

ACCEPTED  
FOR REGISTRATION

Nov. 10, 2022

New York State Department  
of Environmental Conservation  
Division of Solid & Hazardous Materials  
Pesticide Product Registration

Classified for  
"RESTRICTED USE"  
in New York State  
under 6NYCRR Part 326

ACEPHATE GROUP 1 INSECTICIDE

Doc. ID 584143

# ACEPHATE® 97UP INSECTICIDE

## ACTIVE INGREDIENT

Acephate: (O,S-Dimethyl acetylphosphoramidothioate) ..... 97%\*

**OTHER INGREDIENTS** ..... 3%

**TOTAL** ..... 100%

\*U.S. Patent Nos. 6,752,943 and 6,875,381

EPA Reg. No. 70506-8

EPA Est. No. 41876-IND-004

## KEEP OUT OF REACH OF CHILDREN CAUTION

See inside for additional Precautionary Statements and complete Directions For Use.

### FIRST AID

Contains an organophosphate that inhibits cholinesterase. **If swallowed:** • Call 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 by a poison control center or doctor. • Do not give anything by mouth to an unconscious person. **If in eyes:** • Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice. **If on skin or clothing:** • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice. **If inhaled:** • Move person to fresh air. • If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice. **Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR EMERGENCY MEDICAL ASSISTANCE, CALL ROCKY MOUNTAIN POISON AND DRUG SAFETY 1-866-673-6671. NOTE TO PHYSICIAN:** Acephate is a cholinesterase inhibitor. If signs of cholinesterase inhibition appear, atropine is antidotal. 2-PAM may also be used in conjunction with atropine but should not be used alone.

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

## Net Weight: 10 Pounds

INSECTICIDE

Made in India  
UPL NA Inc. • 630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406 U.S.A. • 1-800-438-6071



## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS

# CAUTION

HARMFUL IF SWALLOWED.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators, mixers, loaders and other handlers must wear:

- long-sleeved shirt and long pants
- chemical-resistant gloves made from any waterproof material for all mixers and loaders and for applicators using hand-held application equipment
- shoes and socks

In addition, all mixers and loaders and all applicators using low pressure hand wand application equipment must wear:

- A minimum of a NIOSH-approved particulate filtering facepiece respirator with any N, R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; OR a NIOSH-approved powered air-purifying respirator with a HE filter.

See **Engineering Controls** for additional 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

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

The use of human flaggers is prohibited.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds.

For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

Exposed treated seed may be hazardous to birds and other wildlife. Dispose of all excess treated seed and seed packaging by burial away from bodies of water.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Eliminations System (NPDES) permitted and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

### USER SAFETY RECOMMENDATIONS

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

**READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

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 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls, chemical-resistant gloves made of any waterproof material and shoes plus socks.

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or greenhouses.

Do not enter or allow others to enter treated areas until sprays have dried.

### USE RESTRICTIONS

- Do not apply with low pressure handwand equipment except for control of fire ants as a mound treatment and when used on ornamental trees, shrubs, and floral plants grown for non-agricultural or non-commercial use.
- Not for indoor residential use.
- For use on turf, use limited to sod farms and golf courses, except when applying to mound or spot treatment for fire ant and harvester ant control.
- For greenhouse/shadehouse, use is limited to commercial greenhouses/shadehouses for use on ornamental, floral and foliage plants and the tobacco floated application as specified in the tobacco use directions.
- Not for use on agricultural establishments in hopper-box, planter-box, slurry-box or other seed treatment applications at, or immediately before, planting.
- Do not apply this product through any type of irrigation system except as specified for use on cranberries.

## SPRAY DRIFT RESTRICTIONS

Observe the following precautions to minimize drift:

A variety of factors including weather conditions (e.g. wind direction, wind speed, temperature, relative humidity), and method of application (e.g. ground, aerial, Airblast, chemigation) can influence pesticide drift. The applicator and grower must evaluate all factors and make appropriate adjustments when applying this product. Do not allow this product to drift.

- All aerial, ground and air-assisted/airblast application equipment must be properly maintained and calibrated using water as carrier. Do not apply this product as an ultralow (ULV) spray or in any carrier other than water.
- Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Do not apply at wind speeds greater than 10 mph at the application site.
- Make applications when wind velocity favors on-target product deposition (approximately 3 to 10 mph).
- Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage.
- For aerial applications, do not apply at heights greater than 10 feet (consistent with flight safety).
- For airblast applications, direct spray above foliage and turn off outward pointing nozzles at row ends and outer rows.
- For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or rotor diameter.
- For ground applications, do not apply at heights greater than 4 feet.

## Resistance Management

For resistance management, ACEPHATE® 97UP Insecticide contains a Group 1 insecticide. Any insect population may contain individuals naturally resistant to ACEPHATE 97UP and other Group 1 insecticides. The resistant individuals may dominate the insect population if this group of insecticides/acaricides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of ACEPHATE 97UP or other Group 1 insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they still may provide pest management benefits.
  - The insect resistance-management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.

- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.

Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

## USE INFORMATION

ACEPHATE 97UP is an insecticide for control of pests on selected agricultural crops and in certain non-crop areas. The active ingredient in ACEPHATE 97UP is acephate, a water-soluble insecticide readily absorbed by plant roots and foliage to give systemic control of feeding insects. Insect pests are generally controlled more effectively by ACEPHATE 97UP through ingestion than by contact. To maintain control repeat application of ACEPHATE 97UP as directed.

### FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THE LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY, AND/OR ILLEGAL RESIDUES.

**NOTE:** This product is sold by weight and package is full when packed but, due to the product's nature, settling is likely to occur.

## MIXING AND COMPATIBILITY

Fill the spray tank one-third to one-half full of clean water with agitation running and add the required amount of ACEPHATE 97UP Insecticide to the spray tank. Add remaining water to bring to the desired volume and maintain agitation during mixing, loading and application. Do not add any liquid fertilizers, micronutrients or adjuvants to the spray solution until the ACEPHATE 97UP Insecticide has completely dissolved. ACEPHATE 97UP should completely dissolve in approximately five minutes. Dissolution may be slowed by cold water, low level of agitation, or water containing high concentrations of boron or sulfur.

## FIRE ANT CONTROL

Under prolonged hot and dry conditions, due to the location of ants deep in the nest, best results are obtained from applications made in the early morning or late afternoon when ants are most active.

**TANK MIXES:** Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator, and/or application advisor. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**USE DIRECTIONS FOR FOLIAR APPLICATIONS TO BEANS AND LIMA BEANS**  
**—Dry and Succulent Forms—**  
**Except Succulent Green Beans Unless Grown Only for Seed**

**Ground Application:** Apply in 20 to 100 gallons of water per acre by conventional ground equipment to ensure thorough coverage of the target crop.

**Aerial Application:** Make applications of ACEPHATE 97UP Insecticide in a minimum of 2 gallons of water per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Fleahoppers Grasshoppers	0.25 to 0.5 lb. (4 to 8 oz.)	Apply when eggs or insects first appear. Repeat at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.* Use higher specified rates within the specified range for severe insect infestations.	*Do not apply more than 2.1 lbs. product/A (2 lbs. a.i./A) per season. <b>Dry Beans:</b> Allow at least 14 days between final application and harvest. <b>Lima beans (Succulent):</b> Allow at least 1 day to elapse between final application and harvest. Do not feed treated vines to livestock. Use on succulent green beans as a food crop is prohibited (includes string beans, snap beans, and wax beans). Succulent green bean use is permitted <b>ONLY</b> if grown for seed.
Aphids (excluding, Black Bean Aphid) Bean Leaf Beetle Bean Leafroller Cabbage Looper Cutworms Green Cloverworm Leafhoppers Mexican Bean Beetle Plant bugs (Lygus) Soybean Looper Thrips Whitefly (except Sweetpotato & Silverleaf Whitefly)	0.5 to 1 lb. (8 to 16 oz.)		
Armyworms (excluding Beet Armyworm) Corn Earworm European Corn Borer	0.75 to 1 lb. (12 to 16 oz.)		
<p><b>Restrictions for Succulent Green Beans Grown for Seed:</b></p> <ul style="list-style-type: none"> <li>• Do not feed crop residues to livestock or allow animals to graze treated areas.</li> <li>• Do not apply to succulent beans grown for fresh market or processing.</li> <li>• No portion of the succulent bean plant may be used or distributed for food or feed purposes.</li> <li>• Seeds grown from succulent beans shall bear a tag or container label which forbids use of the seed for human consumption or animal feed.</li> <li>• Seeds grown from succulent beans may not be distributed for human consumption or animal feed.</li> </ul>			

## USE DIRECTIONS FOR FOLIAR APPLICATIONS TO BRUSSELS SPROUTS & CAULIFLOWER

**Ground Application:** Apply in 25 to 150 gallons of water per acre by conventional ground equipment to ensure thorough coverage of the target crop.

