



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

February 23, 2024

Brien O'Loughlin
Agent
Tide International USA, Inc.
c/o Pyxis Regulatory Consulting Inc.
4110 136th St. Ct. NW
Gig Harbor, WA 98332

Subject: Label Amendment – Adding State Restrictions for Certain Uses and Minor Revisions (Revising Net Content Specifications in Storage and Disposal Section; Citrus Crop Section Title Correction)
Product Name: Tide Diflubenzuron 2SC
EPA Registration Number: 84229-49
Application Date: January 26, 2024
Case Number: 498087

Dear Brien O'Loughlin:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website

is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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

If you have any questions, please contact Christopher Taylor at 202-566-2928 or at taylor.christopher.m@epa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Tamica Cain".

Tamica Cain, Product Manager 10
Invertebrate & Vertebrate Branch 2
Registration Division (7505T)

Enclosure

[Note to reviewer: [Text] in brackets denotes optional text].
[Note to reviewer: {Text} in braces denotes where in the final label text will appear.]

{BOOKLET FRONT PANEL AND BASE LABEL LANGUAGE}

RESTRICTED USE PESTICIDE

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

DIFLUBENZURON	GROUP	15	INSECTICIDE
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TIDE DIFLUBENZURON 2SC

**Insect Growth Regulator
Aqueous Flowable**

For use on **field and row crops** (alfalfa^{†,††}, artichoke (California only), (barley, oats, triticale and wheat)^{†,††}; carrots (not grown for seed)^{†,††}; cotton; leafy brassica subgroup 5B and turnip greens; mushrooms^{†,††}; peanut; pepper/eggplant subgroup 8-10B; rice; soybean[†]; turfgrass (for use on sod farms only)), **orchard crops** (citrus crop group 10-10*; pear; peach subgroup 12-12B; plum subgroup 12-12C; tree nut crop group 14-12) and **non-crop uses** (livestock and poultry premises; grassland; non-crop areas)

*In California – only approved for use on orange, grapefruit, tangerine, pummelo and their hybrids.

[†]Not registered for use in California.

^{††}Not registered for use in New York.

ACTIVE INGREDIENT:

Diflubenzuron: [((4-Chlorophenyl)amino)carbonyl]-2,6-difluorobenzamide*..... 22.0%

OTHER INGREDIENTS: 78.0%

TOTAL: 100.0%

*Contains 2 lbs. diflubenzuron per gallon

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

See inside label booklet for Precautionary Statements and Directions for Use including Storage and Disposal instructions.

EPA Reg. No. 84229-49

EPA Est. No.

Manufactured for:

Tide International, USA, Inc.
21 Hubble
Irvine, CA 92618

Net Contents:

ACCEPTED

02/23/2024

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 84229-49

{LANGUAGE INSIDE BOOKLET}

Have the Tide Diflubenzuron 2SC container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this pesticide product, including health concerns, medical emergencies, or pesticide incidents, you may call **CHEMTREC®** at **1-800-424-9300**, 24 hours per day, 7 days per week.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Wear long-sleeved shirt and long pants, socks and shoes.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below.

Applicators and Other Handlers Must Wear: A long-sleeved shirt and long pants; chemical-resistant gloves, such as barrier laminate or butyl rubber ≥14 mils or nitrile rubber ≥14 mils or neoprene rubber ≥14 mils or natural rubber ≥14 mils or polyethylene or polyvinyl chloride (PVC) ≥14 mils or Viton ≥14 mils, when mixing and loading and also when using hand-held equipment; shoes plus socks.

Mixers and Loaders Using Fixed-Wing Aircraft Must Wear: A long-sleeved shirt and long pants; chemical-resistant gloves such as barrier laminate or butyl rubber ≥14 mils or nitrile rubber ≥14 mils or neoprene rubber ≥14 mils or natural rubber ≥14 mils or polyethylene or polyvinyl chloride (PVC) ≥14 mils or Viton ≥14 mils, when mixing and loading and also when using hand-held equipment; shoes plus socks.

Mixers and Loaders Using Fixed-Wing Aircraft Must Wear: A long-sleeved shirt and long pants; chemical-resistant gloves, such as barrier laminate or butyl rubber ≥14 mils or nitrile rubber ≥14 mils or neoprene rubber ≥14 mils or natural rubber ≥14 mils or polyethylene or polyvinyl chloride (PVC) ≥14 mils or Viton ≥14 mils; shoes plus socks; a minimum of a NIOSH-approved elastomeric half mask respirator with organic vapor (OV) cartridges and combination R or P filters; OR a NIOSH-approved gas mask with OV canisters; OR a NIOSH-approved powered air purifying respirator with OV cartridges and combination HE filters.

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

When handlers use closed systems (including water soluble bags), enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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 glove before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to terrestrial juvenile insects and aquatic invertebrates/mollusks/insects. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar application
- Ingestion of residues in nectar and pollen when the pesticide is applied as a foliar application

When Using This Product, Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants around the application site
- Minimize drift of this product on to beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in reduced immature bee viability.

DIRECTIONS FOR USE RESTRICTED USE PESTICIDE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves, such as barrier laminate or butyl rubber ≥14 mils or nitrile rubber ≥14 mils or neoprene rubber ≥14 mils or natural rubber ≥14 mils or polyethylene or polyvinyl chloride (PVC) ≥14 mils or Viton ≥14 mils, and
- Shoes plus socks

INSTRUCTIONS AND INFORMATION

RUNOFF

Tide Diflufenzuron 2SC has a potential for runoff, which can occur up to several months or more after use. Runoff containing this product is more likely to occur in soils that have shallow water tables or are poorly draining.

The following will decrease the likelihood of contaminating water from runoff:

- a well maintained, level vegetative buffer strip situated between application areas and surface water features (i.e., ponds, springs, streams)
- application of product avoided if forecasts predict rainfall within 48 hours
- practices that foster sound erosion control

This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

MANDATORY SPRAY DRIFT MANAGEMENT¹

Aerial Applications:

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a fine or coarser droplet size (ASABE S572.1).
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

Airblast Applications:

- Spray must be directed into the canopy.
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- User must turn off outwind pointing nozzles at row ends and when spraying outer rows.
- Do not apply during temperature inversions.

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 3 ft above the ground or crop canopy.
- Applicators are required to use a fine or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

¹ These requirements do not apply for applications to control gypsy moths, and rangeland grasshoppers and Mormon crickets as part of the USDA Gypsy Moth Program and Rangeland Grasshoppers and Mormon Cricket Suppression Program.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size—Ground Boom

- Volume—Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure—Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle—Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size—Aircraft

- Adjust Nozzles—Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT—Ground Boom

For ground equipment, the booms should remain level with the crop and have minimal bounce.

RELEASE HEIGHT—Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and a common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Handheld Technology Applications:

- Take precautions to minimize spray drift.

PRODUCT INFORMATION

Tide Diflubenzuron 2SC is an insect growth regulator, whose mode of action disrupts the regular molting process of insect larvae. It is effective against Lepidoptera and Diptera species and a wide variety of listed insect pests, and performs well when used in IPM programs.

USE RESTRICTIONS

- Do not apply Tide Diflubenzuron 2SC to water bodies where swimming is likely to occur.
- For Field Crops, Row Crops, Orchard Uses, Grassland, Non-crop Areas: Do not apply within 25 feet by ground or 150 feet by air of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. All applications must include a 25 foot vegetative buffer strip within the buffer zone to decrease runoff.
- ROTATIONAL CROPS: Unless diflubenzuron is registered for use on a particular crop, wait one month after last application to plant food or feed crops in soils treated with Tide Diflubenzuron 2SC.
- Due to mode of action, insects could take several days following application to show visible effects of Tide Diflubenzuron 2SC.

- Do not apply through irrigation systems (chemigation) in the state of California.

