active ingredient per acre per season.	
	European corn borer	8 (0,2)		

Do not apply within 3 days of harvest.

POTATOES				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	
Potatoes	Aster leafhopper Beet armyworm Cabbage looper Colorado potato beetle Cutworms European corn borer Potato aphid Potato flea beetle Potato leahopper Potato psyllid Potato tuberworm Tarnished plant bug	4 - 8 (0.1 - 0.2)	Do not apply more 1.6 pounds of active ingredient per acre pe season.	

• TENGARD AG also may be applied using refined non-volatile vegetable oil for control of listed pests. TENGARD AG should be diluted with oil and applied in a minimum of one quart total volume per acre using equipment calibrated to give adequate coverage. Use sufficient spray volume to obtain full coverage.

Do not apply within 14 days of harvest.

TOMATOES, TOMATILLOS				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	
Tomatoes Tomatillos	Beet armyworm Cabbage looper Colorado potato beetle Granulate cutworm Hornworms Southern armyworm Tomato fruitworm Tomato pinworm Vegetable leafminers	2 - 8 (0.05 - 0.2)	Do not apply more 1.2 pounds of active ingredient per acre per season. Do not apply to cherry tomatoes or other varieties which produce fruit less than one inch in diameter.	

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# TREE FRUIT AND NUTS

ALMONDS				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	
Almonds	Navel orangeworm Peach twig borer	8 - 16 (0.2 - 0.4)	Apply when insects appear and repeat as required to maintain control.	
			Apply by air or ground equipment. By air, apply in a minimum of 15 gallons of water per acre. By ground, apply in 25-400 gallons of finished spray per acre.	
	Ants	16 (0.4)	Apply by ground equipment only in a minimum of 15 gallons of water per acre. Application should follow mowing of weed growth to ensure maximum coverage of the soil surface. Overhead moisture following application will enhance activity.	

• Do not apply more than 2.0 pounds of active ingredient per acre per season.

Do not graze livestock in treated areas.

• Do not feed cover crops from treated areas to livestock.

Do not apply within 7 days of harvest.

CROP	TARGET PESTS	RATE FL OZ/A (LBS Al/A)	REMARKS		
Apples	Green fruitworm Oblique banded leafroller Plum curculio Redbanded leafroller Rosy apple aphid Spotted tentiform leafminer Tarnished plant bug White apple leafhopper	4 - 16 (0.1 - 0.4)	Do not apply more than 0.6 pound of active ingredient per acre per season. Apply when insects appear and repeat as required to maintain control. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

CHERRIES			
CROP	TARGET PESTS	RATE FL OZ/A (LBS Al/A)	REMARKS
Cherries (includes Sweet Cherries and Tart Cherries)	Green fruitworm Lesser peach tree borer Plum curculio Redbanded leafroller Rose chafer Tarnished plant bug	4 - 8 (0.1 - 0.2)	Apply when insects first appear. East of the Rockies: Do not exceed 6 applications per season, with no more than 4 applications after petal fall. West of the Rockies: Do not apply more than 4 applications pe season, with no more than 3 applications after petal fall.

Do not feed cover crops from treated areas to livestock.

Do not apply within 3 days of harvest.

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FILBERTS				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	
Filberts	Filbertworm Oblique banded leafroller	8 - 16 (0.2 - 0.4)	Do not apply more than 1.6 pounds of active ingredient per acre per season. Apply when insects appear. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.	

gallons of finished spray per acre. Do not apply within 14 days of harvest.

PAPAYA (Florida Only)				
CROP	TARGET PESTS	RATE FL OZ/A (LBS Al/A)	REMARKS	
Рарауа	Aphids Brown soft scale Mealybug Papaya fruit fly	8 (0.2)	Do not apply more than 1.2 pounds of active ingredient per acre per season. Spray to wet all foliage. Apply when insects first appear and repeat at 7-10 day intervals as needed to provide control.	
	Papaya webworm Papaya whitefly Scale crawlers		Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.	