**Aerial Application:** Make applications of ACEPHATE 97UP Insecticide in a minimum of 5 gallons of water per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Green Peach Aphid	0.5 to 1 lb. (8 to 16 oz.)	Apply when eggs or insects first appear.	*Do not apply more than 2.1 lbs. product/A (2 lbs. a.i./A) per crop cycle. Allow at least 14 days to elapse between final application and harvest. Do not feed trimmings to livestock or allow animals to graze in treated areas.
Cabbage Looper Imported Cabbage Worm	1 lb. (16 oz.)	Repeat applications at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.* Use higher specified rates within the specified range when heavy infestations of aphids are present.	
Diamondback Moth Larvae	1 lb. (16 oz.)	This insect has demonstrated an ability to develop resistance to various classes of insecticides. Consult your local Agricultural Extension Service for current recommended control practices for this insect.	

## USE DIRECTIONS FOR FOLIAR APPLICATIONS TO CELERY

**Ground Application:** Apply in 50 to 100 gallons of water per acre by conventional ground equipment to ensure thorough coverage of the target crop.

**Aerial Application:** Make applications of ACEPHATE 97UP Insecticide in a minimum of 5 gallons of water per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Green Peach Aphid	0.5 to 1 lb. (8 to 16 oz.)	Apply when eggs or insects first appear.	*Do not apply more than 2.1 lbs. product/A (2 lbs. a.i./A) per season. Allow at least 21 days to elapse between final application and harvest. All celery must be trimmed (tops removed) before shipment for use. Do not use trimmed tops for food or feed.
Cabbage Looper Fall Armyworms	1 lb. (16 oz.)	Repeat at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.* Use higher specified rates within the specified range for severe insect infestations.	

## USE DIRECTIONS FOR COMMERCIALLY TREATED COTTONSEED

**APPLICATION INSTRUCTIONS:** ACEPHATE 97UP contains a water-soluble systemic insecticide which helps to reduce injury to cotton seedlings by several insects. ACEPHATE 97UP can be mixed in the slurry tank with most of the fungicide seed treatments in common use. It also can be applied as a separate treatment using enough water to give adequate coverage of the seed.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER 100 LBS. COTTONSEED	EFFICACY	RESTRICTIONS
Cotton Aphids Thrips (including Western Flower Thrips)	0.28 - 0.4 lb. (4.5 - 6.4 oz.) Note: lower rate not approved for use in California.	Gives effective reduction of thrips and cotton aphids for up to three weeks after planting.	When using formulations that do not contain dye, compliance with 21 CFR Chapter 1, Section 2.5 requires that all seed treated with a pesticide must be colored to distinguish from, and prevent inadvertent use as, food for man or feed for animals.
Black (Greasy) Cutworm	0.28 - 0.4 lb. (4.5 - 6.4 oz.) Note: lower rate not approved for use in California.	Gives effective reduction of Black (Greasy) Cutworm from planting through the 3 <sup>rd</sup> to 4 <sup>th</sup> leaf stage of development. When planting into fields where large cutworms are present (5 <sup>th</sup> instar and larger), economic damage may occur.	<p><b>Seed Container Label Requirements</b></p> <p>Seed commercially treated with ACEPHATE 97UP Seed Treatment must be labeled in compliance with the Federal Seed Act.</p> <p>In addition, all bags containing treated seed must be labeled or tagged with the following information:</p> <ul style="list-style-type: none"> <li>- This seed has been treated with ACEPHATE 97UP Seed Treatment, which contains acephate.</li> <li>- Do not use treated seed for feed, food or oil processing.</li> <li>- Store away from feeds and other foodstuffs.</li> <li>- Wear long-sleeved shirt, long pants, and chemical-resistant gloves when handling treated seed.</li> <li>- Dispose of seed packaging in accordance with local requirements.</li> <li>- Exposed treated seed may be hazardous to birds. Dispose of all excess treated seed by burial away from bodies of water. Cover or incorporate spilled treated seeds.</li> </ul> <p><b>Notes:</b></p> <p>Follow all precautions and limitations on labeling of all products used in mixtures. Note: lower rate not approved for use in California.</p>

## USE DIRECTIONS FOR COTTON

### RESTRICTIONS APPLICABLE TO ALL USES ON COTTON:

Do not use treated seed for food or feed purposes or process for oil.

Do not feed gin trash or forage to livestock.

Do not allow animals to graze on treated areas.

Do not apply more than 4.125 lbs. product/A (4 lbs. a.i./A) per season. This includes the use of ACEPHATE 97UP in commercial seed-treatment, in-furrow, and foliar applications.

When applied by air, do not apply more than 1.03 lbs. product/A (1 lb. a.i./A) in California and Arizona. Do not apply more than 0.77 lb. product/A (0.75 lb. a.i./A) for all other areas of the US when applied by air.

### RESISTANCE MANAGEMENT

Cotton pest control programs, especially those for control of Silverleaf/Sweetpotato Whitefly populations, should employ a properly designed resistance-management strategy. Such resistance-management strategies include mixture or rotation of alternative classes of chemistry including organophosphates, carbamates, pyrethroids or insect growth regulators. Consult your state or area agricultural extension service for local resistance management strategies and advice on alternative insecticides.

## IN-FURROW APPLICATION

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS
Aphids (excluding Cotton Aphids in AZ & CA) Black (Greasy) Cutworm (except CA) Thrips	0.5 to 1 lb. (8 to 16 oz.)  NOTE: For the Blacklands of Texas use 1 lb./A ACEPHATE 97UP.	Apply in water a 3 to 5 gallons carrier per acre as an in-furrow spray. Use flat-fan nozzles for in-furrow application. Align nozzles to ensure good spray deposition into the seed furrow. Cone type nozzles are not recommended since unacceptable spray deposition may occur. Securely fasten spray-system tubing to furrow opener and check frequently to ensure proper positioning and operation. Use higher specified rates within the specified range for severe insect infestations. ACEPHATE 97UP can be mixed with fungicides that are sprayed in-furrow for disease control.

## FOLIAR APPLICATIONS

**Ground Application:** Apply in 10 to 25 gallons of water per acre by conventional ground equipment to ensure thorough coverage of the target crop.

**Aerial Application:** Make applications of ACEPHATE 97UP insecticide in 3 to 10 gallons of water per acre (minimum of 5 gallons per acre in AZ & CA). Use sufficient carrier volume to provide thorough, uniform coverage. Do not apply ACEPHATE 97UP at more than 1.03 lbs. product/A (1 lb. a.i./A) in California and Arizona and not more than 0.77 lb. product/A (0.75 lb. a.i./A) for all other areas of the United States. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Thrips	0.16 to 0.19 lb. (2.5 oz. to 3.0 oz.)	Apply when eggs or insects first appear. Repeat applications at 3 day intervals as necessary to maintain control.* Use higher specified rates within the specified range for severe insect infestations.	Allow at least 21 days to elapse between final application and harvest.
Plant bugs (Lygus)	0.25 to 1 lb. (4 to 16 oz.) AZ & CA: 0.75 to 1 lb. (12 to 16 oz.)	Apply when eggs or insects first appear. Use highest specified rate for Lygus adults that have migrated into cotton. Repeat applications 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.* Use higher specified rates within the specified range for severe insect infestations.	*See restrictions applicable to all uses on cotton.
Fleahoppers	0.25 lb. (4 oz.)	Apply when eggs or insects first appear. Repeat applications at 3 day intervals as necessary to maintain control.*	
Cotton Aphid (excluding AZ & CA)	0.5 to 1 lb. (8 to 16 oz.)	This insect may develop resistance to various classes of insecticides. Consult your local Agricultural Extension Service for current control recommendations. Repeat applications at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.* Use higher specified rates within the specified range for severe insect infestations.	
Whitefly (excluding Sweetpotato & Silverleaf Whitefly)	0.5 to 1 lb. (8 to 16 oz.)	Repeat applications at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.* Use higher specified rates within the specified range for severe insect infestations.	
Armyworms (excluding Beet Armyworm) Cabbage Looper	1 lb. (16 oz.)	Apply when eggs appear and repeat at 7 day spray intervals.*	
Bollworm Tobacco Budworm Adults Larvae Eggs (DEADHATCH®)	East of Rockies: 0.5 to 1 lb. (8 to 16 oz.) AZ & CA: 1 lb. (16 oz.)	<b>Early Season:</b> Use 0.5 lb. product/A for light infestation. <b>Mid and Late Season:</b> Use 0.75 to 1 lb. product/A for moderate to severe infestations. Apply when eggs appear and repeat at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A).* Use higher specified rates within the specified range for severe insect infestations. Moths of budworm larvae are controlled by direct contact with spray. Moth kill is most likely to occur when late evening applications are made. DEADHATCH: Control of emerging larvae by consumption of treated egg casings.	