APPLICATION INSTRUCTIONS

Mixing Directions – if used with water

- Fill a clean spray tank with half of the amount of water required for treatment
- Begin agitation and add appropriate amount of Tide Diflubenzuron 2SC to spray tank
- Add second half of water while maintaining agitation
- If permitted for the use site, add the proper quantity of oil slowly into the mixing tank. Making sure to use at least 2 parts of water to one part of oil will help avoid development of an invert emulsion

Mixing Directions – if used without water

Always evaluate any potential mixture for compatibility and sprayability. To ensure thorough mixing of Tide Diflubenzuron 2SC with insecticides or other carriers, premix ingredients in a nurse tank before transferring into appropriate aerial or ground ULV application equipment. If a nurse tank is not available, or unable to simultaneously mix:

- Fill a clean tank with required amount of oil and/or oil-based insecticide
- Begin agitation and add appropriate amount of Tide Diflubenzuron 2SC to spray tank
- Thoroughly mix contents of spray tank
- Drain a volume of carrier adequate to fill booms and piping system from the contents of the tank and then add back to the tank

Compatibility – when combining Tide Diflubenzuron 2SC with other pesticides, additives or adjuvants, test for compatibility and sprayability. In a lidded glass jar (~1 quart size), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly. Observe mixture for approximately 30 minutes (though signs of incompatibility will often be seen within 5 minutes). Read and follow the label of each tank mix Tide Diflubenzuron 2SC used for precautionary statements, directions for use, rates and timings, and other restrictions.

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.

Application – aerial or ground application

Spray should be applied with aerial or ground equipment designed or modified to insure uniform and complete coverage of the whole plant / crop surface. Continue constant agitation while mixing and applying Tide Diflubenzuron 2SC.

Application Through Irrigation Systems – Chemigation*

***DO NOT APPLY VIA CHEMIGATION IN THE STATE OF CALIFORNIA**

Tide Diflubenzuron 2SC can be applied through properly equipped chemigation systems for insect control in grassland and row crops. Tide Diflubenzuron 2SC can be applied only through sprinkler irrigation systems (center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move). Do not apply this product through any other type of irrigation system. If treated water is not uniformly distributed, crop injury, illegal pesticide residues or lack of efficacy could occur.

In order to calibrate the irrigation system and injector to apply the mixture:

- Determine how many acres are irrigated by the chemigation system
- Once the irrigation rate has been set, determine how long (minutes) the system takes to cover the intended treatment area
- Determine the amount of mixture (total gallons) necessary to cover the desired acreage.
- Determine injector's gallon per minute rate by dividing amount of mixture (gallons) needed by time (minutes) to cover intended treatment area.
- Determine the correct ounces per minute rate (converting from gallons per minute)

- Operate system at desired irrigation rate and calibrate injector

It is suggested that the injector pump be calibrated at least twice before operation and the system be monitored during operation.

Your local extension service, university experts or equipment manufacturers or representatives can answer questions regarding calibration.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide 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.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

If the chemigation system is connected to a public water supply, the following conditions must also be met:

- 'Public water system' means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from a point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must 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 or in cases where there is no water pump, 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.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
- Upon completion of insecticide application, remove scale, pesticide residues, and other foreign matter from the supply tank and entire injector system. Flush thoroughly with clean water.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

SPRINKLER CHEMIGATION

For continuously moving systems, the mixture containing Tide Diflubenzuron 2SC must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For sprinkler systems that do not move during operation, apply in no more than 0.25 inch of irrigation immediately before the end of the irrigation cycle.

Maintain continuous agitation of the pesticide supply tank for the duration of the application period.

To apply a pesticide using sprinkler chemigation, the chemigation system must meet the following specifications:

- 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.

RESISTANCE MANAGEMENT

For resistance-management, Tide Diflubenzuron 2SC contains a Group 15 insecticide. Any insect population may contain individuals naturally resistant to Tide Diflubenzuron 2SC and other Group 15 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance management strategies should be followed. To reduce the potential for developing insect resistance, rotate to an insecticide with a different mode of action. Monitor treated pest populations for resistance development. Read product label before applying any insecticide and follow label directions.

To delay insecticide resistance, take the following steps:

- Rotate the use of Tide Diflubenzuron 2SC or other Group 15 insecticides within a growing season, or among growing seasons, with different groups that control the same pests. Avoid application of more than the maximum seasonal use rate or the total number of consecutive sprays of Tide Diflubenzuron 2SC per season.
- 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 may still 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/acaricides 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.
- For further information or to report suspected resistance contact a Tide International USA Inc. representative.

SPECIFIC USE DIRECTIONS

FIELD AND ROW CROPS

ALFALFA (Except New York and California)

- Due to the mode of action of Tide Diflubenzuron 2SC, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Tide Diflubenzuron 2SC, and then undergo molting)
- Due to the mode of action of Tide Diflubenzuron 2SC, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Tide Diflubenzuron 2SC, and then undergo molting) in 2 to 15 gallons (total volume) per acre. Make sure that application volume is sufficient for adequate coverage.

Application Rates

Grasshoppers and Mormon Crickets: apply 2 fl. oz. per acre

Make applications any time following egg hatching. For best results, apply once nymphs are between the 2nd and 4th instar growth stage. To protect new growth, make additional applications every 10-14 days for seed crops. After application Tide Diflubenzuron 2C will continue to remain active, controlling later season insect populations.

IMPORTANT

- Adult grasshoppers will not be effectively controlled by Tide Diflubenzuron 2SC. If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Due to the mode of action of Tide Diflubenzuron 2SC, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Tide Diflubenzuron 2SC, and then undergo molting)
- Larvae and nymphs could take up to 3 to 10 days following application to show visible effects, due to the mode of action of Tide Diflubenzuron 2SC.

ALFALFA RESTRICTIONS

- Do not make more than 3 applications per season.
- Do not apply more than 6 fl. oz. (0.09375 lb. a.i.) per acre per season.
- Do not exceed a total of 2 fl. oz. per acre per cutting.
- Preharvest Interval for cutting forage or hay is 1 day; preharvest interval for harvest of alfalfa seed is 1 day after final treatment.
- Do not use in the state of California or in the state of New York.

ARTICHOKE (California only)

Application Instructions

Tide Diflubenzuron 2SC can be applied aerially in 10 to 20 gallons (total volume) per acre, or by ground application in 50 to 250 gallons (total volume) per acre. Make sure that application volume is sufficient for adequate coverage.

Application Rates

Artichoke Plume Moth: apply 8-16 fl. oz. per acre

Optimum results are obtained when Tide Diflubenzuron 2SC is applied when first moths are caught in pheromone traps, or when moth flights start.

IMPORTANT

- Tide Diflubenzuron 2SC can be a part of an IPM program to manage target pest populations (in combination with cultural practices, target insect population early detection, threshold treatment levels, etc.). University or local extension representatives can give recommendations regarding IPM practices

ARTICHOKE RESTRICTIONS

- For use only in California
- Maximum number of applications is 3 in any 30 day period
- Application interval is a minimum of 15 days
- Pre-harvest interval is 1 day before harvest

BARLEY, OATS, TRITICALE, & WHEAT

Application Instructions

Tide Diflubenzuron 2SC can be applied aerially in 2 to 5 gallons (total volume) per acre, or by ground application in 5 to 15 gallons (total volume) per acre. Make sure that application volume is sufficient for adequate coverage.

Application Rates

Grasshoppers: apply 1 – 2 fl. oz. per acre

Optimum results are obtained when application is made to infesting grasshoppers that have reached the 2nd and 3rd nymphal stage of development. Adult grasshoppers will not be effectively controlled by Tide Diflubenzuron 2SC.

Cereal Leaf Beetle: apply 4 fl. oz. per acre

Make application when egg laying begins to occur, for optimum results. If infestation advances into later instar larvae, do not apply Tide Diflubenzuron 2SC.

IMPORTANT

- If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Tide Diflubenzuron 2SC alone may not reduce grasshopper population soon enough to minimize extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the unique mode of action of Tide Diflubenzuron 2SC.

BARLEY, OATS, TRITICALE, & WHEAT RESTRICTIONS

- Pre-harvest interval for forage is 3 days; Pre-harvest interval for hay is 15 days; Pre-harvest interval for grain and straw is 50 days.
- For use only in: Alaska; Colorado; Idaho; Montana; Nebraska, Western (West of Route 281); North Dakota, Western (West of Route 281); Oregon; South Dakota, Western (West of Route 281); Utah, Washington, Wyoming
- Do not apply after the boot stage of growth
- Do not make more than 1 application per season
- Do not exceed 4 fl. oz. (1 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season

CARROTS (NOT GROWN FOR SEED; Except New York and California)

Application Instructions

Tide Diflubenzuron 2SC can be applied by ground application in 20 to 50 gallons (total volume) per acre. Make sure that application volume is sufficient for adequate coverage.