Apply by ground equipment only. Apply in 25-400 gallons of finished spray per acre. Do not apply within 7 days of harvest. .

CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS
Peaches Nectarines	Green fruitworm Lesser peach tree borer Oriental fruit moth Peach twig borer Plum curculio Rose chafer Tarnished plant bug	4 – 12 (0.1 – 0.3)	Do not apply more than 1.5 pounds of active ingredient per acre per season. Spray to wet all foliage. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.

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	PISTACHIOS				
CROP	TARGET PESTS	RATE FL OZ/A (LBS Al/A)	REMARKS		
Pistachios	Leaffooted bugs Naval orangeworm Peach twig borer Plant bugs Stink bugs	8 - 16 (0.2 - 0.4)	Use sufficient water to obtain full coverage of foliage.		
	Ants	16 (0.4)	Application should follow mowing of weed growth to ensure maximum coverage of the soil surface. Overhead moisture following application will enhance activity.		

• Do not apply after 10 percent hull split.

- Do not apply more than 1.6 pounds of active ingredient per acre per season.
- Do not graze livestock in treated areas.
- Do not feed cover crops from treated areas to livestock.
- May be applied up until harvest.

PEARS					
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS		
Pears (Dormant through Delayed Dormant)	Pear psylla	8 - 16 (0.2 - 0.4)	Do not apply more than 0.8 pound of active ingredient per acre per season. May be combined with 2 to 8 gallons of spray oil per acre. Apply during the dormant through delayed dormant growth periods only.		
Pears (Pre-Bloom)	Codling moth Green fruitworm Pear psylla	8 – 16 (0.2 – 0.4)	Do not apply more than 0.8 pound of active ingredient per acre per season. Pre-bloom sprays can be applied from dormant through bud burst stages.		

Apply by air or ground equipment. By air, apply in a minimum of 10 gallons of water per acre. By ground, apply in 25-400 gallons of finished spray per acre. Use sufficient water to obtain uniform coverage.

Do not graze livestock in treated areas.

Do not feed cover crops from treated areas to livestock.

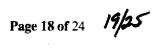
CROP	TARGET PESTS	RATE FL OZ/A (LBS Al/A)	REMARKS
Walnuts	Codling moth Navel orangeworm Walnut husk fly	8 – 16 (0.2 – 0.4)	Do not apply more than 1.6 pounds of active ingredient per acre per season. Apply when insects appear. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.

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# **OTHER CROPS**

		ALFALFA	and CLOVER
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS
Alfalfa Alfalfa grown for seed Clover (Includes lucerne, sainfoin, holy clover, esparcet, birdsfoot trefoil and varieties and/or hybrids of these)	Alfalfa caterpillar Armyworms Biue alfalfa aphid Cutworms Green cloverworm Green peach aphid Loopers Pea aphid Spotted alfalfa aphid Velvetbean caterpillar Webworms Alfalfa weevil Cucumber beetle Egyptian alfalfa weevil Meadow spittlebug Plant bugs (including Lygus spp.) Potato leafhopper	2 - 8 (0.05 - 0.2) $4 - 8$ (0.1 - 0.2)	Do not apply more than 0.2 pound of active ingredient per cutting. Use higher recommended dosage for increased pest pressure or for increased residual pest control. Avoid application when bees are actively foraging by applying during the early morning or during the evening hours.
10 gallons of wa foliage is dense May be applied t	ter per acre. Use higher and/or when pest popula	gallonage, 5-10 gallonage, 5-10 gallonage, 5-10 ga tions are high. es of 0.1 pound pe	um of 2 gallons of water per acre. By ground, apply in a minimum of allons by air or 20 by ground, of finished spray per acre when r active per acre or less are used. When rates greater than 0.1 s of harvest.