(continued)

## FOLIAR APPLICATIONS *(continued)*

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Stink bugs	0.75 lb. (12 oz.)	Apply when eggs appear and repeat at 7 day spray intervals.*	Allow at least 21 days to elapse between final application and harvest. *See restrictions applicable to all uses on cotton.
Pink Bollworm (AZ & CA)	1 lb. (16 oz.)	Apply when insects appear and repeat at 7 day spray intervals.*	
Cutworms	0.75 lb. (12 oz.)	Ground application is recommended. Aerial applications are less effective, but may be used. Control is most effective when ground application is made in the evenings and sprays are directed toward the base and lower portion of plant. Apply when insects first appear or damage is first noted and repeat applications at 7 day spray intervals as necessary to maintain control.*	

## COTTON TANK MIXES FOR FOLIAR APPLICATION

**Ground Application:** Apply in 10 to 25 gallons of water per acre by conventional ground equipment to ensure thorough coverage of the target crop.

**Aerial Application:** Make applications of ACEPHATE 97UP Insecticide in 3 to 10 gallons of water per acre (minimum of 5 gallons per acre in AZ & CA). Use sufficient carrier volume to provide thorough, uniform coverage. Do not apply ACEPHATE 97UP at more than 1.03 lbs. product/A (1 lb. a.i./A) in California and Arizona and not more than 0.77 lb. product/A (0.75 lb. a.i./A) for all other areas of the United States. Use sufficient carrier volume to provide thorough, uniform coverage.

### RESTRICTIONS APPLICABLE TO ALL USES ON COTTON:

Do not use treated seed for food or feed purposes or process for oil.

Do not feed gin trash or forage to livestock.

Do not allow animals to graze on treated areas.

Do not apply more than 4.125 lbs. product/A (4 lbs. a.i./A) per season. This includes the use of ACEPHATE 97UP in commercial seed-treatment, in-furrow, and foliar applications.

Always read and follow all label directions when using any pesticide alone or in tank mix combinations. Follow all restrictions and precautions, which appear on all product labels. The most restrictive labeling applies when using a tank mix.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP + TANK MIX PARTNER PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Sweetpotato & Silverleaf Whitefly	0.5 to 1 lb. (8 to 16 oz.)  + Fenpropathrin products 8 to 16 fl. oz.	Apply when insects first appear or when damage is first noted and repeat applications at 3 day spray intervals as necessary to maintain control.* Use a minimum application rate of 10.66 fl. oz./acre Fenpropathrin product (0.2 lb. a.i./acre) in CA and AZ. Always read and follow all applicable directions, restrictions, and precautions on the EPA registered label for Fenpropathrin product.	Allow at least 21 days to elapse between final application and harvest. *See restrictions applicable to all uses on cotton.



## COTTON TANK MIXES WITH PYRETHROIDS FOR FOLIAR APPLICATIONS

**Ground Application:** Apply in 10 to 25 gallons of water per acre by conventional ground equipment to ensure thorough coverage of the target crop.

**Aerial Application:** Make applications of ACEPHATE 97UP Insecticide in 3 to 10 gallons of water per acre (minimum of 5 gallons per acre in AZ & CA). Use sufficient carrier volume to provide thorough, uniform coverage. **RESTRICTION:** Do not apply ACEPHATE 97UP at more than 1.03 lbs. product/A (1 lb. a.i./A) in California and Arizona and not more than 0.77 lb. product/A (0.75 lb. a.i./A) for all other areas of the United States. Use sufficient carrier volume to provide thorough, uniform coverage.

### RESTRICTIONS APPLICABLE TO ALL USES ON COTTON:

Do not use treated seed for food or feed purposes or process for oil.

Do not feed gin trash or forage to livestock.

Do not allow animals to graze on treated areas.

Do not apply more than 4.125 lbs. product/A (4 lbs. a.i./A) per season. This includes the use of ACEPHATE 97UP in commercial seed-treatment, in-furrow, and foliar applications.

Always read and follow all label directions when using any pesticide alone or in tank mix combinations. Follow all restrictions and precautions that appear on all product labels. The most restrictive labeling applies when using a tank mix. Synthetic Pyrethroids should be used within the guidelines of state and/or regional resistance-management programs and recommendations.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP + TANK MIX PARTNER	APPLICATION INSTRUCTIONS	RESTRICTIONS
Aphids Bollworm Cabbage Looper Cotton Leaf Perforator Fall Armyworm Fleahoppers Pink Bollworm (AZ & CA) Plant bugs Sweetpotato & Silverleaf Whitefly Thrips Tobacco Budworm Whiteflies	0.5 to 1 lb./A (8 to 16 oz.) + Esfenvalerate products (Follow label directions) or BIFENTURE® EC EPA Reg No. 70506-57 (Bifenthrin products) (Follow label directions) or LAMBDA-CY™ EC EPA Reg No. 70506-120 (Lambda-cyhalothrin products) (Follow label directions)	Begin applications when eggs or insects first appear. Repeat application at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.* Use higher rates within the specified range for severe insect infestations.	Allow at least 21 days to elapse between final application and harvest. *See restrictions applicable to all uses on cotton.
Cutworms	0.75 lb./A (12 oz.) + Any Synthetic Pyrethroid listed above	Control is most effective when ground applications are made in the evenings and sprays are directed toward the base and lower portion of plant. Repeat applications at 7 day spray intervals as necessary to maintain control.* Directed, ground applications are most effective. Aerial applications are less effective, but may be used.	
Stink bugs	0.75 lb./A (12 oz.) + Any Synthetic Pyrethroid listed above	Apply when eggs or insects first appear. Repeat application at 7 day spray intervals necessary to maintain control.*	

## USE DIRECTIONS FOR FOLIAR APPLICATIONS TO CRANBERRY

**Ground Application:** Apply with conventional ground equipment in sufficient water to ensure thorough coverage of the target crop.

**Aerial Application:** Make aerial applications in a minimum of 2 gallons of water per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

**Chemigation Application:** This product may only be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, travelers, big gun, solid set, or hand move. Do not apply this product through any other type of irrigation system. Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Inject the product with a positive displacement pump into the main line ahead of a right turn to ensure adequate mixing. Application of more than label-specified quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop may result from non-uniform distribution of treated water.

### RESTRICTIONS AND PRECAUTIONS FOR APPLICATIONS THROUGH CHEMIGATION SYSTEMS

**Do not connect an irrigation system (including greenhouse/shadehouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water systems are in place.**

- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, 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 contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 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 fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- **Solid Set System:** Apply specified dosage for the entire length of the irrigation period or for a 30 to 60 minute period at the end of a regular irrigation set or as a 30 to 60 minute injection as a separate application not associated with a regular irrigation. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining pesticide, a dye indicator may be injected into the lines to mark the end of the application period. See **NOTE** below.
- **Center Pivot Systems:** Inject the specified dosage per acre continuously for one complete revolution of the system. See **NOTE** below.

**NOTE:** Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Inject the product with a positive displacement pump into the main line ahead of a right turn to ensure adequate mixing.

**Application of more than label-specified quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness.**

### CRANBERRY

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cranberry Blossomworm Cranberry Cutworm Gypsy Moth False Armyworm Fireworms Spanworms Sparganothis	1 lb. (16 oz.)	Apply when insects first appear.	Limit to one application per growing season. Do not apply more than 1.03 lbs. product/A (1.0 lb. a.i./A) per season.  The Pre-Harvest Interval (PHI) is 75 days in the states of MA, NJ, OR, WA, WI, and 90 days in all other states.  Do not apply from start of bloom until all berries set.

## USE DIRECTIONS FOR FOLIAR APPLICATIONS TO HEAD LETTUCE —Crisphead Type Only—

**Ground Application:** Apply in 10 to 60 gallons of water per acre by conventional ground equipment to ensure thorough coverage of the target crop.

**Aerial Application:** Make aerial applications in minimum of 5 gallons of water per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Aster Leafhopper Green Peach Aphid	0.5 to 1 lb. (8 to 16 oz.)	Repeat application at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.* Use higher specified rates within the specified range for severe insect infestations.	*Do not apply more than 2.1 lbs./A (2 lbs. a.i.) per season.
Armyworm (excluding Beet Armyworm) Cabbage Looper	1 lb. (16 oz.)		Allow at least 21 days to elapse between final application and harvest. Do not feed trimmings to livestock or allow animals to graze on treated areas. For use on Spring, Summer, and early Fall crops in all areas; Winter crops in Florida and Texas; late Fall crops in Arizona; and Winter crops in Arizona and California. Do not apply after first head begins to form in crops which germinate from mid-September through November in desert areas of AZ & CA.

## USE DIRECTIONS FOR FOLIAR APPLICATIONS TO NON-BEARING CITRUS (Newly Planted Groves) - Agricultural Settings ONLY

### FOLIAR APPLICATIONS

**Ground Application:** Apply in 100 to 200 gallons of water per acre by conventional ground equipment to ensure thorough coverage of the target crop.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Aphids Grasshoppers Katydid Mealybugs Orangedog Plant bugs Thrips Whiteflies (except Sweetpotato & Silverleaf Whitefly)	0.5 lb. (8 oz.)	Apply at 3 day spray intervals as necessary to maintain control. Spray individual juvenile or non-bearing trees for coverage with total application not to exceed specified rate in lbs. per acre. Length of residual activity will depend upon spray coverage and the amount of moisture following application.	Do not graze treated areas. Do not harvest citrus for one year after treatment. *Not registered in California for control of Citrus Blackfly.
Citrus Blackfly*	0.5 to 0.75 lb. (8 to 12 oz.)	Apply when eggs or insects first appear. Use higher rates within the specified range for severe insect infestations. Repeat at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A).	
Ants (excluding fire, harvester, carpenter and fire ants)	0.75 lb. (12 oz.)	Repeat at 7 day spray intervals as necessary to maintain control.	