Application Rates

Carrot Weevil: apply 8 fl. oz. per acre

Apply at first sign of larval infestation.

IMPORTANT

- Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the unique mode of action of Tide Diflubenzuron 2SC.

CARROTS (NOT GROWN FOR SEED; Except New York and California) RESTRICTIONS

- Do not use in the state of California and the state of New York.
- Do not apply this product to carrots grown for seed.
- Do not make more than 2 applications per year.
- Do not apply more than 16 fl. oz. (4 lb. a.i.) per acre per year.
- Allow a minimum of 7 days between treatments.
- Preharvest Interval is 7 days.

COTTONSEED SUBGROUP 20C

Application Instructions

Tide Diflubenzuron 2SC may be applied aerially in 3 to 5 gallons (total volume) per acre, or by ground application in 10 to 20 gallons (total volume) per acre. Make sure the application volume is sufficient for adequate coverage.

Adjuvants

- If Tide Diflubenzuron 2SC is being applied under conditions of high air temperature and/or low humidity, or other conditions that encourage water evaporation, 1 to 2 qts. oil is to be used with Tide Diflubenzuron 2SC for control of larvae / nymphs
- For a low volume application (ground or aerial), the use of 1 pt. to 2 qts. of an emulsified vegetable or paraffinic crop oil can reduce evaporation of spray droplets (and subsequent drift), and can enhance canopy penetration
- When Tide Diflubenzuron 2SC is being applied via ULV, 20 fl. oz. (minimum) of an emulsified cottonseed, vegetable or petroleum-based oil carrier is to be used (if cottonseed oil used is non-emulsified, a compatibility agent may be necessary for thorough blending)

For oil specifications, consult your supplier representative.

Application Rates

Beet Armyworm (early season before first bloom): Apply 2-4 fl. oz. per acre

For acceptable beet armyworm control in young cotton, apply Tide Diflubenzuron 2SC when observing 2 beet armyworm egg masses or hatchouts per 100 feet of row, or other sign of beet armyworm activity. Make multiple directed or broadcast applications until 8 fl. oz. Tide Diflubenzuron 2SC have been applied per acre, at application intervals of 5 to 7 days. Multiple applications more completely cover rapidly growing cotton plants, and Tide Diflubenzuron 2SC's persistence can help prevent buildup of beet armyworm populations later in the growing season.

Beet Armyworm (mid-season): apply 4-8 fl. oz. per acre

Make multiple applications at 5 to 7 day intervals, until 8 fl. oz. Tide Diflubenzuron 2SC per acre have been applied. Start application around first bloom, up through mid-bloom. For more extreme larval pressure, or for larger cotton, use higher listed application rate. Make first application when a new generation of larvae is about to hatch (determined by peak beet armyworm moth catches in pheromone traps). For optimum control, treat cotton leaves during early stages of larval development, before populations become established.

Beet Armyworm (late season): apply 6-8 fl. oz. Tide Diflubenzuron 2SC per acre

Apply when peak beet armyworm moth catches are observed in pheromone traps, after mid-bloom, but at least 14 days prior to harvest. For more extreme larval pressure, or for larger cotton, use higher listed application rate.

For control of **Fall Armyworm, Yellowstriped Armyworm, Southern Armyworm** and suppression of **Soybean Looper, Cabbage Looper, Saltmarsh Caterpillar**: apply 4 -8 fl. oz. per acre.

Make applications during a 5 to 7 day interval, in early larval development stages, until at least 8 fl. oz. Tide Diflubenzuron 2SC per acre have been applied.

Boll Weevil (early season, before first bloom): apply 4-8 fl. oz. per acre

For optimum boll weevil control, apply initially at pinhead square stage of cotton growth. Wait 7 days before repeat application.

Adjuvants: Use 2 to 4 quarts paraffinic crop oil, emulsified cottonseed oil or vegetable oil. If cottonseed oil used is non-emulsified, a compatibility agent may be necessary for thorough blending. For oil specifications, consult your supplier representative.

Tide Diflubenzuron 2SC does not kill adult boll weevil, but controls populations by suppressing reproduction – eggs deposited by affected female weevils will not hatch. Seven to 10 days after initial treatment of female, non-hatching eggs are laid, and will continue to be laid for approximately 10 days, or longer if female boll weevil is exposed to additional applications of Tide Diflubenzuron 2SC. Control of egg hatch and larval development within the pinhead square keeps it from shedding, and results in normal boll development. Multiple treatments and early application will result in best control.

Boll Weevil: apply 2-4 fl. oz. per acre

Apply when adult weevils are going into diapause, when cotton plant has begun blooming out at the top or has reached full vegetative growth. The number of weevils that appear in the spring is reduced when applications are made to adult weevils going into diapause to overwinter.

Make 2 to 3 (maximum) applications, at 7 to 14 day intervals.

Adjuvants: Use 2 to 4 quarts paraffinic crop oil, emulsified cottonseed oil or vegetable oil with a low volume application spray. If making a ULV application, use a minimum of 8 fl. oz. of vegetable or petroleum-based oil carrier, oil-based insecticide or emulsified cottonseed oil. If cottonseed oil used is non-emulsified, a compatibility agent may be necessary for thorough blending.

Grasshopper: apply 2 fl. oz. per acre

When most infesting grasshoppers have reached the 2nd and 3rd nymphal stage of development, Tide Diflubenzuron 2SC should be applied. For effective control, apply before grasshoppers reach the adult stage. If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Tide Diflubenzuron 2SC alone may not reduce grasshopper population soon enough to minimize extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

IMPORTANT:

- Tide Diflubenzuron 2SC can be tank mixed with other cotton insecticides. Be careful when tank mixing Tide Diflubenzuron 2SC with emulsifiable concentrate insecticides and oil, as phytotoxicity may result. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the mode of action of Tide Diflubenzuron 2SC.

COTTONSEED SUBGROUP 20C RESTRICTIONS

- Do not make more than 6 applications per season
- Do not exceed 24 fl. oz. (6 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season
- For uses after boll opening, the maximum number of applications per year is 3, and the maximum amount of product per acre is 12 fl. oz. (3 oz. a.i.)
- Pre-harvest interval is 14 days

LEAFY BRASSICA GREENS SUBGROUP 5B (includes: Broccoli raab, Cabbage, Chinese (bok choy), Collards, Kale, Mizuna, Mustard greens, Mustard spinach, Rape greens) and TURNIP GREENS

Application Instructions

Tide Diflubenzuron 2SC can be applied via ground application in a minimum of 30 gallons of water per acre. Multiple applications can more effectively cover newly growing foliage. Make sure that application volume is sufficient for adequate coverage.

Application Rate

Grasshopper: apply 2-4 fl. oz. per acre

When most infesting grasshoppers have reached the 2nd and 3rd nymphal stage of development, Tide Diflubenzuron 2SC should be applied. Reapply after 7 days if crop reinfestation (nymphal hatch out) continues. For effective control, apply before grasshoppers reach the adult stage. Use higher listed application rate for greater residual control, around dense foliage, or for areas with historically heavy grasshopper infestations.

IMPORTANT

- Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the mode of action of Tide Diflubenzuron 2SC.
- If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Tide Diflubenzuron 2SC alone may not reduce grasshopper population soon enough to minimize extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- Populations will not be decreased until larvae and nymphs ingest plant material treated with Tide Diflubenzuron 2SC, and then undergo molting

LEAFY BRASSICA GREENS SUBGROUP 5B and TURNIP GREENS RESTRICTIONS

- Do not apply to turnip varieties or cultivars with harvestable root
- Do not make more than 4 applications per season
- Do not exceed 16 fl. oz. (4 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season
- Pre-harvest interval is 7 days

MUSHROOMS (Except California, Idaho, New York, Oregon & Washington)

Application Instructions & Rates

Sciarid Flies Composting Treatment: apply 40 to 64 fl. oz. per 1,000 square feet

Apply between compost filling and spawning by thorough incorporation, such as with a spawning machine. Assuming a wet compost weight of 40 pounds per cubic foot, this is equivalent to 30 to 50 ppm active ingredient.

