



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

September 16, 2019

Katy DeGroot  
Regulatory Consultant  
Tide International, USA, Inc  
c/o Pyxis Regulatory Consulting Inc  
4110 136<sup>th</sup> St. Ct. NW  
Gig Harbor, WA 98332

Subject: Label Amendment – Minor Label Revisions  
Product Name: Tide Mesotrione 4SC  
EPA Registration Number: 84229-48  
Application Date: 11/26/2018 & 2/4/2019  
Decision Number: 546301 & 548544

Dear Ms. DeGroot:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, 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 the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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

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with FIFRA section 6. If you have any questions, please contact Manjula Unnikrishnan by phone at 703-347-8520, or via email at [unnikrishnan.manjula@epa.gov](mailto:unnikrishnan.manjula@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Erik Kraft". The signature is fluid and cursive, with the first name "Erik" being more prominent than the last name "Kraft".

Erik Kraft, Product Manager 24  
Fungicide and Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

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 LANGUAGE}

MESOTRIONE GROUP 27 HERBICIDE

TIDE MESOTRIONE 4SC

For control of annual broadleaf weeds in corn (field, seed, sweet, yellow pop), asparagus, citrus fruit, pome fruit, stone fruit, tree nuts, cranberries, flax, oats, okra, pearl millet, rhubarb, sorghum (grain and sweet), soybeans, sugarcane, turfgrass

ACTIVE INGREDIENT:

Mesotrione: (CAS No. 104206-82-8)..... 40.0%

OTHER INGREDIENTS:..... 60.0%

TOTAL:..... 100.0%

Contains 4 lbs. active ingredient mesotrione per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION

Table with 2 columns: First Aid instructions (IF ON SKIN OR CLOTHING, IF IN EYES, IF INHALED, IF SWALLOWED) and Hot Line Number information.

[See] [inside] [label] [booklet] [for] [First Aid][,] [additional] [Precautionary Statements][,] [and] [Directions for Use] [including] [Storage and Disposal] [instructions][.]

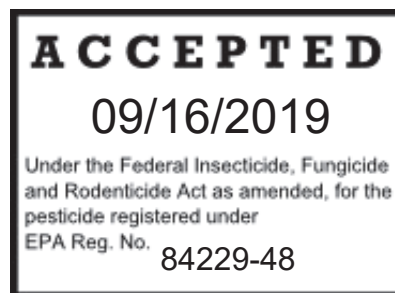
EPA Reg. No. 84229-48

EPA Est. No. xxxxxx-xx-xxx

Net Contents: \_\_\_\_\_

Lot No.: see container

Manufactured For: Tide International, USA, Inc. 21 Hubble Irvine, CA 92618



# {LANGUAGE INSIDE BOOKLET}

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Waterproof gloves

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

### ENGINEERING CONTROL STATEMENTS

When handlers use closed systems or enclosed cabs 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:**

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

### ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

#### Surface Water Advisory

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several weeks 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 runoff. Runoff from 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.

### PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow to come into contact with oxidizing agents. Hazardous chemical reactions may occur.

## DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### **AGRICULTURAL USE REQUIREMENTS**

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

### **NON-AGRICULTURAL USE REQUIREMENTS**

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

Do not enter treated areas without protective clothing until sprays have dried.

### **PRODUCT INFORMATION**

Tide Mesotrione 4SC is a systemic pre-emergence and post-emergence herbicide for the selective contact and residual control of broadleaf weeds in field corn, seed corn, yellow popcorn, sweet corn, and other listed crops. When used pre-emergence, weeds take up the product through the soil during emergence. Dry conditions following application may reduce the pre-emergence activity of Tide Mesotrione 4SC. If an activating rain (0.25 inches) is not received within 7-10 days after a pre-emergence application, where appropriate, rotary hoeing is suggested to activate the herbicide. When used post-emergence, susceptible weeds take up the herbicide through the treated foliage and cease growth soon after application. Complete death of the weeds may take up to 2 weeks. The product is absorbed through the soil and/or by the foliage of emerged weeds.

Tide Mesotrione 4SC is not effective for the control of most grass weeds. Pre-emergence grass herbicides or post-emergence grass herbicides can be tank mixed with Tide Mesotrione 4SC to provide broad spectrum weed control in corn (see appropriate section of label for this information). Tide Mesotrione 4SC can be applied post-emergence following a pre-emergence grass herbicide application. Tide Mesotrione 4SC can also be used in combination with a burndown herbicide, prior to planting, to provide added burndown and residual weed control in field corn, seed corn, yellow popcorn, and sweet corn.