## SOIL MOUND DRENCHES

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Fire Ants & Harvester Ants*	0.75 oz./ 5 gallons water	Apply 1 gallon of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	Do not graze treated areas. Do not harvest citrus for one year after treatment. Do not treat mound more than once per season. *Not registered in California for control of Harvester Ants. <b>Notes:</b> For best results, apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged dry and hot conditions may be ineffective due to the location of the ants deep within the nest.

## USE DIRECTIONS FOR FOLIAR APPLICATIONS TO PEANUTS

**Ground Application:** Apply in 10 to 50 gallons of water per acre by conventional ground equipment to ensure thorough coverage.

**Aerial Application:** Make aerial applications in 5 to 10 gallons of water per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshoppers	0.25 to 0.5 lb. (4 to 8 oz.)	Apply when eggs or insects first appear. Repeat application at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.*	*Do not apply more than 4.125 lbs. product/A (4 lbs. a.i./A) per season.
Thrips	0.375 to 0.75 lb. (6 to 12 oz.)	Use higher specified rates within the specified range for severe insect infestations.	Allow at least 14 days to elapse between final application and digging or lifting of peanuts. Do not feed treated forage or hay to livestock. Do not allow animals to graze on treated areas.
Corn Earworm Fall Armyworm Leafhoppers Loopers Velvetbean Caterpillar	0.75 to 1 lb. (12 to 16 oz.)	ACEPHATE 97UP can be tank mixed with registered at-cracking and early post-emergence peanut herbicides, provided those products do not prohibit tank mixes, provided the most restrictive of label limitations and precautions are followed, and provided no label dosage rates are exceeded.  To determine physical compatibility, pour the specified proportions of each chemical with the same proportion of water as will be present in the chemical supply tank, into a suitable container. Mix thoroughly and allow to stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture is considered physically compatible. When mixing wettable powder or dry flowable formulations, add and disperse these first, then add liquid pesticides. Do not use the mix combination if there is any separation which cannot be readily remixed. Combinations should be kept agitated and applied immediately. Do not allow combinations to set for prolonged periods in the chemical supply tank or irrigation lines.	

## USE DIRECTIONS FOR FOLIAR APPLICATIONS TO PEPPERMINT AND SPEARMINT

**Ground Application:** Apply in 20 to 100 gallons of water per acre by conventional ground equipment to ensure thorough coverage of the target crop.

**Aerial Application:** Make aerial applications in minimum of 5 to 10 gallons of water per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Alfalfa Looper Aphids Cutworms	1 lb. (16 oz.)	Apply when eggs or insects first appear. Make one repeat application at no less than 7 day spray interval, if necessary, to maintain control.*	*Do not apply more than 2.1 lbs. product/A (2 lbs. a.i./A) per season. Allow at least 14 days to elapse between final application and harvest.
Strawberry Root Weevil Adult Black Vine Weevil Adult	1 lb. (16 oz.)	For control, apply in water in a minimum of 40 gallons spray per acre by ground. Good spray coverage and canopy spray penetration is critical for control. Increase spray volume and pressure with tall or dense mint canopy. Apply after adult emergence is complete but prior to egg laying. Apply at dusk or during the night on a warm still evening. Two applications 10 to 14 days apart may be necessary to reduce heavy infestations.	The grazing of animals on treated areas and the feeding of spent mint hay to animals are prohibited.

## USE DIRECTIONS FOR FOLIAR APPLICATIONS TO PEPPERS

### BELL

**Ground Application:** Apply in 25 to 150 gallons of water per acre by conventional ground equipment to ensure thorough coverage.

**Aerial Application:** Make aerial applications in minimum of 3 gallons of water per acre (minimum of 5 gallons/A in CA). Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshoppers	0.25 to 0.5 lb. (4 to 8 oz.)	Apply when eggs or insects first appear. Repeat at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain insect-pest populations below economically damaging numbers.*	*Do not apply more than 2.1 lbs. product/A (2 lbs. a.i./A) per season. Allow at least 7 days to elapse between final application and harvest.
Cabbage Looper Green Peach Aphid Tobacco Hornworm	0.5 to 1 lb. (8 to 16 oz.)	Use higher specified rates within the specified range for severe insect infestations.	
European Corn Borer	0.75 to 1 lb. (12 to 16 oz.)		

### NON-BELL (For use only in Midwestern states, Eastern states, and Puerto Rico)

**Not for use in the following states: Washington, Oregon, Idaho, Montana, Wyoming, California, Nevada, Arizona, New Mexico, Colorado, or Utah.**

**Ground Application:** Apply in 40 to 150 gallons of water per acre by conventional ground equipment to ensure thorough coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Aphids	0.5 lb. (8 oz.)	Repeat at 3 day spray intervals as necessary.*	*Do not apply more than 1.03 lbs. product/A (1.0 lb. a.i./A) per season. Allow at least 7 days to elapse between final application and harvest.

## USE DIRECTIONS FOR SOYBEANS

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshopper Thrips	0.25 to 0.5 lb. (4 to 8 oz.)	Apply when eggs or insects first appear. Repeat applications as necessary to maintain insect-pest populations below economically damaging numbers.	<p>*Do not apply more than 1.55 lbs. product/A (1.5 lbs. a.i./A) per crop cycle.</p> <p>Allow at least 14 days to elapse between final application and harvest.</p> <p>Do not graze or cut vines for hay or forage.</p>
Potato Leafhopper Stink bugs	0.5 to 1 lb. (8 to 16 oz.)	Repeat application at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as necessary to maintain control.*	
Armyworms (except Beet)	0.75 to 1 lb. (12 to 16 oz.)	Use higher specified rates within the specified range for severe insect infestations.	
Bean Leaf Beetle Cabbage Looper Green Cloverworm Mexican Bean Beetle Soybean Aphid Threecornered Alfalfa Hopper Velvetbean Caterpillar		<p><b>Ground Application:</b> Apply in 10 to 50 gallons per acre by conventional ground equipment to ensure thorough coverage.</p> <p><b>Aerial Application:</b> Make aerial applications in 5 to 10 gallons per acre (minimum of 5 gallons/A in CA). Use sufficient carrier volume to provide thorough, uniform coverage.</p>	

## USE DIRECTIONS FOR TOBACCO

### TOBACCO TRANSPLANT WATER APPLICATION (EXCEPT CA)

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cutworms Flea Beetle Green Peach Aphid Potato Tuberworm Tobacco Aphid Tobacco Thrips	0.75 lb. (12 oz.)	<p>Provides control of early season flea beetles, green peach aphids, tobacco aphids and cutworms for approximately 3 to 4 weeks after transplanting. For later season control of these insects, apply a foliar spray of ACEPHATE 97UP.</p> <p>Apply in a minimum of 100 gallons of transplant water per acre. ACEPHATE 97UP should be pre-mixed in water to form a slurry solution prior to adding to the transplant water tank.</p>	<p>Do not apply more than 4.125 lbs. product/A (4 lbs. a.i./A) per season. This includes the use of ACEPHATE 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications.</p> <p>Make transplant-water applications using mechanical transplant equipment only. Using such equipment, the insecticide/water mixture is mechanically applied directly into the soil along with the transplanted plants.</p> <p>Do not apply more than 0.75 lb. ACEPHATE 97UP per acre as a transplant water application as some phytotoxicity may occur.</p>

## TOBACCO FOLIAR APPLICATION (EXCEPT CA)

**Ground Application:** Apply in 10 to 50 gallons of water per acre by conventional ground equipment to ensure thorough coverage.

**Aerial Application:** Make aerial applications in minimum of 3 gallons of water per acre. Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshoppers	0.25 to 0.5 lb. (4 to 8 oz.)	Apply at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as needed.* Use higher specified rates within the specified range for severe insect infestations.	*Do not apply more than 4.125 lbs. product/A (4 lbs. a.i./A) per season. This includes the use of ACEPHATE 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications.  Allow at least 3 days to elapse between final application and harvest.
Green Peach Aphid Flea Beetle Hornworm Tobacco Thrips	0.5 lb. (8 oz.)		
Stink bugs Tobacco Aphid Vegetable Weevils	0.5 to 0.75 lb. (8 to 12 oz.)		
Budworm Cabbage Looper Cutworm Japanese Beetle	0.75 lb. (12 oz.)		

## TOBACCO PLANT BED APPLICATION (EXCEPT CA)

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	0.75 lb. (12 oz.)	Apply to foliage at the equivalent of 3/4 tablespoon in 1 gallon of water per every 1,000 sq. ft. of bed. Apply evenly to ensure thorough coverage. Apply at 7 day intervals as needed.	Do not apply more than 4.125 lbs. product/A (4 lbs. a.i./A) per season. This includes the use of ACEPHATE 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications.