Sciarid Flies Casing Treatment: apply 13.5 fl. oz. per 1,000 square feet

Apply at the time of casing. Assuming a casing weight of 6,700 pounds per 1,000 square feet, this is equivalent to a rate of 30 ppm active ingredient.

IMPORTANT

- Tide Diflubenzuron 2SC prevents larvae from developing, effectively stopping reproduction.
- Due to the mode of action of Tide Diflubenzuron 2SC, signs of control will not be immediate. Tide Diflubenzuron 2SC does not control adult flies.

MUSHROOM RESTRICTIONS

- Do not use in California, Idaho, New York, Oregon and Washington.

PEANUT

Application Instructions

Tide Diflubenzuron 2SC can be applied aerially, in 3 to 5 gallons water per acre, or by ground application, in 9 to 35 gallons water per acre. Make sure that application volume is sufficient for uniform coverage.

Adjuvants: See COTTON section.

Application Rate

Velvet Bean Caterpillar, Mexican Bean Beetle, Green Cloverworm: apply 2-4 fl. oz. per acre

Armyworm (such as Beet, Fall, Southern, Yellow-striped), Lesser Cornstalk Borer: apply 4-8 fl. oz. per acre

Soybean Looper suppression: apply 4-8 fl. oz. per acre

For optimum control and minimization of insect damage, apply when larvae are small (less than 1/2 inch). Use higher listed application rate for greater residual control, around dense foliage, or for areas with historically heavy infestations. Tide Diflubenzuron 2SC can be reapplied if necessary, to control reappearance of pests, after an application interval of 14 days.

Grasshopper: apply 2 fl. oz. per acre

When most infesting grasshoppers have reached the 2nd and 3rd nymphal stage of development, Tide Diflubenzuron 2SC should be applied. For effective control, apply before grasshoppers reach the adult stage.

IMPORTANT

- Due to the mode of action of Tide Diflubenzuron 2SC, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Tide Diflubenzuron 2SC, and then undergo molting)
- If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Tide Diflubenzuron 2SC alone may not reduce grasshopper population soon enough to minimize extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

PEANUT RESTRICTIONS

- Do not make more than 3 applications per season
- Do not exceed 24 fl. oz. (6 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season
- Pre-harvest interval is 28 days

PEPPER/EGGPLANT CROP SUBGROUP 8-10B (includes African Eggplant, Bell Pepper, Eggplant, Matynia, Nonbell Pepper, Okra, Pea Eggplant, Pepino, Roselle, Scarlet Eggplant – Cultivars, varieties, and/or hybrids of these)

Application Instructions

Tide Diflubenzuron 2SC can be applied aerially, in 3 to 10 gallons (total volume) per acre, or by ground application, in a minimum of 30 gallons (total volume) per acre. Make sure that application volume is sufficient for adequate coverage.

Adjuvants: see COTTON section.

Application Rate

Apply 4 to 8 fl. oz. per acre

Pepper Weevil - Make application when pepper plants begin to flower. For more thorough coverage of expanding fruit and new foliage, Tide Diflubenzuron 2SC can be reapplied every 7 days (note – do not exceed seasonal application rate of 24 fl. oz. product per acre per season). For moderate to heavy infestations, use higher listed rate. Tide Diflubenzuron 2SC does not control adult pepper weevils, but adult contact or consumption of Tide Diflubenzuron 2SC will bring about reduced hatching of eggs from these adults.

Armyworm (Beet, Fall Southern) and other Lepidopteran insects that feed on pepper foliage:

For control of armyworms and to lessen damage to fruit and leaves, make application when armyworm larvae are small. For more thorough coverage of expanding fruit and new foliage, Tide Diflubenzuron 2SC can be reapplied every 7 days (note – do not exceed seasonal application rate of 24 fl. oz. Tide Diflubenzuron 2SC per acre per season). For heavy infestations, or if product is applied alone, use higher listed rate.

Tank Mixes: If presence of late instar larvae are detected, tank mix Tide Diflubenzuron 2SC with an insecticide that provides insect knockdown. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

IMPORTANT

- Due to the mode of action of Tide Diflubenzuron 2SC, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Tide Diflubenzuron 2SC, and then undergo molting)

PEPPER RESTRICTIONS

- Do not exceed 24 fl. oz. (6 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season
- Do not make more than 5 applications per season
- Pre harvest interval is 7 days

RICE

Application Rate and Instructions

Apply Tide Diflubenzuron 2SC aerially, in at least 5 gallons total volume per acre.

Rice Water Weevil:

When adults have reached an economic threshold or begin laying eggs, application of Tide Diflubenzuron 2SC will control rice weevil larvae. Local extension service or university experts can advise regarding egg laying and economic threshold. Use the rates indicated below:

- California – Make one 8 to 16 fl. oz. per acre application (for historically high infestations, use 12-16 fl. oz. rate). Apply to rice in CA when rice is at 2 to 4 leaf stage, typically 2-5 days after rice emerges above water.
- Southern U. S. Rice Belt – water seeded, pinpoint flood or continuous flood rice – Apply 8 fl. oz. per acre application (typically when rice leaves have emerged above water). Make second 8 fl. oz. application 5 to 7 days later. [NOTE – not making second application in indicated time frame could lead to unsatisfactory control, particularly for higher infestations or prolonged migration]
- Southern U. S. Rice Belt – drill seeded, dry seeded or water seeded delayed flood rice – Make one 12 to 16 fl. oz. per acre application (for historically high infestations, or prolonged migration of weevils into rice field, use higher listed application rate). Apply to rice 2 to 5 days after permanent flood establishment.

For optimum results, wait 7 days to disturb flood after single application, and for split application, wait 4 days to disturb flood after first treatment and 7 days to disturb flood after second treatment.

Tank Mixes: Tide Diflubenzuron 2SC can be tank mixed with rice post permanent flood herbicides, such as those containing the active ingredient quinclorac, triclopyr or bensulfuron methyl, as it does not exhibit any phytotoxicity to rice. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

IMPORTANT

- To avoid decreased activity, apply Tide Diflubenzuron 2SC when field flooding is not in progress
- Tide Diflubenzuron 2SC does not control adult weevils directly, adults feeding on treated plants will not lay viable eggs

- Tide Diflubenzuron 2SC prevents larvae from hatching, and controls eggs laid under water treated with Tide Diflubenzuron 2SC

RICE RESTRICTIONS

- Do not exceed 16 fl. oz. (4 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season
- Preharvest interval is 80 days
- Not for use on wild rice (*Zizania* spp.)
- Granular material treated with Tide Diflubenzuron 2SC cannot be used in rice
- Treat entire field with Tide Diflubenzuron 2SC (do not try to treat specific sections of rice field)
- Floodwaters from treated rice are only to be used to irrigate crops listed on Tide Diflubenzuron 2SC's label.
- Retain treated floodwaters at least 14 days, to give Tide Diflubenzuron 2SC time to dissipate
- Tide Diflubenzuron 2SC should not be used around crayfish (crawfish):
 - Do not use on rice fields in which crayfish (crawfish) farming is included in the cultural practice
 - Do not use on rice fields that are directly next to sites of crayfish farming
 - Do not drain treated water onto fields where crayfish are farmed

SOYBEANS (Except California)

Application Instructions

Tide Diflubenzuron 2SC can be applied aerially, in 3 to 5 gallons water per acre, or by ground application, in 9 to 35 gallons water per acre. Make sure that application volume is sufficient for uniform coverage.

Adjuvants: See COTTON section.

Application Rate

Velvet Bean Caterpillar, Mexican Bean Beetle, Green Cloverworm: apply 2-4 fl. oz. per acre

For lower insect damage and optimum control, apply when larvae are small (less than 1/2 inch). Tide Diflubenzuron 2SC can be reapplied if necessary, to control reappearance of damaging numbers of pests, after an application interval of 30 days. When soybean pod formation has begun, after vegetative growth is complete, Tide Diflubenzuron 2SC applied at the lower rate (2 fl. oz.) can prevent velvetbean caterpillar buildup.

Beet Armyworm, Fall Armyworm, Soybean Looper (suppression): apply 4 fl. oz. per acre

For optimum control, apply before populations build, and when worms are small in size.