### **RESISTANCE-MANAGEMENT**

The efficacy of Tide Mesotrione 4SC is not affected by the presence of biotype weed species that are resistant to Protoporphyrinogen Oxidase (PPO), 4-Hydroxyphenylpyruvate Dioxygenase (HPPD) or Acetolactate Synthase (ALS) inhibiting herbicides or to Triazine or Glyphosate herbicides.

For resistance management, Tide Mesotrione 4SC is a Group 27 herbicide. Any weed population may contain or develop plants naturally resistant to Tide Mesotrione 4SC and other Group 27 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance management strategies should be followed.

To delay herbicide resistance, take one or more of the following steps:

- Rotate the use of Tide Mesotrione 4SC or other Group 27 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension

service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.

- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout before and after herbicide application to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.
- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact a Tide International USA Inc. representative.

### **Weed Management Practices**

To minimize the occurrence of mesotrione-resistant biotypes, observe the following weed management practices:

- Scout your fields before and after herbicide application.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Incorporate other herbicides (e.g., a selective and/or a residual herbicide) and cultural practices (e.g., tillage or crop rotation) as part of your weed control system, where appropriate.
- Use the full specified herbicide rate and proper application timing for the hardest to control weed species present in the field. Avoid tank mixtures with other herbicides that reduce the efficacy of this product (through antagonism), or with ones that encourage application rates of this product below those specified on this label.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Use new commercial seed that is as free of weed seed as possible.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Report any incidence of repeated non-performance of this product on a particular weed to your Tide International USA, Inc. representative, local retailer, or county extension agent.

### **Management of Mesotrione-Resistant Biotypes**

Appropriate testing is critical in order to determine if a weed is resistant to mesotrione. Contact your Tide International USA, Inc. representative to determine if resistance in any particular weed biotype has been confirmed in your area, or visit on the Internet [www.weedscience.org](http://www.weedscience.org).

The following good agronomic practices can reduce the spread of confirmed mesotrione-resistant biotypes:

- If a naturally occurring resistant biotype is present in your field, this product may be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices (e.g., crop rotation or tillage) can also be used as appropriate.

- Scout treated fields after herbicide application and control weed escapes, including resistant biotypes, before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

### INTEGRATED WEED PEST MANAGEMENT

Integrate Tide Mesotrione 4SC into an overall weed pest management strategy whenever the use of an herbicide is required. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

### USE RESTRICTIONS

Do not apply this product through any type of irrigation system unless specified otherwise under the specific crop section on the label.

Do not apply this product with suspension fertilizers as the carrier.

Do not apply Tide Mesotrione 4SC post-emergence in a tank mix with emulsifiable concentrate (EC) grass herbicides, unless specifically addressed under one of the tank mix sections of this label, or injury may occur.

Do not apply Tide Mesotrione 4SC by air unless specified otherwise under the specific crop section on the label.

### USE PRECAUTIONS

When weeds are stressed and not actively growing due to environmental conditions (such as drought, heat, lack of fertility, flooding, or prolonged cool temperatures), control can be reduced or delayed. Weed escapes or regrowth may occur when application is made under prolonged stress conditions. For best weed control, apply Tide Mesotrione 4SC following label directions when weeds are actively growing.

Tide Mesotrione 4SC may be applied with pyrethroid type insecticides such as bifenthrin, lambda cyhalothrin, and permethrin.

### SPRAY DRIFT INFORMATION

Avoid drift onto adjacent crops and other non-target areas.

#### **Mandatory Spray Drift**

##### Aerial Applications

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For all applications, applicators are required to use nozzles producing a coarse-ultra coarse droplet.
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

##### Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a coarse or coarser spray droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

##### Boom-less Ground Applications:

- Applicators are required to use a coarse or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

## **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**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift. When applying aurally to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

#### **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 are 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.

#### **Boom-less Ground Applications:**

Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### **Handheld Technology Applications:**

Take precautions to minimize spray drift.



## APPLICATION INFORMATION

### PRE-EMERGENCE GROUND APPLICATION

Apply Tide Mesotrione 4SC pre-emergence with a spray volume of 10-60 gals./A using water or liquid fertilizer (excluding suspension fertilizers) as the carrier.

**Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying.**

### POST-EMERGENCE GROUND APPLICATION

Apply in a spray volume of 10-30 gals./A using water as a carrier.

Use a pump that can maintain a pressure of at least 35-40 psi at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles. When weed foliage is dense, use a minimum of 20 gals.