## TOBACCO GREENHOUSE (FLOATBED) APPLICATION (EXCEPT CA)

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Cutworm Flea Beetle Green Peach Aphid Tobacco Aphid	0.75 lb. (12 oz.)	Apply to foliage at the equivalent of 3/4 tablespoon in 3 gallons water per every 1,000 sq. ft. of bed. Apply evenly to ensure thorough coverage. Apply at 7 day intervals as needed.	Do not apply more than 4.125 lbs. product/A (4 lbs. a.i./A) per season. This includes the use of ACEPHATE 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications.  Dispose of floatbed water in the transplanted field by either transplant water or foliar spray.

## TOBACCO SOIL MOUND DRENCH APPLICATION (EXCEPT CA)

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Fire Ant & Harvester Ant	Mix 0.75 oz. in 5 gallons of water. Apply 1 gallon of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	When insects first appear.	Do not apply more than 4.125 lbs. product/A (4 lbs. a.i./A) per season. This includes the use of ACEPHATE 97UP in transplant water, plant bed, soil, float bed (greenhouse), and foliar applications. Allow at least 3 days to elapse between final application and harvest. Treat maximum of 13 mounds per acre. Do not treat more than once per season. <b>Notes:</b> For best results apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged dry and hot conditions may be ineffective due to the location of the ants deep within the nest.

## USE DIRECTIONS FOR NON-CROP AREAS

### FIELD BORDERS, FENCEROWS, ROADSIDES, DITCHBANKS, AND BORROW PITS

**Ground Application:** Apply in 10 to 20 gallons of water per acre by conventional ground equipment to ensure thorough coverage.

**Aerial Application:** Make aerial applications in minimum of 1 to 5 gallons of water per acre (minimum 5 gallons/A in CA). Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Grasshoppers	0.25 lb. (4 oz.)	For early to mid-season application. Use the higher volumes when spraying dense foliage. An approved drift retardant may be added to aid in controlling drift and reducing evaporation of aerial sprays.	Do not graze or feed vegetation cut from treated areas.

### WASTELAND

**Ground Application:** Apply in 10 to 20 gallons of water per acre by conventional ground equipment to ensure thorough coverage.

**Aerial Application:** Make aerial applications in minimum of 1/2 gallon of water per acre (minimum 5 gallons/A in CA). Use sufficient carrier volume to provide thorough, uniform coverage.

PESTS CONTROLLED	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION INSTRUCTIONS	RESTRICTIONS
Black Grass Bugs Grasshoppers Mormon Crickets	0.094 to 0.125 lb. (1.5 to 2 oz.)	Use the higher volumes when spraying dense foliage. An approved drift retardant may be added to aid in controlling drift and reducing evaporation of aerial sprays. Use higher specified rates within the specified range for severe insect infestations.	Do not make more than one application per season. Do not graze or feed vegetation cut from treated areas.



## SPECIALTY USES

### CROP TOLERANCE

ACEPHATE 97UP Insecticide is generally not phytotoxic to most greenhouse/shadehouse or field grown plants or turf. However, it is impossible to test all plant varieties and cultural conditions. Before treating large plantings, apply to a representative group of plants and observe for two weeks to assure that a particular variety, grown under current conditions is not sensitive to ACEPHATE 97UP. Use on turfgrass is limited to sod farms and golf courses, except when applying by mound or spot treatment for fire ant and harvester ant control.

The following have been found to be sensitive to ACEPHATE 97UP:

**Trees:** Balm of Gilead, Cottonwood, Lombardy Poplar or Viburnum suspensum and Crabapple varieties, Ichonoski, Malus floribunda, Pink Perfection, Red Wine and Snow Cloud.

**Plants:** Blechnum gibbum, Cissus antarctica, Ficus triangularis, Fittonia verschaffeltii, Maranta leuconeura kerchoviana, Pachystachys lutea, Plecranthus australis, Polypodium aureus, Polystichum, Pteris ensiformis, Tolmiea menziesii.

**Chrysanthemum Varieties:** Albatross, Bonnie Jean, Dixie, Garland, Gem, Iceberg, Pride, Showoff, Statesman, Tally Ho, Westward Ho and Wild Honey. Applications to Chrysanthemums and Roses with open flowers may result in flower damage.

### SPECIALTY USES

#### SMALL SPRAY EQUIPMENT

PREPARATION OF ACEPHATE 97UP SPRAY MIX		
LABEL DIRECTION PER ACRE IN 100 GALLONS OF WATER	EQUIVALENT PER ACRE IN 25 GALLONS WATER*	EQUIVALENT PER ACRE IN 1 GALLON WATER (TEASPOONS/GALLON)
0.25 lb.	1 oz.	1/3 tsp.
0.50 lb.	2 oz.	2/3 tsp.
0.75 lb.	3 oz.	1 tsp.
1.00 lb.	4 oz.	1-1/3 tsp.

## NON-BEARING CITRUS

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Non-bearing citrus (including citrus nursery seedlings)	Aphids Grasshoppers Katydid Mealybugs Orangedogs Plant bugs (Lygus) Thrips Whiteflies	0.5 lb. (8 oz.)	Apply at 3 day spray intervals as needed for control of existing populations.	Apply in 100 to 200 gallons of water per acre. Spray individual juvenile or non-bearing trees for coverage with total application not to exceed specified rate in lbs. per acre. Length of residual activity will depend upon spray coverage and the amount of moisture following application.	Do not allow livestock to graze treated areas.  Do not harvest citrus for one year after treatment.
	Citrus Blackfly	0.5 to 0.75 lb. (8 to 12 oz.)	Begin applications when eggs or adults first appear.  Apply at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) to maintain control.  Use the higher specified rate when a heavy infestation of Citrus Blackfly is present. Begin applications when eggs or adults first appear.		

*(continued)*

## NON-BEARING CITRUS *(continued)*

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Non-bearing citrus (including citrus nursery seedlings)	Ants (excluding fire, harvester, carpenter, and pharaoh ants)	Foliar spray 0.75 lb. (12 oz.)	Apply at 7 day spray intervals as needed for control of existing populations.	Apply in 100 to 200 gallons of water per acre. Spray individual juvenile or non-bearing trees for coverage with total application not to exceed specified rate in lbs. per acre. Length of residual activity will depend upon spray coverage and the amount of moisture following application.	Do not allow livestock to graze treated areas.  Do not harvest citrus for one year after treatment.
	Fire Ants and Harvester Ants	Mound Treatment - Drench Method	Mix 0.75 oz. product in 5 gallons of water. Apply 1 gallon of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.  Applications made under prolonged dry and hot conditions may be ineffective due to the location of the ants deep within the nest.		

## NURSERY STOCK: NON-BEARING DECIDUOUS FRUIT TREES, NUT TREES AND VINES IN NURSERY FIELD OR NON-BEARING ORCHARDS

**Ground Application:** Apply in 50 to 100 gallons of water per acre in conventional equipment to ensure thorough coverage of the target plants.

**Aerial Application:** Apply in a minimum of 5 gallons of water per acre. Use sufficient carrier volume to provide thorough coverage.

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION TIMING	RESTRICTIONS
Nursery stock (non-bearing Deciduous Fruit Trees, Nut Trees, Vines)  Almond Apricot Apple Cherry Grape Kiwi Pear Pistachio Plum Prune Walnut	Aphids Plant bugs (Lygus) Thrips	0.5 to 1 lb. (8 to 16 oz.)	Apply at 3 day spray intervals for rates up to 0.52 lb. product/A (0.5 lb. a.i./A) and at 7 day spray intervals for rates greater than 0.52 lb. product/A (0.5 lb. a.i./A) as needed for control of existing populations.  Use higher specified rates within the specified range for severe insect infestations.	For application only to non-bearing trees and vines in nursery fields or in non-bearing orchards. Do not apply to interplants or single trees in a bearing orchard.  Do not harvest any fruit from sprayed trees for one year after application.  Do not allow livestock to graze treated area.  Do not exceed 1 lb. product/A.

## SPECIALTY USES - NON-CROP AREAS

CROPS	INSECTS	AMOUNT OF ACEPHATE 97UP PER ACRE	RESTRICTIONS
Non-crop areas (field borders, fencerows, roadsides, ditchbanks, and borrow pits)	Grasshoppers	0.25 lb. (4 oz.)	Apply in 1 to 5 gallons of water by air or in 10 to 20 gallons of water with ground equipment. Use the higher volumes when spraying heavier foliage. Do not graze or feed vegetation cut from treated areas. <b>Notes:</b> For early to mid-season application to grasshoppers in field borders, fencerows, roadsides, ditch banks, and borrow pits.
	Fire Ants and Harvester Ants	Mound Treatment - Drench Method: Mix 0.75 oz. product in 5 gallons of water. Apply 1 gallon of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	Do not treat mound more than once per season. <b>Notes:</b> Grass in the treated area may be injured. For best results apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged dry and hot conditions may be ineffective due to the location of the ants deep within the nest.