Grasshopper: apply 2 fl. oz. per acre

When most infesting grasshoppers have reached the 2nd and 3rd nymphal stage of development, Tide Diflubenzuron 2SC should be applied. For effective control, apply before grasshoppers reach the adult stage.

Tank Mix: Apply Tide Diflubenzuron 2SC tank mixed with a knockdown insecticide if soybean fields experience a large grasshopper population incursion from adjacent and nearby fields, to reduce extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Soybean yield enhancement: Tide Diflubenzuron 2SC can increase soybean seed yield in both determinate and indeterminate cultivars, under certain growing conditions, and LOW insect pressure. Making application of Tide Diflubenzuron 2SC at 2 to 4 fl. oz., at the R3 (beginning of pod growth – fully developed leaf with pod of 3/16 inches in length on main stem uppermost node) to R3.5 (pod almost fully elongated – fully developed leaf with pod 3/4 inches in length on main stem uppermost nodes) growth stages will result in most consistent yield increase.

IMPORTANT

- Due to the mode of action of Tide Diflubenzuron 2SC, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Tide Diflubenzuron 2SC, and then undergo molting)

SOYBEANS (Except California) RESTRICTIONS

- Do not use on soybeans in the State of California (registered by the California Department of Pesticide Regulation)
- Do not make more than 2 applications per season
- Do not exceed 8 fl. oz. (2 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season
- Pre-harvest interval is 21 days

TURFGRASS (for use on sod farms only)

Application Instructions

Tide Diflubenzuron 2SC can be applied in 20 to 50 gallons of water per acre depending on the density of turf and caterpillar pressure. Use higher volume of water for greater insect pressure or dense foliage. Tide Diflubenzuron 2SC can be reapplied, if necessary, after an application interval of 14 days.

Application Rate

Armyworms (Fall, True, Southern Beet, Yellow-striped), Sod Webworm, Striped Grass Looper, Granulate Cutworm and other Lepidopteran foliage-feeding caterpillars:

Apply 2 fl. oz. per acre

Make application while caterpillar larvae are small (less than ½ inch long, prior to reaching 4th instar growth stage), and at first sign of hatch out. Populations will be decreased once larvae consume Tide Diflubenzuron 2SC and undergo molting.

TURFGRASS (for use on sod farms only) RESTRICTIONS

- Do not exceed 8 fl. oz. (2 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season
- Do not make more than 4 applications per season

ORCHARD CROPS

CITRUS FRUIT GROUP 10-10* Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliate orange; uniq fruit; cultivars, varieties, and/or hybrids of these

***In California – only approved for use on orange, grapefruit, tangerine, pummelo and their hybrids.**

Application Instructions

Tide Diflubenzuron 2SC can be applied as a high volume spray aerially, using fixed wing or rotary equipment, in 5 to 20 gallons (total volume) per acre, or by ground application, using hand-held, hand gun, air blast or air assisted equipment, in 50 to 1000 gallons (total volume) per acre. Make sure that application volume is sufficient for uniform coverage of leaf surfaces. Refer to pest specific sections below for low volume application instructions (**low volume applications to citrus fruit are not approved in California**). Optimum results on the largest range of pests will be gained from applying Tide Diflubenzuron 2SC when new flush is emerging and/or present, however product can be applied to citrus at any time of the year.

Application Rate

For all citrus pests, apply Tide Diflubenzuron 2SC at a rate of 20 fl. oz. per acre.

Asian Citrus Psyllid (*Diaphonia citri*)

Make application when Asian Citrus Psyllid (ACP) oviposition is seen or expected, when early feather leaf flush is present.

To maximize coverage of the entire citrus leaf flush, make split application by spraying half of volume of product (10 fl. oz. per acre) as indicated above (oviposition seen or expected, early-feather leaf flush is present, leaf distortion is evident), and the other half (10 fl. oz. per acre) to protect new growth flush, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Tide Diflubenzuron 2SC.

Low Volume Application – Except in California, apply by ground (air-assisted or air blast spray equipment) in 3 to 5 gallons (total volume) per acre.

Citrus Rust Mite (*Phyllocoptruta oleivora*)

Make application when Citrus rust mites (CRM) are first observed on fruit or leaves.

For CRM control programs, rotate to an insecticide with a different mode of action before reapplying Tide Diflubenzuron 2SC. Activity of Tide Diflubenzuron 2SC on CRM is on immature stages, with most activity on late-instar CRM and may not reach full effect for up to 14 days after application.

Lepidopterous Miners: Citrus Leafminer (*Phyllocnistis citrella*)

Make application when Citrus Leafminer (CLM) oviposition is seen or expected, when leaf flush is present and oldest leaf is expanded by one-quarter, or when leaf mining is evident.

To maximize coverage of the entire leaf flush, make split application by spraying half of volume of product (10 fl. oz. per acre) as indicated above (oviposition seen or expected, leaf flush is present, leaf distortion is evident), and the other half (10 fl. oz. per acre) to protect new growth flush, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Tide Diflubenzuron 2SC. **Low Volume Application** – apply by ground (air-assisted or air blast spray equipment) in 3 to 5 gallons (total volume) per acre.

Lepidopterous Miners: Citrus Peel Miner (*Marmara* spp.)

Make application when citrus peel surfaces show Citrus peel miner (CPM) oviposition, or when expected.

To maximize coverage of the fruit surface, make split application by spraying half volume of product (10 fl. oz. per acre) when CPM oviposition begins, and the other half (10 fl. oz. per acre) to protect expanded fruit growth, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Tide Diflubenzuron 2SC. Protection from CPM larvae will lessen over time as fruit expands and new, unprotected tissue develops, but may last up to several weeks.

Citrus Root Weevil Complex: West Indian Sugarcane Rootstalk Borer Weevil (*Diaprepes abbreviatus*), Southern Blue-Green Citrus Root Weevil (*Pachnaeus litus*), Blue-Green Citrus Weevil (*Pachnaeus opalus*) Fuller Rose Beetle (*Asynonychus godmani*), Little Leaf Notcher (*Artipus flondanus*)

Make application to citrus leaf flush when Citrus root weevils (CRW) are seen, when oldest leaf is expanded by one-half, or when recent leaf feeding is evident.

Katydid, Grasshoppers:

Make application when katydids or grasshoppers are seen, or recent feeding on leaves or fruit is noticed.

To maximize coverage and protection of leaves and fruit, make split application by spraying half of volume of product (10 fl. oz. per acre) as indicated above (katydids or grasshoppers are seen, recent feeding on leaves or fruit), and the other half (10 fl. oz. per acre) to protect new growth, as needed. Wait at least 30 days **(90 days in CA)** for subsequent applications of Tide Diflubenzuron 2SC.

Adjuvants - To enhance spray coverage, add a CDA approved or other quality surfactant such as Dine-Amic® or Kinetic® or addition of a spray oil, such as FC435-66. Consult your supplier representative for oil specifications. Addition of a spray oil also aids knockdown of existing populations (CRM), penetration or absorption of Tide Diflubenzuron 2SC into immature stages of insects², mites³, eggs^{1,3,4,5,6,7}, larvae³, pupae³, nymphs^{1,6,7} and adults^{1,6,7}. A spray oil improves Tide Diflubenzuron 2SC's activity, which is to prevent eggs from hatching, larvae or nymphs from molting, moths from emerging from pupae, and limiting eggs laid or able to hatch by adult females when exposed to Tide Diflubenzuron 2SC through contact, ingestion and/or absorption. Spray oil also limits egg mass attachment to citrus leaf surface³.