Use flat fan nozzles of 80° or 100° for best post-emergence coverage. **DO NOT** use floodjet nozzles or controlled droplet application equipment for post-emergence applications.

Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser.

**Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying.**

## AERIAL APPLICATION

### RESTRICTIONS

- Tide Mesotrione 4SC may be applied by air **ONLY** to corn and sugarcane.

Applications must be made in a minimum of 2 gallons of water per acre.

For corn, apply Tide Mesotrione 4SC by air for pre-emergence or post-emergence weed control only in the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Nebraska, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming.

For sugarcane, apply Tide Mesotrione 4SC by air for pre-emergence or post-emergence weed control only in the following states: Florida, Louisiana and Texas.

## SPRAY ADDITIVES

### POST-EMERGENCE ADJUVANTS

When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Council of Producers and Distributors of Agrotechnology (CPDA) adjuvant certification program is advised.

The following adjuvant directions are intended primarily for Tide Mesotrione 4SC use in corn. Refer to the use directions section of each crop section for specific adjuvant directions.

### POST-EMERGENCE APPLICATIONS TO FIELD CORN AND SEED CORN

For post-emergence applications made after the crop has emerged, add crop oil concentrate (COC) to the spray solution at the rate of 1.0 gal./100 gals. of water (1.0% v/v). The use of a nonionic surfactant (NIS) at 1 qt./100 gallons of water (0.25% v/v) instead of COC is allowed, but the weed control achieved with COC is consistently better than NIS. **Severe crop injury may occur if methylated seed oil (MSO) adjuvants or MSO blend adjuvants are used with Tide Mesotrione 4SC for post-emergence applications. DO NOT use MSO adjuvants for post-emergence use unless directed for a specific tank mix under the Tide Mesotrione 4SC**

**TANK MIXTURES FOR CORN section of this label.** In addition to COC, always add spray grade UAN (e.g., 2800-0) to the spray solution at a rate of 2.5% (v/v) or AMS at 8.5 lb./100 gals. of spray solution, except if precluded elsewhere on this label.

#### **POST-EMERGENCE APPLICATIONS TO SWEET CORN AND YELLOW POPCORN**

**To avoid potentially or severe crop injury, do not add UAN or AMS when making post-emergence applications of Tide Mesotrione 4SC to yellow popcorn or sweet corn.**

For post-emergence applications to yellow popcorn and sweet corn, use a nonionic surfactant (NIS) instead of a crop oil concentrate (COC), to minimize the risk of crop injury. A COC may be used, and will increase the level of weed control achieved, especially under dry growing conditions, but the risk of crop injury is increased significantly under lush growing conditions. For optimum control, add atrazine wherever rotational or local atrazine restrictions allow.

#### **PRE-EMERGENCE ADJUVANTS**

For Tide Mesotrione 4SC preplant or pre-emergence applications, and where weeds are present, the use of any adjuvant for agricultural use is permitted. In these situations, MSO type adjuvants are typically better than COC type adjuvants, which are typically better than NIS type adjuvants for enhancing weed control. UAN or AMS can be added and typically provides better weed control than not adding one of these. 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.

#### **SPRAY EQUIPMENT**

##### **Cleaning Equipment After Tide Mesotrione 4SC Application**

Special attention must be given to cleaning equipment before spraying a crop rather than corn. Mix only as much spray solution as needed.

1. Flush tank, hoses, boom, and nozzles with clean water.
2. Prepare a cleaning solution of 1 gal. of household ammonia per 25 gals. of water. Many commercial spray tank cleaners may be used.
3. Use a pressure washer to clean the inside of the spray tank with this solution. Take care to wash all parts of the tank, including the inside top surface. If a pressure washer is not available, completely fill the sprayer with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
4. Flush hoses, spray lines, and nozzles for at least 1 minute with the cleaning solution.
5. Dispose of rinsate from steps 1-3 in an appropriate manner.
6. Repeat steps 2-5.
7. Remove nozzles, screens, and strainers and clean separately in the ammonia solution after completing the above procedures.
8. Rinse the complete spraying system with clean water.

#### **MIXING PROCEDURES**

Refer to the **Crop Use Directions** sections of this label for tank mixes. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive direction for use and precautionary statements of each product in the tank mixture.

Always refer to labels of other pesticide products for mixing directions and precautions which may differ from those outlined here. Mix only with products which are labeled for the same crops and whose labels do not prohibit mixing with mesotrione-containing products. Always follow the most restrictive label limitations and precautions.