## CONTAINER GROWN NURSERY STOCK

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER ACRE	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Container Grown Nursery Stock (Arborvitae Azalea Camellia Rhododendron Roses Viburnum Yew)	Black Vine Weevil Strawberry Root Weevil	0.75 lb. (12 oz.)	Application should be made by mid-September for greenhouse/ shadehouse stock and by mid-October for outdoor stock. Consult your local county extension agent for information on the identification and control of root weevils on ornamentals.	Apply the specified amount of ACEPHATE 97UP spray per 100 gallons of solution so as to thoroughly drench the root system. Apply at 7 day spray intervals to maintain control.	Do not apply more than 0.75 lb. product/A.
	Ants (excluding fire, harvester, carpenter and pharaoh ants)	0.75 lb. (12 oz.)	Apply as needed to control the pest.		

## ORNAMENTAL TREES AND SHRUBS

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALLONS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Trees & Shrubs (except Douglas Fir, Flowering Crabapple, and Crape Myrtle) - see below	Aphids Bagworms Birch Leafminer Lace Bugs Leafrollers Tent Caterpillar*	0.25 lb. (4 oz.)	As the insects begin to appear.	Apply the specified amount of ACEPHATE 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray.  *Mist Blower Application: Adjust rates to 1 lb. product per 100 gallons of water for Gypsy Moth control and 0.75 lb. product per 100 gallons of water for Tent Caterpillar control.  The addition of a suitable sticker improves control of Gypsy Moth larvae.  Repeat at 14 day spray intervals as necessary to maintain control.	Do not apply more often than 3 times in a growing season to trees and shrubs. Do not apply more than 1.0 lb. product/A/ 100 gallons of water. <b>Notes:</b> Refer to <b>Crop Tolerance</b> statement.
	Douglas Fir Tussock Moth Larvae Gypsy Moth Larvae* Webworms	0.5 lb. (8 oz.)	As the insects begin to appear.		
	Scales (crawlers)	0.5 lb. (8 oz.)	As crawlers begin to appear. Repeat applications at a 2 week or more interval may be necessary where there is continuous crawler production.		
	Ponderosa Pine Needle Miner	0.5 lb. (8 oz.)	Time of application is important. Consult your Farm Advisor or County Extension Agent.		
	Grasshoppers	0.5 lb. (8 oz.)	As the grasshoppers begin to appear.		
	California Oakworm Cankerworms (Spring & Fall)	0.25 to 0.5 lb. (4 to 8 oz.)	As the insects begin to appear. Use the higher specified rate when larger larvae are present.		
	Nantucket Pine Tip Moth Larvae	0.75 lb. (12 oz.)	Time of application is important. Consult your Farm Advisor or County Extension Agent. Repeat applications will be required for subsequent generations.		
	Root Weevil Adults	0.75 lb. (12 oz.)	Apply when first feeding damage occurs. Repeat applications at 4 week intervals until the first heavy frost, may be necessary for complete foliage protection.		
	Box Elder Bugs Budworms Leafhoppers Sawflies	0.75 lb. (12 oz.)	As the insects begin to appear.		
	Japanese Beetle	1 lb. (16 oz.)	As the Japanese Beetles begin to appear. Repeat applications at 2 week intervals may be necessary.		
Elm Leaf Beetle (larvae)	1 lb. (16 oz.)	As the larvae begin to appear. ACEPHATE 97UP will not prevent Elm Leaf Beetle eggs from hatching.			

*(continued)*

## ORNAMENTAL TREES AND SHRUBS *(continued)*

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALLONS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Douglas Fir (Christmas Trees)	Douglas Fir Needle Midge	0.5 lb. (8 oz.) (0.5 lb. per acre)	Make applications no more than 2 weeks prior to bud burst. For additional pest management information, consult your County Extension Agent.	Apply the specified amount of ACEPHATE 97UP in not less than 2 gallons of spray per acre by air or in 100 gallons of spray per acre by ground.	Do not apply more than 0.5 lb. product/A/ 100 gallons of water. Do not treat more than once per season.
Flowering Crabapple	Aphids Leafrollers Tent Caterpillars	0.25 lb. (4 oz.)	As the insects begin to appear.	Apply the specified amount of ACEPHATE 97UP in 100 gallons of water with a hydraulic sprayer.	Do not apply more often than 3 times in a growing season at 28 day intervals. Do not apply more than 0.25 lb. product/A/ 100 gallons of water. <b>Notes:</b> Phytotoxicity has occurred on the following Crabapple varieties: Hops, Ichonoski, Malus floribunda, Pink Perfection, Red Wine and Snow Cloud.
Crape Myrtle	Aphids	2 to 3 level tsp. (0.6 to 0.8 oz.) per tbsp. water as paint on	As aphids begin to appear.	Make a paint-on-slurry by mixing the specified amount of ACEPHATE 97UP with 1 tablespoon of water. Remove the loose bark from the trunk areas to be treated. Completely paint a band around each trunk to a width twice its diameter. Make applications to trunks within a zone 6 to 12 inches above the ground and below the point where branching begins. For multi-trunk plants, be certain to treat all trunks. For either single or multi-trunk plants, make application as low as possible within the specified treatment zone.	

## OUTDOOR FLORAL CROPS AND GROUND COVERS

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALLONS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Chrysanthemums Daisies Dahlias Gladioli Gypsophila Lillies: including Easter Lily, Calla Lily Pachysandra Peony Roses Sedum Statice Strawflower Yarrow Zinnia	Aphids Lygus Thrips	0.5 lb. (8 oz.)	As insects begin to appear. Repeat applications may be necessary.	Apply the specified amount of ACEPHATE 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray. Repeat at 14 day spray intervals as necessary to maintain control.	Do not apply more than 1.0 lb. product/A/ 100 gallons of water. Do not apply more than 0.77 lb. product/A (0.75 lb. a.i./A) to cut flowers. <b>Notes:</b> Multiple applications may cause slight tip burn or marginal leaf necrosis on some varieties. Test on a few plants to determine varietal susceptibility.
Boston Ivy Roses	Japanese Beetle	1 lb. (16 oz.)	As the Japanese Beetle begin to appear. Repeat applications at 2 week intervals may be necessary.		

## ORNAMENTAL TREES AND SHRUBS - SOIL APPLICATION

PLANTS	INSECTS	AMOUNT OF PRODUCT	APPLICATION TIMING	APPLICATION DIRECTIONS	RESTRICTIONS
Ornamental Trees and Shrubs	Aphids Bagworm Black Vine Weevil Budworm Cankerworm Carpenterworm Cuban Laurel Thrips Gall Forming Insects Gypsy Moth (larvae) Japanese Beetle Lacebugs Leaf Beetles Leafhoppers Leafminers Leafrollers Leafier (larvae) Lepidoptera (larvae) Loopers Maple Shoot Moth Oakworm Pine Coneworm Pine Tip Moth (larvae) Plant bugs Sawflies Scales Spider Mites Tent Caterpillar Tiger Moth (larvae) Tussock Moth (larvae) Webworm Winter Moth (larvae) Whitefly Zimmerman Pine Moth (larvae)	<b>For trees up to 15 inches in trunk diameter (DBH)</b> use 1/5 oz. (5.7 g) per DBH inch. <b>For trees 15 DBH inches or greater</b> use 1/5 oz. (5.7 g) to 2/5 oz. (11.3 g) per DBH inch.  Dilute 10 oz. in up to 25 gallons of water.	Make applications to actively growing plants just prior to or when insects first appear.	For optimal uptake, irrigate the treated area after treatment to promote absorption into the root system. Applications to dry soil may decrease performance. UPL NA Inc. does not recommend applications be made to Huckleberry, Balm of Gilead, Cottonwood, Lombardy Poplar, and Viburnum suspensum. <b>Caution:</b> Phytotoxicity has occurred on the following crabapple varieties: Hopa, Ichonoski, Malus floribunda, Pink Perfection, Red Wine, and Snow Cloud.	Do not apply more than once per month. Do not apply to areas where food crops are grown (i.e., vegetable gardens, fruit trees, berry vines, etc.), children's play areas, or animal runs. Do not apply more than 5 lbs. of product per acre per application. Do not apply more than 6 lbs. of product per acre per year.

### SOIL APPLICATION METHODS

Pull back landscape mulch, landscape fabric and surface organic matter prior to making soil applications to ensure solution is delivered to the mineral soil. Measure the diameter of the tree at breast height (DBH), 4'6" above the soil line. For multi-stemmed trees and shrubs, use the cumulative diameter of individual stems at soil line stead of DBH.

**Basal Soil Injection:** Mix required dosage in sufficient water to inject an equal amount of solution in each hole. For trees less than 8 inches DBH, use a minimum of 4 injection sites per tree. Space injection sites evenly around the base of the tree no more than 12 inches out from the base. Maintain a low pressure and inject into the mineral soil to a depth of two (2) to six (6) inches. Dilution rate may vary depending on equipment used and tree size. Refer to the injector equipment instructions for guidance.