CORN (FIELD), FIELD CORN GROWN FOR SEED, POPCORN				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	



Field Corn, Field corn grown for seed, Popcorn (Pre-emergent Use)	Armyworm Cutworm Stalk borers	4 - 8 (0.1 - 0.2) as a broadcast spray OR	May be applied as a preplant incorporated, pre-emergence, or at planting time application. Apply in the time period from 5 days prior to planting up to emergence of the crop. Apply as a broadcast spray by ground or air or 4-15 inch band using sufficient spray volume to achieve adequate coverage.
		0.3 – 0.6 oz per 1000 linear feet row (based on a 4" band and 40"	Linear row calculations should be used proportional to the standard Band Width/Row Width formula to adjust rates for different band widths or row spacings. Use higher rates of TENGARD AG when incorporating into the soil without exceeding the recommended dosage.
		row spacing)	When using tank mixes, observe all restrictions and precautions which appear on the labels of these products. Provide constant agitation during mixing and application to keep the mixture in solution.
Field Corn, Field Corn Grown for Seed, Popcorn (Foliar Use)	Armyworm (including Fall Armyworm) Corn borer European, Southwestern Corn earworm Corn rootworm beetles Cutworm Flea beetle Hop vine borer Stalk borers Webworms	4 - 8 (0.1 - 0.2)	Do not apply more than 0.6 pound of active ingredient per acre per season. Do not make treatments less than 6 days apart. When treating for stalk borers, TENGARD AG must be applied when or shortly before the stalk borer larvae are moving into the corn from surrounding weeds and grasses. Mowing or burndown herbicide is suggested to initiate movement. For control of corn earworm, apply just before silking and continue as necessary to maintain control.
	Western bean cutworm	2 - 4 (0.05 - 0.1)	

Do not apply within 30 days of harvest of grain or fodder (stover). Forage may be harvested on the day of application.

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	CORN (FIE	LD), FIELD C	ORN (	ROWN FOR SEED, POPCORN
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A		REMARKS
Field Corn, Field corn grown for seed, Popcorn (At Plant Use)	Armyworm Cutworm Seed corn maggot* Wireworm*	0.3 oz per 1 linear feet row		Apply as an in furrow, band or T-band treatment using a minimum 4" band. Use table below to determine the TENGARD AG needs for each acre. * Not for use in California
Row Spacings (inch	es)	40	30	20
TENGARD AG (oun		4.0	6.0	8.0
TENGARD AG (pou	inds ai per acre)	0.10	0.15	0.20

MUSHROOMS (Mushroom Houses and Adjacent Premise Areas)					
CROP	TARGET PESTS	RATE OZ (LBS AI)	REMARKS		

Mushrooms (Mushroom houses and adjacent premise areas) Mushroom flies (Sciarid and Phorid adults) 2 - 2.5 (0.05 - 0.06 Phorid adults)	<ul> <li>Preparation of the building prior to fogging: (1) Close all doors, windows, and ventilators, (2) Lock or barricade all entrances, turn off pilot lights, post warning signs, and take precautions to prevent persons and animals from entering the area. Use prior to filling the house, during cool-down, during spawning, up to pinning, and between breaks. Do not use when mushrooms are present. Treat once daily as needed when flies appear. Do not make more than 20 applications prior to pinning of first break; apply no more than two applications between each break. Do not apply more than 30 applications total per crop of 5 breaks. Length of exposure time should be limited to 1 hour; then ventilate the house. Use fans to ventilate in houses that do not have forced air circulation. Wear a respirator with either an organic vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).</li> </ul>
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• Apply in 30 ounces of water or suitable diluent. Use 1 quart of solution per standard double house (35,000 cu. ft.: 8000 sq. ft.).

Apply as a fogging or aerosol treatment.
Do not apply within 3 days of harvest.

RANGE GRASS (New Mexico Only)					
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS		
Range Grass (New Mexico only)	Range caterpillar	0.4 (0.1)	Apply as needed. Do not apply more than once per year. Cattle may be present during application.		

Do not harvest or feed hay to livestock.