- | | |
|--------------------------------|-----------------------|
| 1 – Asian Citrus Psyllid | 2 – Citrus Rust Mite |
| 3 – Citrus Leafminer | 4 – Citrus Peel Miner |
| 5 – Citrus Root Weevil Complex | 6 – Katydid |
| 7 - Grasshopper | |

IMPORTANT:

- Application of Tide Diflubenzuron 2SC when new citrus flush has emerged will give best control of the most pests, however it can be applied anytime during the year
- Tide Diflubenzuron 2SC affects existing ACP, CLM and citrus root weevil populations by diminishing their reproductive ability.
- Tide Diflubenzuron 2SC does not control the following insect growth stages:
 - Adult Asian citrus psyllid, citrus root weevils, katydids or grasshoppers
 - Adult Citrus Rust mite or Citrus rust mite eggs
 - Citrus Leafminer or Citrus peel miner moths

CITRUS FRUIT CROP RESTRICTIONS

- **Ground Application:** Do not apply within 25 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. **In the State of Florida**, do not apply within 100 feet of estuarine/marine bodies of water. Spray last three rows windward of surface water using nozzles on one side only, with spray directed away from surface water. Avoid spray going over tops of trees by adjusting or turning off top nozzles. Shut off nozzles on one side away from the grove when spraying the outside row. Shut off nozzles when turning at ends of rows and passing tree gaps in rows.
- **Aerial Application:** Do not apply within 150 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. **In the State of Florida**, do not apply within 1000 feet of estuarine/marine bodies of water.
- Maximum amount of product per acre is 60 fl. oz. (15 oz. a.i.) per year
- Maximum number of applications per year is three full rate applications of 20 fl. oz. per acre per year or six split applications of 10 fl. oz. per acre per year, or a combination of full and split applications, not exceeding the maximum yearly amount of 60 fl. oz. (15 oz. a.i.) per acre per year.
- Pre-harvest interval is 7 days **(21 days in CA)**.
- Wait a minimum of 30 days **(90 days in CA)** for repeat application (except when making split applications, as per instructions, above)
- Do not graze livestock in treated areas or harvest cover crops in treated areas for livestock feed

PEACH SUBGROUP 12-12B (including Nectarines, Peaches and cultivars, varieties and hybrids of these) & PLUM SUBGROUP 12-12C (including Apricots, Japanese Apricot, Chinese Jujube Plum, American Plum, Beach Plum, Canada Plum, Cherry Plum, Chickasaw Plum, Damson Plum, Japanese Plum, Klamath Plum, Plum, Prune, Plumcot, Sole and cultivars, varieties and hybrids of these)

Application Instructions

Apply Tide Diflubenzuron 2SC by ground in a minimum of 50 gallons of water for trees up to 10 feet tall and a minimum of 100 gallons of water for larger trees. For optimal results, use enough water for sufficient coverage and make sure that canopy is evenly and thoroughly covered.

Application Rate

Peach Twig Borer: apply 12 – 16 fl. oz. per acre (0.188 lb. a.i. to 0.25 lb. a.i./acre). Always use the higher listed rate in the range for orchards with a history of heavy infestations.

Dormant / delayed dormant application: apply with a narrow range oil (4 to 6 gallons per acre or 1.5 to 2.0 gallons per 100 gallons spray volume in a dilute spray).

Bloom application: Application can be made with a vegetable oil (1 qt. per acre), with application starting at early bloom.

Leafroller (Filbert, Oblique Banded, Omniverous, Variegated), Omniverous leaftier, Moth (Oriental Fruit, Winter), Fall Webworm, Caterpillar (Redhumped, Walnut), Codling Moth*, Katydid*, Plum cucurlio*: apply 8 – 16 fl. oz. per acre (0.125 lb. a.i. to 0.25 lb. a.i./acre). Always use the higher listed rate in the range for orchards with a history of heavy infestations.

Make application when insect larvae are first observed. The higher listed use rate will give longer residual control. It should also be used if foliage is heavy or dense, if pest infestations are high, or if trees are larger or crop load is low. Tank mix with an adulticide for adult Plum cucurlio control.

*Not for use in California.

Grasshoppers, Katydid (for use in **Peach Orchards in GA ONLY**): Apply 2 fl. oz. per acre

Make application to peach orchards or surrounding vegetation when immature insects are first observed. Larvae and nymphs could take up to 5 to 7 days following application to show visible effects, due to the mode of action of Tide Diflubenzuron 2SC.

Tide Diflubenzuron 2SC will not control adult grasshoppers. If a large influx of grasshoppers occurs, tank mixing with a knockdown insecticide is recommended. Use of Tide Diflubenzuron 2SC alone may not reduce grasshopper populations soon enough to minimize extensive foliage feeding. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

IMPORTANT:

- Due to the mode of action of Tide Diflubenzuron 2SC, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Tide Diflubenzuron 2SC, and then undergo molting)

PEACH SUBGROUP 12-12B & PLUM SUBGROUP 12-12C RESTRICTIONS:

- Preharvest interval is 14 days.
Do not exceed 32 fl. oz. (8 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season.
- Maximum number of applications per year is 2.
- Wait a minimum of 14 days between Tide Diflubenzuron 2SC applications

PEAR

Application Instructions

Apply Tide Diflubenzuron 2SC in a minimum of 80 to 400 gallons of water per acre. Make sure that application volume is sufficient for uniform coverage.

Application Rate

Pear Psylla, Pear Rust Mite (pre-bloom) – apply 40 – 48 fl. oz. per acre

Make application any time from delayed dormant period to white bud, or 'popcorn,' stage of growth, and during the deposition of pear psylla eggs so that Tide Diflubenzuron 2SC contacts eggs and/or 1st and 2nd instar nymphs. Make sure tree is completely and uniformly covered with spray for optimum insect control.

Additives: During delayed dormant period, apply Tide Diflubenzuron 2SC with 4 to 6 gallons per acre of a horticultural mineral oil. When applying during other growth periods, through the white bud, or 'popcorn,' stage, apply Tide Diflubenzuron 2SC with 0.25% horticultural oil (maximum of 1 gallon horticultural oil per

acre). Additionally, coverage can be enhanced with the use of a surfactant (follow surfactant label instructions).

Codling Moth, suppression of **Pear Psylla** (post bloom) – apply 12 to 16 fl. oz. per acre

Make application as soon as possible after first codling moths are observed or caught (biofix), or about 50-75 degree days after biofix. Tide Diflubenzuron 2SC prohibits hatching of codling moth eggs, and must be applied to trees before eggs are laid, so that laid eggs are deposited on treated surfaces. Make sure that entire tree surface, including fruit and foliage is treated with Tide Diflubenzuron 2SC. If codling moth pressure is light, or if pear trees are small, use lower rate. Timing of application is extremely important. Timing can be determined by local fruit specialist or pest control consultant, by employing the use of pheromone traps. Typically the optimum time for application will occur around 10 – 14 days prior to application of an organophosphate insecticide, or around late petal fall.

A second application of Tide Diflubenzuron 2SC should be applied 14 – 18 days after initial application.

If necessary (prior to egg laying of 2nd generation, as determined by timing indicated above, for 1st generation), a third and fourth application can be made. If the use of pheromone traps are not employed, the third application should be made 21-30 days after the 2nd, or 1000 degree days after biofix. The fourth application should be made 21-30 days after the third.

Tank Mixes: For more effective control of moderate to heavy codling moth infestations, when treating large trees, or for optimum timing of Tide Diflubenzuron 2SC spray (to save a trip through the orchard), Tide Diflubenzuron 2SC can be combined with organophosphate insecticides. Apply at the normal time for the first organophosphate cover spray, which occurs at the beginning of egg hatch (250 degree days following biofix for 1st generation, or 1250 degree days following biofix for 2nd generation). Application of this tank mixture can be repeated for 2nd and 3rd generations of codling moth, or Tide Diflubenzuron 2SC alone can be used prior to egg laying. For late season control, oil should not be used in the tank mix. When codling moth populations are low, an organophosphate / Tide Diflubenzuron 2SC mixture could control an entire generation with 1 application. For heavy populations, this combination of Tide Diflubenzuron 2SC/organophosphate may not control the entire generation with one spray. In that case apply a second spray 14 – 18 days later of Tide Diflubenzuron 2SC alone or in combination with an organophosphate, so that eggs laid after insecticide application will be residually controlled. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Leafminer – apply 8 to 16 fl. oz. per acre

For control of leafminer larvae and eggs, make application during or just before eggs are laid. Fruit specialist or local pest control consultant can advise about timing for control of 1st or 2nd generations of leafminer. Tide Diflubenzuron 2SC can also be applied for control of later generations. For control through early sap feeding stage, Tide Diflubenzuron 2SC should be applied prior to egg laying. For control of leafminer larvae throughout the sap feeding stage, make sure that foliage is completely covered.

IMPORTANT

- Using oil with Tide Diflubenzuron 2SC could cause certain pear varieties to display injury. Local fruit tree specialists can advise on compatibility of oil mixtures.