- Inject these locations first then evenly distribute the remaining solution.

**Grid System:** For trees less than 15 DBH inches, use 1/5 oz. (5.7 g) per 100 sq. ft. of area under the dripline of the trees or shrubs. Dilute 1/4 lb. (4 oz.) (113.4 g) of product in 8 gallons of water to treat 2,000 sq. ft. of area under the dripline of the tree or shrub. For trees 15 DBH inches or greater, use 1/5 oz. (5.7 g) to 2/5 oz. (11.4 g) per 100 sq. ft. of area under the dripline of the trees or shrubs. Dilute 1/4 lb. (4 oz.) (113.4 g) to 1/2 lb. (8 oz.) (226.8 g) of product in 8 gallons of water to treat 2,000 sq. ft. of area under the dripline of the tree or shrub. Make a minimum of four (4) injections per 25 sq. ft. of area under the tree of shrub, using a grid pattern. Apply at least six (6) oz. of dilue solution per injection site. Maintain a low pressure and inject to a depth of six (6) inches.

## COMMERCIAL GREENHOUSE/SHADEHOUSE FLORAL AND FOLIAGE PLANT CROPS Not for use in residential greenhouses/shadehouses

Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption.  
Do not apply with low pressure handwand equipment.

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALLONS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Roses	Leafrollers	0.5 to 0.75 lb. (8 to 12 oz.)	As leafrollers begin to appear. Use the higher specified rate when large larvae are present.	Apply the specified amount of ACEPHATE 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray.  Use higher specified rates within the specified range for severe insect infestations.	Do not apply more than 0.75 lb. product/A/ 100 gallons of water. Do not apply at less than 14 day spray intervals. <b>Notes:</b> UPL NA Inc. does not recommend application to roses with open flowers.
Anthuriums Cacti Foliage Plants Orchids Poinsettia	Aphids	0.25 lb. (4 oz.)	As aphids begin to appear.	Apply the specified amount of ACEPHATE 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray. The addition of a wetting agent may be required on difficult to wet foliage.	Do not apply more than 0.5 lb. product/A/ 100 gallons of water. Do not apply at less than 14 day spray intervals. <b>Notes:</b> Phytotoxicity has occurred on the following plants: Bletchum gibbum, Cissus antarctica, Ficus triangularis, Fittonia verschaffeltii, Maranta leuconera kerchoviana, Plectranthus lutes, Plectranthus australis, Polypodium aureus, Polystichum, Pteris ensiformis, Tolmiea menziesii.  Before treating large plantings, spray only a few plants and observe 2 weeks for varietal phytotoxicity.  Application to poinsettias after bract formation may result in phytotoxicity on certain varieties.
	Mealybugs Thrips Whiteflies	0.5 lb. (8 oz.)	As the insects begin to appear. A repeat application at a 2 week interval may be necessary for control of mealybugs and whiteflies.		
	Scales (crawlers)	0.5 lb. (8 oz.)	As crawlers begin to appear. Repeat applications at a 2 week or more interval; may be necessary where there is continuous crawler production.		
	Sweetpotato/ Silverleaf Whiteflies (except CA)	0.25 lb. (4 oz.) + Fenpropathrin products 10.66 fl. oz. (0.2 lb. a.i.)	Apply when insects first appear. If a population is well established, make one application of the tank mix and follow 5 to 7 days later with Fenpropathrin product alone at 16 fl. oz./100 gallons. See the Fenpropathrin product label for instructions.		
				Apply the specified amount of ACEPHATE 97UP plus Fenpropathrin product. Spray as a tank mix at a volume necessary to obtain good coverage. Follow the Fenpropathrin product label for specific instructions on the alternation of Fenpropathrin product plus ACEPHATE 97UP and Fenpropathrin product alone and the rotation instruction to avoid potential resistance.	

(continued)



**COMMERCIAL GREENHOUSE/SHADEHOUSE FLORAL AND FOLIAGE PLANT CROPS**  
**Not for use in residential greenhouses/shadehouses (continued)**

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 100 GALLONS	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Carnations Chrysanthemums Roses	Aphids Thrips	0.5 lb. (8 oz.)	As aphids begin to appear. As thrips begin to appear or at the tight flower bud stage. Repeat applications may be necessary.	Apply the specified amount of ACEPHATE 97UP in 100 gallons of water with a hydraulic sprayer as a full coverage spray.	Do not apply more often than once every 14 days. Do not apply more than 0.5 lb. product/A/ 100 gallons of water. <b>Notes:</b> Phytotoxicity has occurred on the following Chrysanthemum varieties: Albatross, Bonnie Jean, Dixie, Garland, Gent, Iceberg Pride, Showoff, Statesman, Tally-Ho, Westward-Ho & Wild Honey. Before treating large Chrysanthemum plantings, spray only a few plants and observe 2 weeks for varietal phytotoxicity. UPL NA Inc. does not recommend application to chrysanthemums and roses with open flowers.

## COMMERCIAL TURFGRASS: GOLF COURSES AND SOD FARMS ONLY

Do not allow livestock to graze treated areas. Do not feed treated grass to livestock. Use is limited to sod farms and golf courses, except when applying by mound or spot treatment for fire ant and harvester ant control. Aerial applications to turf are prohibited.

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 1,000 SQ. FT.	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Turfgrass (Golf Courses and Sod Farms only)	Fall Armyworm Yellow Striped Armyworm Southern Armyworm	0.4 to 0.9 oz. (1 to 2.5 lbs. per acre)	As the insects appear. A repeat application at a 14 day interval may be necessary.	Apply the specified amount of ACEPHATE 97UP per 1,000 sq. ft. Use a minimum of 5 gallons of water per 1,000 sq. ft. to obtain good coverage.  Use higher specified rates within the specified range for severe insect infestations.	Do not apply more than 3.09 lbs. product/A for Sod Farms and 4.12 lbs. product/A for Golf Courses.  For Sod Farms, allow at least 3 days to elapse between final application and harvesting sod.  Do not apply aerially.
	Cutworm	Golf Courses: 0.9 to 1.5 oz. (2.5 to 4.12 lbs. per acre)  Sod Farms: 0.9 to 1.1 oz. (2.5 to 3.09 lbs. per acre)			
	Chinch Bugs	Golf Courses: 0.9 to 1.5 oz. (2.5 to 4.12 lbs. per acre)  Sod Farms: 0.9 to 1.1 oz. (2.5 to 3.09 lbs. per acre)	Apply as needed for adult population knockdown.  Apply at 10 to 14 day intervals as needed.	Apply the specified amount of ACEPHATE 97UP per 1,000 sq. ft. Use 1 to 15 gallons of water per 1,000 sq. ft. to obtain good coverage.  Use higher specified rates within the specified range for severe insect infestations.	
	Leafhopper	0.75 oz. (2 lbs. per acre)	As the leafhoppers begin to appear. A repeat application at a 7 day interval may be necessary.		
	Mole Crickets (except CA) Spittlebug (except CA)	Golf Courses: 0.8 to 1.4 oz. (2.2 to 4 lbs. per acre)  Sod Farms: 0.8 to 1.1 oz. (2.2 to 3.09 lbs. per acre)	As mole crickets begin to appear.  For knockdown of existing populations, more than one application may be required throughout the growing season.  For heavy infestations, use the higher dosage rate.  Apply at 7 to 14 day intervals as needed.	Apply the specified amount of ACEPHATE 97UP per 1,000 sq. ft. Use 1 to 15 gallons of water per 1,000 sq. ft. to obtain good coverage.  Apply during late afternoon or early evening hours and after irrigation. Do not irrigate after application.  Use higher specified rates within the specified range for severe insect infestations.  The use of a lemon fragrance substance in the spray mix can act as a flushing agent and thus provide increased mole cricket contact with the acephate. The following lemon-scented products have been shown to be effective flushing agents: Lemon Joy, Lemon Palmoive, and Mighty Products manufactured-base pure lemon fragrance. The use rate for these lemon-scented products is 2 teaspoons per gallon of water for small total mix volume or 6 fl. oz. per 50 gallons of water for large mix volume.	