**DO NOT** apply more than labeled rates. **DO NOT** tank mix Tide Mesotrione 4SC with any other insecticide, fungicide, fertilizer solution, or adjuvant not specified on the label without testing compatibility, as poor mixing may result. Test the compatibility of any tank mix combination on a small scale (including a jar test) before actual tank mixing.

Only use sprayers in good running condition with good agitation. Ensure that the sprayer has been cleaned according to instructions on the label of the product used most recently. For post-emergence applications, use only clean water for the spray solution. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser. **DO NOT** use screens finer than 50-mesh.

Follow the mixing instructions for adding Tide Mesotrione 4SC to the spray tank:

1. Liquid fertilizer (excluding suspension fertilizers) may be used as the carrier for pre-emergence applications.
2. Begin to fill sprayer tank or premix tank with clean water and engage agitator. Agitation must be continued throughout the entire mixing and spraying procedure.
3. When the sprayer or premix tank is half full of water, add AMS and agitate until completely dispersed.
4. Next add Tide Mesotrione 4SC slowly and agitate until completely dissolved. Wait at least 1 minute after the last of the Tide Mesotrione 4SC has been added to the tank to allow for complete dispersion. A longer agitation period may be required to disperse Tide Mesotrione 4SC when using old water from sources including deep drilled wells.
5. If tank mixing, add the tank mix product next.
6. Finally, add adjuvant and UAN, if needed, and then continue to fill tank to desired level with water.

### WEEDS CONTROLLED

Tide Mesotrione 4SC applied as directed in this label will control or partially control the weeds listed in Tables 1 and 2.

Partial control can either mean erratic control (good to poor) or consistent control at a level below that generally considered acceptable for commercial weed control.

For best post-emergence results, apply Tide Mesotrione 4SC to actively growing weeds. Dry weather following pre-emergence application of Tide Mesotrione 4SC may reduce residual weed control effectiveness. If irrigation is available, apply ½ to 1 inch of water after pre-emergence application. If irrigation is not available, make a uniform shallow cultivation as soon as weeds emerge.

Tide Mesotrione 4SC applied alone or in mixture with atrazine will not provide consistent or effective control of weeds identified as resistant to post-emergence HPPD inhibiting herbicides.

Refer to the crop sections on this label for specific rates and use directions.

**Table 1. Weeds Controlled with Post-Emergence Applications of Tide Mesotrione 4SC**

Weed Common Name	Weed Scientific Name	Tide Mesotrione 4SC 3 fl oz/A (0.094 lb a.i./A)	Tide Mesotrione 4SC 2.5-3.0 fl oz/A (0.078-0.094 lb a.i./A) + Atrazine <sup>1</sup>
		Apply to Weeds <5 Inches Tall <sup>2</sup>	
Amaranth, palmer	<i>Amaranthus palmeri</i>	PC <sup>3</sup>	C <sup>3</sup>
Amaranth, powell	<i>Amaranthus powellii</i>	C	C
Amaranth, spiny	<i>Amaranthus spinosus</i>	C	C
Atriplex	<i>Chenopodium orach</i>	C	C
Broadleaf signalgrass	<i>Urochloa platyphylla</i>	C <sup>3</sup>	C <sup>3</sup>
Buckwheat, wild	<i>Polygonum convolvulus</i>	PC	PC
Buffalobur	<i>Solanum rostratum</i>	C	C
Burcucumber	<i>Sicyos angulatus</i>	PC	C <sup>3</sup>
Carpetweed	<i>Mollugo verticillata</i>	C	C
Carrot, wild	<i>Daucus carota</i>	PC	C
Chickweed, common	<i>Stellaria media</i>	C	C
Cocklebur, common	<i>Xanthium strumarium</i>	C	C
Crabgrass, large	<i>Digitaria sanguinalis</i>	C <sup>3</sup>	C <sup>3</sup>
Dandelion	<i>Taraxacum officinale</i>	NC	PC
Dock, curly	<i>Rumex crispus</i>	PC	PC