SOYBEANS				
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS	

Soybeans	Bean leaf beetle Cabbage looper Corn rootworm beetle Cutworms Flea beetle Green cloverworm Japanese beetle Mexican bean beetle Potato leafhopper Saltmarsh caterpillar (Woolybear caterpillar) Thistle caterpillar Velvetbean caterpillar	2 - 4 (0.05 - 0.1)	Do not apply more than 0.4 pound of active ingredient per acre per season. Do not graze treated areas or feed soybean forage or hay.
	Beet armyworm Corn earworm Soybean looper Webworms	4 - 8 (0.1 - 0.2)	

Apply by air or ground equipment. By air, apply in a minimum of 2 gallons of water per acre. By ground, apply in a minimum of 10 gallons of water per acre.

TENGARD AG may also be applied using refined non-volatile vegetable oil for control of listed pests. TENGARD AG should be diluted with oil and applied in a minimum of 1 quart total volume per acre using equipment calibrated to give adequate coverage. When applying in water by aircraft, 1 quart of oil may be substituted for 1 quart of water per gallon of finished spray.
 Do not apply within 60 days of harvest.

# ORNAMENTALS

	_	CHRYSAI	NTHEMUMS
CROP	TARGET PESTS	RATE OZ (LBS AI)	REMARKS
Chrysanthemums	Liriomyza leafminer flies	20 (0.5) per 100 gallons of water (1 teaspoon per gallon)	Avoid spraying the blooms. May be applied on a weekly schedule.

CONIFERS (Container and Field Grown)						
CROP	TARGET PESTS	RATE FL OZ/A (LBS AI/A)	REMARKS			
Conifers (container and field grown)	Nantucket pine tip moth	4 - 8 (0.1 - 0.2)	Begin application when the adults appear and repeat at 5 to 7 day intervals or as needed throughout the season.			

## **ORNAMENTAL NURSERY STOCK (Field Grown)**

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CROP	TARGET PESTS	RATE OZ (LBS AI)	REMARKS
Ornamental nursery stock (field grown)	Bagworm Beet armyworm Cabbage looper Citrus thrips Lace bug Leafhoppers Leafminers Whiteflies	4 - 8 (0.1 - 0.2) per 100 gallons of water	TENGARD AG may be used to control specified pests on non- edible ornamentals and non-bearing plants of fruiting species.

 Caution: Marginal leaf burn may occur on Salvia, Dieffenbachia and Pteris Fern. Application to blooming plants may cause browning of petals.

• TENGARD AG has demonstrated excellent plant safety; however, not all species and cultivars have been tested. Before treating large numbers of plants of a particular variety, treat a few plants and observe prior to full scale application.

treating large numbers of plants of a particular variety, treat a few plants and observe pror to full scale application.

PINE SEED ORCHARDS					
CROP	TARGET PESTS	RATE OZ	REMARKS		
Pine seed orchards	Coneworms Seed bugs	8 in 100 gallons of water (0.025% dilution by weight)	For high volume sprayers, apply 5 to 10 gallons of finished spray per tree.		
		42 in 100 gallons of water (0.125% dilution by weight)	For low volume sprayers, apply 100 gallons per tree.		
		30 per acre	For aerial application, use in not less than 10 gallons of water.		
To control other cone Repeat applications a • Do not graze live		pplication within 1 we – make first application do not apply more the	eek of female flower closure or peak pollen flight. on within 30 days following female flower closure. an 6 applications.		

Avoid contact with open water.

ROSES (Field Grown)					
	REMARKS	RATE FL OZ/A (LBS_AI/A)	TARGET PESTS	CROP	
		4 - 8 (0.1 - 0.2)	Heliothis spp.	Roses (field grown)	
	urn of 2 gallons of water per acre. By grou	4 - 8 (0.1 - 0.2)		(field grown)	

**ROSES (Greenhouse)** 

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CROP	TARGET PESTS	RATE OZ (LBS AI)	REMARKS
Roses (greenhouse)	Beet armyworm Cabbage looper Omnivorous leafroller	8 (0.2) per 100 gallons of water	
Excitement, F Crier, Tropica	Forever Yours, G. Wave, J	ack Frost, Jr. Bridesr ies may vary in their	greenhouse roses: Ballena, Bettina, Cara Mia, Coquette, naid, Matador, Paul's Pink, Samantha, Seventeen, Sonia, Town sensitivity TENGARD AG, and a small number of plants should be to commercial use.