*(continued)*

## COMMERCIAL TURFGRASS: GOLF COURSES AND SOD FARMS ONLY *(continued)*

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP PER 1,000 SQ. FT.	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Turfgrass (Golf Courses and Sod Farms only)	Sod Webworm (Crambus spp.)	0.4 to 0.8 oz. (1 to 2.2 lbs. per acre)	As sod webworms begin to appear use the higher amount when quick knockdown is needed or with heavy infestations. Repeat application may be needed. Apply at 7 to 14 day intervals as needed.	Apply the specified amount of ACEPHATE 97UP per 1,000 sq. ft. Use 1 to 15 gallons of water per 1,000 sq. ft. to obtain good coverage. Use higher specified rates within the specified range for severe insect infestations.	Do not apply more than 3.09 lbs. product/A for Sod Farms and 4.12 lbs. product/A for Golf Courses. For Sod Farms, allow at least 3 days to elapse between final application and harvesting sod. Do not apply aerially.
	Greenbug (Shizaphis graminum) Grasshoppers	0.4 oz. (1 lb. per acre)	Apply when insects or their damage first appear. Apply at 7 to 14 day intervals as needed.	Apply the specified amount of ACEPHATE 97UP. Use 4 gallons of water per 1,000 sq. ft. to obtain good coverage. Do not mow turfgrass for at least 24 hours after application.	
	Black Turfgrass Ataenius (except CA)	Golf Courses: 0.9 to 1.4 oz. (2.5 to 4 lbs. per acre) Sod Farms: 0.9 to 1.1 oz. (2.5 to 3.09 lbs. per acre)	Apply when insects or their damage first appear. Apply at 7 to 14 day intervals as needed.	Apply the specified amount of ACEPHATE 97UP per 1,000 sq. ft. Use a minimum of 5 gallons of water per 1,000 sq. ft. Irrigate lightly after application (not more than 1/2 inch). Use the higher specified rate for severe infestations. Use higher specified rates within the specified range for severe insect infestations.	
Dichondra (Golf Courses and Sod Farms only)	Cutworm Flea Beetle Southern Armyworm Yellow Striped Armyworm	Golf Courses: 0.8 to 1.4 oz. (2.2 to 4 lbs. per acre) Sod Farms: 0.8 to 1.1 oz. (2.2 to 3.09 lbs. per acre)	Apply when the insects appear. Repeat at 14 day intervals as necessary.	Apply the specified amount of ACEPHATE 97UP per 1,000 sq. ft. Use a minimum of 15 gallons of water per 1,000 sq. ft. to obtain good coverage. Use higher specified rates within the specified range for severe insect infestations.	

## MOUND TREATMENT OF FIRE ANTS AND HARVESTER ANTS IN TURFGRASS

Do not allow livestock to graze treated areas. Do not feed treated grass to livestock.

PLANTS	INSECTS	AMOUNT OF ACEPHATE 97UP	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Turfgrass and Non-Crop Areas	Imported Fire Ants and Harvester Ants	Mound Treatment-Drench Method: Mix 0.75 oz. in 5 gallons of water. Apply 1 gallon of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	Apply when insects first appear.	Apply the specified amount of ACEPHATE 97UP as directed. Grass in treated areas may be injured. For best results apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged dry and hot conditions may be ineffective due to the location of the ants deep within the nest.	Do not treat mound more than once per season. For Sod Farms: Allow at least 3 days to elapse between last application and harvesting.

## OUTDOOR AND PERIMETER SPRAY EXCLUDING RESIDENTIAL TURF

LOCATION	INSECTS	AMOUNT OF ACEPHATE 97UP PER GALLON	APPLICATION TIMING	APPLICATION INSTRUCTIONS	RESTRICTIONS
Outdoor and Perimeter area (excluding residential turf)	Wasps	1.2 oz.	Treat early or late in the day, as wasps are generally less active during these times.	Apply the specified amount of ACEPHATE 97UP per each gallon of water used.  Apply as a spot treatment to the nest, nest entrance and surrounding areas where the wasps alight.	The use of low pressure handwand equipment for perimeter or wasp treatments is prohibited.
	Ants (excluding fire, harvester, carpenter and pharaoh ants) Crickets Earwigs Pillbugs	1.2 oz.	As the insects appear.	Apply the specified amount of ACEPHATE 97UP per each gallon of water used.  Apply to a band of soil 6 to 10 feet adjacent to the structure and to a height of 2 to 3 feet on the foundation where pests may be active or may find entrance.  Also apply as a residual spray or with a paint brush to surfaces of buildings, window frames, shutters, entryways, screens, eaves, patios, garages, carports, around garbage areas where these pests congregate.	

**PEST CONTROL USES FOR SPOT APPLICATIONS - Industrial, Institutional, and Commercial Buildings including Restaurants, Warehouses, Stores, Hospitals, Hotels, Manufacturing Plants, and Ships.**

Desired Concentration Wt./Wt.	Grams Product in 1 Gallon Water	Ounces Product in 1 Gallon Water
1.0%	39.0	1.4

**Pantry pests - Exposed Stages (Confused Flour Beetle, Indian Meal Moth, and Trogoderma):** Apply ACEPHATE 97UP at 1.0% as a spot application to pantry and cupboard shelves where food containers suspected of being infested are stored. Prior to spraying, remove all foodstuffs, shelving paper and utensils. Do not replace the food packages until the surface has dried. Replace shelving paper. Infested packages should be destroyed.

**Food Handling Establishments:** For use in Federally Inspected Meat and Poultry Plants and places other than private residences in which exposed food is held, processed, prepared or served.

**Food Areas - Application Limited to Spot and/or Crack and Crevice Treatment Only:** Includes areas for receiving, storage, packing (canning, bottling, wrapping, boxing) preparing, edible waste storage and enclosed processing systems (mills, dairies, edible oils, and syrups). Spray concentration shall be limited to a maximum of 1.0% active ingredient. Apply in small amounts directly into cracks and crevices using equipment capable of delivering a pin-stream of insecticide in points between different elements of construction, between equipment and floors, openings leading to voids and hollow spaces in walls, equipment legs and bases, where labeled insects hide. Care should be taken to avoid depositing this product onto exposed surfaces or introducing the material into the air. Avoid contamination of food or food processing surfaces. **Applications of this product in the food areas of food handling establishments, other than as a spot and/or crack and crevice treatment are not permitted.**

**Non-Food Areas** - Includes garage rooms, lavatories, floor drains (to sewer entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets and storage). Spray concentration shall be limited to a maximum of 1.0% active ingredient. Apply to baseboard areas, around water pipes, surfaces behind and beneath sinks, lockers, tables, pallets and similar areas where insects hide or through which they may enter.

**Serving Areas** - Facilities where prepared foods are served, such as dining rooms, but excluding areas where foods may be prepared or held; Apply as a spot treatment to selective surfaces such as baseboards, under elements of construction into cracks and crevices. Avoid treatment surfaces likely to be contacted by food. (Do not apply when facility is in operation or foods are exposed.) Do not allow spray or mist to contact food, foodstuffs, or water supplies. Dishes and food handling utensils should be thoroughly washed in soap and water if exposed to contamination by the application of this product. Do not allow children or pets to come into contact with treated surfaces until sprays have dried. Avoid contamination of food or food processing surfaces.

Do not apply directly to carpet as staining may occur. Do not treat unpainted masonry floors in poorly ventilated areas such as garages or basements, especially where moisture or high humidity exists since activity on porous surfaces may be limited.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Keep pesticide in original container. Do not put concentrate or dilute product into food or drink containers. Store in cool, dry place. Protect from excessive heat. Do not contaminate food or foodstuffs. Do not store near feed or food.

**PESTICIDE DISPOSAL:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

### CONTAINER HANDLING:

Nonrefillable container. Do not reuse or refill this container.

Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

### 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 reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks 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 UPL NA Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of UPL NA Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold UPL NA Inc. and Seller harmless for any claims relating to such factors.

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UPL NA INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.**

To the extent consistent with applicable law, UPL NA Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UPL NA INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UPL NA INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

UPL NA Inc. 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 UPL NA Inc.

UPL, the UPL logo and ACEPHATE are trademarks of a UPL Corporation Limited Group Company.

®/™ All other products are trademarks of their respective companies.

©2022 UPL Corporation Limited Group Company

146236-A (0822)

ESL031022-10406-081522

## NOTES

## NOTES

## NOTES



ACEPHATE GROUP 1 INSECTICIDE

# ACEPHATE® 97UP

## INSECTICIDE

PEEL DOWN FOR DIRECTIONS >

ACTIVE INGREDIENT	BY WT.
Acephate: (O,S-Dimethyl acetylphosphoramidothioate) .....	97%*
<b>OTHER INGREDIENTS</b> .....	3%
<b>TOTAL</b> .....	100%

\*U.S. Patent Nos. 6,752,943 and 6,875,381

EPA Reg. No. 70506-8

EPA Est. No. 41876-IND-004

## KEEP OUT OF REACH OF CHILDREN CAUTION

See attached booklet for additional Precautionary Statements and complete Directions For Use.

### FIRST AID

Contains an organophosphate that inhibits cholinesterase. **If swallowed:** • Call 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 by a poison control center or doctor. • Do not give anything by mouth to an unconscious person. **If in eyes:** • Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice. **If on skin or clothing:** • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice. **If inhaled:** • Move person to fresh air. • If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice. **Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR EMERGENCY MEDICAL ASSISTANCE, CALL ROCKY MOUNTAIN POISON AND DRUG SAFETY 1-866-673-6671. NOTE TO PHYSICIAN:** Acephate is a cholinesterase inhibitor. If signs of cholinesterase inhibition appear, atropine is antidotal. 2-PAM may also be used in conjunction with atropine but should not be used alone.

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

## Net Weight: 10 Pounds

INSECTICIDE

Made in India  
UPL NA Inc. • 630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406 U.S.A. • 1-800-438-6071



146236-A (0822) ESL031022-10406-081522