Weed Common Name	Weed Scientific Name	Tide Mesotrione 4SC 3 fl oz/A (0.094 lb a.i./A)	Tide Mesotrione 4SC 2.5-3.0 fl oz/A (0.078-0.094 lb a.i./A) + Atrazine <sup>1</sup>
		Apply to Weeds <5 Inches Tall <sup>2</sup>	
Galinsoga	<i>Galinsoga parviflora</i>	C	C
Hemp	<i>Cannabis sativa</i>	C	C
Horsenettle	<i>Solanum carolinense</i>	PC	C
Jimsonweed	<i>Datura stamonium</i>	C	C
Horseweed (Marestail)	<i>Conyza canadensis</i>	PC	C
Knotweed, prostrate	<i>Polygonum aviculare</i>	PC	PC
Kochia	<i>Kochia scoparia</i>	PC <sup>3</sup>	C <sup>3</sup>
Lambsquarters, common	<i>Chenopodium album</i>	C	C
Mallow, Venice	<i>Hibiscus trionum</i>	NC	C
Morningglory, entireleaf	<i>Ipomoea hederacea</i>	PC	C
Morningglory, Ivyleaf	<i>Ipomoea hederacea</i>	PC	C
Morningglory, pitted	<i>Ipomoea lacunosa</i>	PC	C
Mustard, wild	<i>Brassica kaber</i>	C	C
Nightshade, black	<i>Solanum nigrum</i>	C	C
Nightshade, Eastern black	<i>Solanum ptycanthum</i>	C	C
Nightshade, hairy	<i>Solanum sarrachoides</i>	C	C
Nutsedge, yellow	<i>Cyperus esculentus</i>	PC	PC
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C	C
Pigweed, smooth	<i>Amaranthus hybridus</i>	C	C
Pigweed, tumble	<i>Amaranthus albus</i>	C	C
Pokeweed, common	<i>Phytolacca Americana</i>	PC	PC
Potatoes, volunteer	<i>Solanum spp.</i>	C	C
Pusley, Florida	<i>Richardia scabra</i>	C <sup>3</sup>	C <sup>3</sup>
Ragweed, common	<i>Ambrosia artemisiifolia</i>	PC	C
Ragweed, giant	<i>Ambrosia trifida</i>	C <sup>3</sup>	C
Sesbania, hemp	<i>Sesbania exaltata</i>	C	C
Sida, prickly (Teaweed)	<i>Sida spinosa</i>	NC	C <sup>3</sup>
Smartweed, Ladysthumb	<i>Polygonum persicaria</i>	C <sup>3</sup>	C
Smartweed, pale	<i>Polygonum lapathifolium</i>	C <sup>3</sup>	C
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>	C <sup>3</sup>	C
Sunflower, common	<i>Helianthus annuus</i>	C	C
Thistle, Canada	<i>Cirsium arvense</i>	NC	PC
Velvetleaf	<i>Abutilon theophrasti</i>	C	C
Waterhemp, common	<i>Amaranthus rudis</i>	C <sup>3</sup>	C
Waterhemp, tall	<i>Amaranthus tuberculatus</i>	C <sup>3</sup>	C

<sup>1</sup>Tide Mesotrione 4SC tank mixture with atrazine is approved only for use on corn and sugarcane.

<sup>2</sup>In certain situations, weeds can be controlled at larger than listed sizes, however to protect crop yield, manage weed resistance and provide consistent control, treat weeds before they exceed 5 inches in height.

<sup>3</sup>Apply before weed exceeds 3 inches in height.