# **OTHER USES**

SITE	TARGET PESTS	RATE OZ	REMARKS
For Application In: Dairies, Barns, Feedlots, Stables, Poultry houses, Swine and Livestock houses	House flies, Stable flies and other manure breeding flies Also aids in the reduction of Cockroaches, Mosquitoes and Spiders	4 to 12.5 gallons of water Sprayer: apply 1 gallon per 750 sq. ft. of space	Spray directly to walls and ceiling as residual surface treatment only. Re-treat as necessary, but not more often than once every 2 weeks. Do not treat manure or litter.

# General Information

### TREATMENT OF PRECONSTRUCTION LUMBER AND LOGS

TENGARD AG should be diluted with water. To prepare the spray, dilute TENGARD AG as shown in the following spray dilution chart:

GALLONS OF SPRAY MIXTURE DESIRED	GALLONS OF TENGARD AG FOR 0.5% SOLUTION	GALLONS OF TENGARD AG FOR 0.75% SOLUTION	GALLONS OF TENGARD AG FOR 1.0% SOLUTION
40	¥2	3⁄4	1
80	1	1½	2
200	21/2	3¾	5
400	5	71⁄2	10
800	10	15	20

### Directions for Application

To protect unseasoned lumber and logs from wood destroying insects, such as Termites, Carpenter Ants and Beetles (Ambrosia, Powder-post, Old house borers and others), totally treat wood with a 0.5% to 1.0% solution of TENGARD AG. This solution can be applied by various methods including spraying, brushing, dipping, and pressure treatment. Frequent monitoring of dip and pressure systems are necessary to insure that the desired level of TENGARD AG is maintained. Wood can be handled after treatment when dry.

1. For dip treatments, the wood should be totally submersed in the solution until thoroughly wet and then allowed to dry in a suitable location. Dipping solutions to which TENGARD AG has been added should be agitated before use if left unused for long periods of time. Sediment, debris and other deposits should be periodically cleaned from the tank.

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- For pressure treatments the wood should be placed in the treatment chamber, the TENGARD AG solution added and the system pressurized up to 250 psi for up to one hour depending on the density and type of wood treated. After the pressure is released and the system drained, the wood should be placed in a suitable location for drying.
- 3. For spray treatments, the wood should be sprayed thoroughly including back and ends.
- 4. For brush treatments, all parts of wood surfaces should be thoroughly treated.

# STORAGE AND DISPOSAL

#### Pesticide Storage

Store at temperatures above 40°F (5°C).

If feasible, shake container well before using. If crystals form, warm to room temperature by placing container in a room at ambient temperature 70°F (21°C) until crystals dissolve.

Do not use or store near heat, open flame or hot surfaces.

Keep out of reach of children and animals.

Store in a dry place and avoid excess heat in storage. Store in original containers only.

Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. To confine spill, dike surrounding area or absorb with sand, cat litter, commercial clay or gel absorbents. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

#### Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate 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**

Metal Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved State and Local procedures.

Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or dispose of in a sanitary landfill, or incineration, or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

Returnable/Refillable Sealed Container. Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

> FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

# ATTENTION

Dealers Should Sell in Original Packages Only.

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### IMPORTANT INFORMATION READ BEFORE USING PRODUCT

# CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should 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 United Phosphorus or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus and Seller harmless for any claims relating to such factors.

United Phosphorus 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. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, and Buyer and User assume the risk of any such use. UNITED PHOSPHORUS MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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United Phosphorus and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus.

EPA Approval: 10-03-2001 Revision (amend): 01-15-2002 Not EPA approved