PEAR RESTRICTIONS

- Do not make more than 4 applications per season
- Do not exceed 64 fl. oz. (16 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season
- Pre harvest interval is 14 days.
- Do not use oil with Tide Diflubenzuron 2SC for late season (3rd and 4th) applications.

TREE NUTS GROUP 14-12

(includes Almond, Beech nut, Brazil nut, Butternut, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, Walnut (Black and English))

Application Instructions

Apply Tide Diflubenzuron 2SC by ground in a minimum of 50 gallons of water for trees up to 10 feet tall and a minimum of 100 – 300 gallons of water for larger trees. For optimal results, use enough water for thorough coverage and make sure that canopy is evenly and thoroughly covered.

Application Rate

Filbert Worm: apply 12 – 16 fl. oz. per acre

Apply Tide Diflubenzuron 2SC before eggs are laid on treated foliage, or when moths first emerge from cocoon – if using pheromone detection traps, 2 to 3 days after first moth catch. Mating takes place soon after emergence and egg laying begins the following day. Make sure that tree and foliage coverage is uniform for best control. Use lower rate if trees are small or worm pressure is low. Use higher listed rate if trees are larger, or worm pressure is moderate to high. If necessary (continuing high moth pressure), a subsequent application of Tide Diflubenzuron 2SC should be made.

Hickory Shuckworm: apply 8 – 16 fl. oz. per acre

Split Application – for optimum control, apply 4 to 8 fl. oz. Tide Diflubenzuron 2SC when larvae begin to feed or when hickory shuckworm moth emerges; make second 4 to 8 fl. oz. application two weeks later.

Tide Diflubenzuron 2SC can also be applied at half-shell hardening, with additional applications 21 days later, up to shuck split, or while heavy insect infestations are present. Use the higher listed rate on heavy, dense foliage, on larger trees or low crop load, or under higher pest infestations.

Codling Moth– apply 16 fl. oz. per acre

For optimum control, apply prior to egg laying. Apply a full coverage spray to orchard so that eggs are laid on a surface that is treated with Tide Diflubenzuron 2SC.

Apply when first moths hatch (determine by moth flight or pheromone traps). Following application should be made 21 days later. This timing is appropriate for first or second generation (brood).

Tank Mixing – Tide Diflubenzuron 2SC can be tank mixed with an organophosphate insecticide at its lowest label rate to control extended populations of codling moth because of variations in emergence time due to temperature fluctuations or overwintering. Application should occur at normal timeframe for an organophosphate insecticide. Additionally, if Tide Diflubenzuron 2SC is not initially applied prior to egg laying, then tank mixing with an organophosphate insecticide as indicated above will enhance control. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Peach Twig Borer – apply 12 – 16 fl. oz. per acre (use higher listed rate for orchards with a history of heavy infestations)

Dormant / delayed dormant application: apply with a narrow range oil (4 to 6 gallons per acre or 1.5 to 2.0 gallons per 100 gallons spray volume in a dilute spray).

Bloom application: Application can be made with a vegetable oil (1 qt. per acre), with application starting at early bloom.

Spring Flight ('May Spray') or Summer Flight – Apply Tide Diflubenzuron 2SC at initial flight activity (as determined by pheromone traps).

Pecan Nut Case-Bearer: apply 8 – 16 fl. oz. per acre

Apply Tide Diflubenzuron 2SC as a split application as indicated:

- For optimum control and best nut set, apply first application of 4 – 8 fl. oz. at bud break and second application 14 days later. In southeastern U. S., bud break would typically occur in mid-April.
- For control of adult generations and to target egg hatch, make first application of 4 – 8 fl. oz. 8 to 15 days following biofix (threshold is reached when 5 moths are captured in 3 pheromone traps in a 7 day period)

Local extension service or university experts may have different or additional recommendations regarding Tide Diflubenzuron 2SC application. Consult them prior to use. Use the higher rate on heavy, dense foliage, on larger trees or low crop load, or under higher pest infestations.

Pecan Weevil (suppression): apply 8 – 16 fl. oz. per acre

Use the higher listed rate for moderate to heavy infestations, or if weevils are attacking crop.

Leafroller (Filbert, Oblique Banded, Omniverous, Variegated), Moth (Oriental Fruit, Winter), Fall Webworm, Omniverous Leaf-tier, Caterpillar (Redhumped, Walnut): apply 8 – 16 fl. oz. per acre

Make application as soon as larval infestations are detected. Use the higher listed rate on heavy, dense foliage, on larger trees or low crop load, or under higher pest infestations.

Tent Caterpillar (for use in almonds, pecans, pistachios and walnuts (black and English)).

Apply 8 – 16 fl. oz. per acre

Make application as soon as larval infestations are detected. Use the higher listed rate on heavy, dense foliage, on larger trees or low crop load, or under higher pest infestations.

IMPORTANT

- If four applications are made to tree nuts, the timing should correspond to:
 - Dormant to pre-bud swell
 - Bloom to petal fall
 - Flowers/leaves/immature nut fruit formation
 - Hull split

TREE NUTS GROUP 14-12 RESTRICTIONS

- Pre-harvest interval is 28 days
- Do not exceed 64 fl. oz. (16 oz. a.i.) of Tide Diflubenzuron 2SC per acre per growing season
- Do not make more than 4 applications per season (3 for walnuts)

NON-CROP USES

LIVESTOCK AND POULTRY PREMISES

Including barns, dairies, equine facilities, farms, farm buildings, feedlots, poultry houses and other production facilities. Tide Diflubenzuron 2SC application can be made to feed troughs, feed bunks, fence lines of holding pens, hay bale feeders, water troughs and waste retention ponds (marginal areas of), and Tide Diflubenzuron 2SC can control insects on/around bedding material, cage frames, ceilings, feed muck/spoilage, floors, litter, manure, manure/straw mixtures, posts, spoiled organic refuse, stale/waste feed and walls / wall footings.

Application Instructions and Rate

Carion Beetle, Darkling Beetle, Hide Beetle (Except California):

Apply 12 fl. oz. Tide Diflubenzuron 2SC in 2 to 20 gallons of water per 1000 ft²

Broadcast – Tide Diflubenzuron 2SC can be applied as a broadcast spray to the whole facility, including the following areas: floors, walls, posts and cage frames (at least 1 foot up from floor); cracks and crevices around insulation; litter following de-caking (making sure to thoroughly treat areas under water and feed lines). Make sure spray volume (which will be dependent on litter depth) is sufficient to completely and uniformly wet litter and other surfaces.

Banded Application – Tide Diflubenzuron 2SC can be applied only where pests congregate, including along perimeter walls and side and end walks, and under water and feed lines. Make sure spray volume (which will be dependent on litter depth) is sufficient to completely and uniformly wet litter and other surfaces, in a 2-4 foot wide band under, around and next to target areas. If lower sections of walls, posts and cage frames are treated, make sure to apply product at least 1 foot up from the floor.

Flies (including House, Stable, Face, Horn):

Broadcast - Apply 12 fl. oz. Tide Diflubenzuron 2SC in 2 to 20 gallons of water per 1000 ft²

Tide Diflubenzuron 2SC can be applied as a broadcast spray to the whole facility, including the following areas: floors, walls, posts and cage frames (at least 1 foot up from floor); cracks and crevices around insulation; litter

following de-caking (making sure to thoroughly treat moist areas and areas under water and feed lines). Make sure spray volume (which will be dependent on litter depth) is sufficient to completely and uniformly wet litter and other surfaces.

Spot Treatment – Apply 5 fl. oz. Tide Diflubenzuron 2SC in 10 gallons of water

Make a directed spray application when flies first appear. 1 quart of spray solution should be applied to 10 ft² of surface (10 gallons spray solution treat 400 ft²). Repeat applications can be made when fly numbers begin to increase – usually within 14 to 21 days.