C = Control      PC = Partial Control      NC = Not Controlled

**Table 2. Weeds Controlled with Pre-Emergence Applications of Tide Mesotrione 4SC**

Common Name	Scientific Name	Tide Mesotrione 4SC Applied Alone 6.0-7.7 fl oz/A (0.188-0.24 lb a.i./A)	Tide Mesotrione 4SC 5.3-7.7 fl oz/A (0.166-0.24 lb a.i./A) + Atrazine <sup>1</sup>
Amaranth, palmer	<i>Amaranthus palmeri</i>	C	C
Amaranth, powell	<i>Amaranthus powellii</i>	C	C
Amaranth, spiny	<i>Amaranthus spinosus</i>	C	C
Broadleaf signalgrass	<i>Urochloa platyphylla</i>	PC	PC
Buffalobur	<i>Solanum rostratum</i>	C	C
Burclover, California	<i>Medicago polymorpha</i>	C	-
Carpetweed	<i>Mollugo verticillata</i>	C	C
Carrot, wild	<i>Daucus carota</i>	C	-
Chickweed, common	<i>Stellaria media</i>	C	C
Chickweed, mouse-ear	<i>Cerastium vulgatum</i>	C	-
Cocklebur, common	<i>Xanthium strumarium</i>	PC	C
Crabgrass, large	<i>Digitaria sanguinalis</i>	PC	PC
Dandelion (common (seedling))	<i>Taraxacum officinale</i>	C	-
Deadnettle, purple	<i>Lamium purpureum</i>	C	-
Dock, curly	<i>Rumex crispus</i>	C	-
Eveningprimrose, cutleaf	<i>Oenothera laciniata</i>	C	-
Fiddleneck, coast	<i>Amsinckia intermedia</i>	C	-
Filaree, redstem	<i>Erodium cicutarium</i>	C	-
Filaree, whitestem	<i>Erodium moschatum</i>	C	-
Fleabane, hairy	<i>Conyza bonariensis</i>	C	-
Galinsoga	<i>Galinsoga parviflora</i>	C	C
Geranium, Carolina	<i>Geranium carolinianum</i>	C	-
Groundcherry, smooth	<i>Physalis subglabrata</i>	C	-
Groundsel, common	<i>Senecio vulgaris</i>	C	-
Henbit	<i>Lamium amplexicaule</i>	C	-
Horsenettle	<i>Solanum carolinense</i>	PC	-
Horseweed (Marestail)	<i>Conyza canadensis</i>	C	-
Jimsonweed	<i>Datura stamonium</i>	C	C
Kochia	<i>Kochia scoparia</i>	PC	C
Lambsquarters, common	<i>Chenopodium album</i>	C	C
Lettuce, prickly	<i>Lactuca serriola</i>	C	-
Mallow, common	<i>Malva neglecta</i>	C	-
Mayweed, chamomile	<i>Anthemis cotula</i>	C	-
Morningglory, entireleaf	<i>Ipomoea hederacea</i>	PC	C
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>	PC	C
Morningglory, pitted	<i>Ipomoea lacunosa</i>	PC	C
Mustard, wild	<i>Brassica kaber</i>	C	C
Nettle, burning	<i>Urtica urens</i>	C	-
Nightshade, eastern black	<i>Solanum ptycanthum</i>	C	C
Nightshade, hairy	<i>Solanum sarrachoides</i>	C	C
Pansy	<i>Viola tricolor</i>	C	-
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C	C
Pigweed, smooth	<i>Amaranthus hybridus</i>	C	C
Pigweed, tumble	<i>Amaranthus albus</i>	C	C
Pineappleweed	<i>Matricaria matricariodes</i>	C	-
Puncturevine, common	<i>Tribulus terrestris</i>	C	-
Purslane, common	<i>Portulaca oleracea</i>	C	-
Pusley, common	<i>Richardia scabra</i>	PC	-
Ragweed, common	<i>Ambrosia artemisiifolia</i>	C	C

Common Name	Scientific Name	Tide Mesotrione 4SC Applied Alone 6.0-7.7 fl oz/A (0.188-0.24 lb a.i./A)	Tide Mesotrione 4SC 5.3-7.7 fl oz/A (0.166-0.24 lb a.i./A) + Atrazine <sup>1</sup>
Ragweed, giant	<i>Ambrosia trifida</i>	PC	C
Redmaids	<i>Calandria caulescens</i>	C	-
Rocket, London	<i>Sisymbrium irio</i>	C	-
Shepherdspurse	<i>Capsella bursa-pastoris</i>	C	-
Smartweed, ladysthumb	<i>Polygonum persicaria</i>	C	C
Smartweed, pale	<i>Polygonum lapathifolium</i>	C	C
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>	C	C
Sowthistle, annual	<i>Sonchus oleraceus</i>	C	-
Spanishneedles	<i>Bidens bipinnata</i>	C	-
Sunflower, common	<i>Helianthus annuus</i>	PC	C
Swinecress	<i>Coronopus didymus</i>	C	-
Tasselflower, red	<i>Emilia sonchifolia</i>	C	-
Velvetleaf	<i>Abutilon theophrasti</i>	C	C
Waterhemp, common	<i>Amaranthus rudis</i>	C	C
Vetch, common	<i>Vicia sativa</i>	C	-
Vetch, purple	<i>Vicia benghalensis</i>	PC	-
Waterhemp, tall	<i>Amaranthus tuberculatus</i>	C	C
Willowherb, panicle	<i>Epilobium brachycarpum</i>	C	-

<sup>1</sup>Tide Mesotrione 4SC tank mixture with atrazine is approved only for use on corn, grain sorghum and sugarcane. Refer to the crop sections on this label for specific use directions.

C = Control      PC = Partial Control

### ROTATIONAL CROPS

When Tide Mesotrione 4SC is applied as directed on this label, follow the crop rotation intervals in Table 3. If Tide Mesotrione 4SC is tank mixed with other products, the most restrictive product's crop rotation intervals must be followed.

**Table 3. Time Interval Between Tide Mesotrione 4SC Application and Replanting or Planting of Rotational Crop**

Crop	Replant/Rotational Interval
Asparagus Corn (all types) Cranberry Flax Kentucky bluegrass grown for seed Millet, pearl Oats Rhubarb Ryegrass (perennial and annual) grown for seed Sorghum (grain and sweet) Soybeans Sugarcane Tall fescue grown for seed	No restriction
Small grain cereals including wheat, barley and rye	4 months
Alfalfa Blueberry Canola Cotton Currant Lingonberry	

Crop	Replant/Rotational Interval
Okra Peanuts Peas* Potato Rice Snap beans* Sunflowers Tobacco	10 months
Cucurbits Dry beans Red clover Sugar beets All other rotational crops not listed in this table	18 months

\*Plant Peas and Snap Beans only if the criteria below have been met. If all criteria are not met, a minimum 18 month interval must be observed following Tide Mesotrione 4SC application.

- At least 20" of rainfall plus irrigation has been received between application and planting of the rotational crop.
- Soil pH is 6.0 or greater.
- Application of Tide Mesotrione 4SC at 3 fl oz/A (0.094 lb a.i./A) or less was applied no later than June 30<sup>th</sup> the year preceding rotational crop planting.
- No other HPPD herbicides (including, but not limited to, product containing isoxaflutole, mesotrione, tembotrione, or topramezone) were applied the year prior to planting peas and snap beans.

#### Restriction

- Do not plant peas or snap beans on sand, sandy loam or loamy sand soils in Minnesota or Wisconsin.

## CROP USE DIRECTIONS

### CORN (Field, Seed, Sweet, and Yellow Pop)

Apply Tide Mesotrione 4SC by ground for pre-emergence or post-emergence weed control.

Aerial application for pre-emergence or post-emergence weed control is permitted only in the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming.

Refer to seed company information for use on field corn inbred lines. Special adjuvant restrictions must be followed for post-emergence applications Tide Mesotrione 4SC in yellow popcorn or sweet corn (see the **SPRAY ADDITIVES** section of this label).

Post-emergence applications (after crop emergence) of Tide Mesotrione 4SC may cause crop bleaching in some yellow popcorn and sweet corn hybrids. Crop bleaching is typically transitory and has no effect on final yield or quality. However, herbicide sensitivity in yellow popcorn and sweet corn varies widely, and all yellow popcorn and sweet corn hybrids have not been tested. Contact your popcorn or sweet corn company, Fieldman, or University Specialist about hybrids before making a post-emergence application of Tide Mesotrione 4SC to yellow popcorn or sweet corn.

Temporary crop response (transient bleaching) from post-emergence applications to field corn may occur under extreme weather conditions or when the crop is suffering from stress. Field corn outgrows these effects and develops normally.

#### Precautions

- Severe corn injury resulting in yield loss may occur if Tide Mesotrione 4SC is applied post-emergence to corn that was treated with terbufos or chlorpyrifos.
- Severe corn injury resulting in yield loss may occur if Tide Mesotrione 4SC is applied foliar post-emergence to corn in a tank mix with any organophosphate or carbamate insecticide.

- Severe corn injury resulting in yield loss may occur if any organophosphate or carbamate insecticide is applied foliar post-emergence within 7 days before or 7 days after Tide Mesotrione 4SC application.

#### **Restrictions**

- Do not apply Tide Mesotrione 4SC to white popcorn or ornamental (Indian) corn.
- Do not cultivate corn within 7 days before or after a Tide Mesotrione 4SC application as weed control from the Tide Mesotrione 4SC application may be reduced.
- Do not apply more than a total of 7.7 fl oz/A (0.24 lb a.i./A) of Tide Mesotrione 4SC per year.
- Do not make more than 2 applications of Tide Mesotrione 4SC per year.
- Do not apply more than 3.0 fl oz/A (0.094 lb a.i./A) in a single post-emergence application.
- Do not make the second application of Tide Mesotrione 4SC within 14 days of the first application.
- Do not feed or harvest forage, grain, or stover within 45 days after application.
- Do not include nitrogen based adjuvants (UAN or AMS) when making post-emergence applications of Tide Mesotrione 4SC to yellow popcorn or sweet corn.

Apply Tide Mesotrione 4SC for the control of broadleaf and grass weeds listed in Tables 1 and 2. Corn may be treated up to 30 inches tall or up to the 8-leaf stage of corn growth.

#### **TIDE MESOTRIONE 4SC USED ALONE**

##### **Post-Emergence**

Apply Tide Mesotrione 4SC at 3.0 fl oz/A (0.094 lb a.i./A) per application. Always add an appropriate adjuvant to the spray tank (see the **SPRAY ADDITIVES** section of this label).