IMPORTANT

- Tide Diflubenzuron 2SC provides extended control of eggs and developing larvae, but not pupal or adult stages of insects; contact or ingestion of Tide Diflubenzuron 2SC by adults will adversely affect number of and viability of eggs.
- If a large population of adult insects is present, applying a knockdown insecticide (either alone or tank mixed with Tide Diflubenzuron 2SC) is recommended for quick decrease of population. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- If controlling insects around hay feeding sites, make product application around entire soil surface where livestock activity mixes the waste hay and manure

LIVESTOCK AND POULTRY PREMISES RESTRICTIONS

- Do not apply Tide Diflubenzuron 2SC for control of Carrion Beetle, Darkling Beetle or Hide Beetle in the State of California.
- Do not apply directly to livestock or poultry
- For spot treatment, do not make application while birds are in the houses – make application only between production cycles. Make band or broadcast applications once per production cycle;
- Band or broadcast applications can be used for indoor use only. Apply only once per production cycle at a maximum application rate (band or broadcast application) not to exceed 520 fl. oz. per year.
- Spot treatment applications can be used for indoor or outdoor use. Maximum application for spot treatment – for outdoor use, do not apply more than 7.5 fl. oz. per acre per application, and do not exceed 17 applications per year – for indoor use, do not apply more than 520 fl. oz. per acre per year.
- Either a 100 foot setback or other measure that provides equivalent or better pollution reduction (35-foot wide vegetative buffer strip or physical barrier, field specific conditions or alternate conservation practices) must be observed for application of manure and processing of wastewater around any down gradient surface waters, agricultural or domestic well heads, open tile line intake structures, sinkholes or other conduits to surface waters.
- Do not contaminate feed or water by application of Tide Diflubenzuron 2SC; exposed feed or water is to be covered or removed from treatment area.

GRASSLAND

For control in grassland, including rangeland, pastures, improved pastures and similar areas used for production of native, domesticated forage grasses for harvest for livestock primarily for grazing or mechanical harvest, grasses/forages/cellulosic crops grown for biofuel, biomass or bioenergy production, including switch grass, miscanthus sp., etc.

Application Instructions

Tide Diflubenzuron 2SC may be applied aerially (low or high volume application) in 2 to 10 gallons of water per acre, or by ground application (low or high volume application) in 2 to 30 gallons of water per acre. For rangeland ULV (aerial or ground), apply in a minimum of 12 fl. oz. total volume per acre. Make sure that target crop is completely covered.

Adjuvants and Additives: For aerial and ULV application, especially when high air temperature or low humidity favor evaporation, add a product that retards evaporation and drift to the spray mixture. If this product is oil-based, maintain a ratio of at least 1 part oil to at least 2 parts water.

Application Rate

2 fl. oz. per acre

Horn Fly, Face Fly

Make application to cow manure patties. Tide Diflubenzuron 2SC will provide at least 14 days of control of flies emerging from cow manure.

Fall Armyworm, Striped Grass Looper, other Lepidopteran foliage feeding caterpillars

Make application while caterpillar larvae are small (less than ½ inch long, prior to reaching fourth instar growth stage), and at first sign of hatch out. Populations will be decreased once larvae consume Tide Diflubenzuron 2SC and undergo molting.

Grasshopper, Mormon Cricket

- Make one application at 1 to 2 fl. oz. per acre on grasshoppers or Mormon crickets at early instar growth stages (i.e., 2nd through 4th instar nymphal stages). A second application, at 0.5 to 1 fl. oz. per acre can be made 14 to 21 days after first application. For application on pastureland, use higher listed use rate.
- For RAAT (Reduced Area and Agent Treatment*) application on early instars in rangeland only, apply 0.75 to 1 fl. oz. per acre. Use lower rate, and skip up to 50% of the infested area (i.e., for every 100 feet treated, skip the next 100 ft. swath) if most of infestation is at early instar growth stage, vegetation is sparse, and topography is uniform. Use higher listed rate and 100% coverage if most of the infestation is at a late instar growth stage, vegetation is dense, terrain is rough and/or application is being made when temperature is high. A second application, at 0.5 to 1 fl. oz. per acre can be made 14 to 21 days after first application.

* A RAAT application is a grasshopper IPM program that takes advantage of the grasshopper's natural tendency to move as they feed. As grasshoppers move from untreated to treated areas and eat foliage treated with Tide Diflubenzuron 2SC, they are killed once molting occurs. The rate of Tide Diflubenzuron 2SC is lowered and applied in alternating treated and untreated strips. A RAAT treatment reduces application cost, giving ranchers a cost effective way to control grasshoppers or Mormon crickets on their rangeland, depending on severity of infestation, insect growth stage and density of vegetation.

If treated areas have a dense canopy, if nymphs have passed the third instar growth stage, and/or if temperature and climate encourage insect survival and proliferation, use higher listed rates of Tide Diflubenzuron 2SC. Tide Diflubenzuron 2SC should be applied after egg hatch, through early instar growth stages, as it will not control the adult stages of these insects. Tide Diflubenzuron 2SC's residual activity will continue to control larvae later in the season.

Tank Mix: Apply Tide Diflubenzuron 2SC tank mixed with a knockdown insecticide or grasshopper adulticide if adults are present (due to overwintering or early hatching) to reduce extensive foliage feeding. Make sure tank mix partners are compatible prior to mixing and adding to main spray tank. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

IMPORTANT

- Apply when possibility of drift to sensitive areas (residential, non-target crops, water bodies, threatened or endangered species habitat) is small.
- For low volume and ULV applications, continue constant agitation while mixing and applying Tide Diflubenzuron 2SC, and make sure the appropriate concentration of Tide Diflubenzuron 2SC is mixed in the boom before application begins.
- Due to the mode of action of Tide Diflubenzuron 2SC, it could take up to 5 to 7 days following application to show first signs of control (populations will not be decreased until larvae and nymphs ingest plant material treated with Tide Diflubenzuron 2SC, and then undergo molting)
- In response to treatment with Tide Diflubenzuron 2SC, Mormon crickets could exhibit structural deformities (such as malformed abdominal segments, twisted antennae, wrinkled wings, missing posterior legs, hernias, hemolymph exudation). This could result in behaviors (such as inability to fly, limited jumps and unsteady landings, slower movement, reduction in feeding) which cause the nymphs or adults to be more vulnerable to predators (birds, mammals or other insects)

GRASSLAND RESTRICTIONS

- Do not exceed 2 fl. oz. (0.5 oz. a.i.) of Tide Diflubenzuron 2SC per acre per cutting
- Do not exceed 6 fl. oz. (1.5 oz. a.i.) of Tide Diflubenzuron 2SC per acre per year
- Wait at least 1 day following Tide Diflubenzuron 2SC application prior to cutting grass.

NON-CROP AREAS

Including field border, fence rows, roadsides, farmsteads, ditchbanks, wasteland, Conservation Reserve Program (CRP) land

Application Instructions

Tide Diflubenzuron 2SC may be applied aerially (high or low volume application) in 2 to 5 gallons water per acre, or by ground application (low or high volume) in 2 to 30 gallons of water per acre.

For additional Application Instructions, see Grassland Directions for Use.

Application Rate

2 fl. oz. per acre

Grasshopper, Mormon Cricket

Insects can be managed in their breeding areas prior to migration into cropland or other undesirable areas with application of Tide Diflubenzuron 2SC.

See Grassland Directions for Use for additional instructions and application information.

Fall Armyworm, Striped Grass Looper and other Lepidopteran foliage-feeding caterpillars

Make application while caterpillar larvae are small (less than ½ inch long, prior to reaching fourth instar growth stage), and at first sign of hatch out. Populations will be decreased once larvae consume Tide Diflubenzuron 2SC and undergo molting.

NON-CROP AREAS RESTRICTIONS

- Do not exceed 2 fl. oz. (0.5 oz. a.i.) of Tide Diflubenzuron 2SC per acre
- Do not exceed 6 fl. oz. (1.5 oz. a.i.) of Tide Diflubenzuron 2SC per acre per crop season

See Grassland Directions for Use for other restrictions and comments

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Keep this product in its tightly closed original container. Store in a cool, dry (preferably locked) area that is inaccessible to children and animals.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING

[Nonrefillable Container (rigid material; 5 gallons or less):] [Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer empty container for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill or by other procedures approved by State and local authorities.]

[Nonrefillable Container (rigid material; larger than 5 gallons):] [Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into

application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer empty container for recycling if available, or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.]

Recycling: Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer or contact Ag Container Recycling Council (ACRC) at 1-877-952-2272 (toll free) or www.acrecycle.org.

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[EPA APPROVAL DATE]