For best results, apply Tide Mesotrione 4SC to actively growing weeds. For a list of weeds controlled see Table 1. Susceptible weeds which emerge soon after application of Tide Mesotrione 4SC may be controlled after they absorb the herbicide from the soil. Tide Mesotrione 4SC will not control most grass weeds.

#### **Restrictions**

Two post-emergence applications of Tide Mesotrione 4SC may be made with the following restrictions.

- Only one post-emergence application may be made if Tide Mesotrione 4SC has been applied pre-emergence. Do not make more than two applications per year. Do not apply more than a total of 7.7 fl oz/A (0.24 lb a.i./A) of Tide Mesotrione 4SC per year.
- Do not make the second application within 14 days of the first application.
- For best weed and residual control, do not apply Tide Mesotrione 4SC at rates less than 3.0 fl oz/A (0.094 lb a.i./A) post-emergence.
- Do not apply more than a total of 6.0 fl oz/A (0.188 lb a.i./A) for the two post-emergence applications.
- If Tide Mesotrione 4SC is applied post-emergence to ground that received a pre-emergence application of a mesotrione-containing herbicide, atrazine must be tank mixed with Tide Mesotrione 4SC.
- If atrazine is mixed with Tide Mesotrione 4SC, do not apply to corn that is more than 12 inches high.
- Corn may be treated up to 30 inches tall or up to the 8-leaf stage of corn growth. Do not harvest forage, grain, or stover within 45 days after application.

#### **Tide Mesotrione 4SC Pre-Emergence**

For broadleaf weed control, apply Tide Mesotrione 4SC alone at 6.0-7.7 fl oz/A (0.188 – 0.24 lb a.i./A) by ground sprayers in a spray volume of 10-30 gals. of water (up to 80 gals. if applied with liquid fertilizers) per acre. See Table 2 for weeds controlled. Tide Mesotrione 4SC may be tank mixed with pre-emergence grass herbicides for grass control. Refer to the tank mix section for a list of partners. 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.

#### **TIDE MESOTRIONE 4SC APPLIED IN TANK MIXTURES FOR CORN**

Tide Mesotrione 4SC may be tank mixed with other registered herbicides for improved spectrum of weed control in burndown, pre-emergence or post-emergence applications. These tank mixtures can also serve as a method to include a different mode of action herbicide to help control or manage the development of resistant weed biotypes. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and direction 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.

### Burndown Tank Mixtures in Corn

Apply Tide Mesotrione 4SC in a tank mixture with other registered herbicides for burndown plus residual weed control.

For improved broadleaf weed control with limited residual control prior to planting corn and before corn emergence, apply Tide Mesotrione 4SC at 3.0 fl oz/A (0.094 lb a.i./A) in tank mixes with paraquat, glyphosate, dicamba brands and/or 2,4-D. For greater residual control, use 6.0-7.7 fl oz/A (0.188 – 0.24 lb a.i./A) of Tide Mesotrione 4SC (see Table 2) with the above products. Use the adjuvant system specified by the burndown herbicide. 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.

### Pre-Emergence Tank Mixtures in Corn

Apply Tide Mesotrione 4SC at a rate of 5.3-7.7 fl oz/A (0.166 – 0.24 lb a.i./A) in tank mixture with other registered herbicides (Table 4) for pre-emergence residual weed control. Refer to Table 2 for a list of weeds controlled by Tide Mesotrione 4SC and Tide Mesotrione 4SC plus atrazine applied pre-emergence.

**Table 4. Tide Mesotrione 4SC Tank Mixtures for Pre-Emergence Application in Corn**

Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

ACTIVE INGREDIENT
Atrazine
Acetochlor
Dimethenamid
Pendimethalin
s-metolachlor
Acetochlor + atrazine
Atrazine + s-metolachlor
Atrazine + glyphosate + metolachlor
Dimethenamid + atrazine

### Post-Emergence Tank Mixtures in Corn

The tank mixtures with Tide Mesotrione 4SC identified in Table 5 may be applied post-emergence to corn. Unless specified otherwise on this label, do not apply Tide Mesotrione 4SC at less than 3.0 fl oz/A (0.094 lb a.i./A). Application of Tide Mesotrione 4SC at rates less than 3.0 fl oz (0.094 lb a.i./A) post-emergence may result in a loss of residual control.

Always add an appropriate adjuvant to the spray tank (see the **SPRAY ADDITIVES** section of this label). 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.

**Table 5. Tide Mesotrione 4SC Tank Mixtures for Post-Emergence Application in Corn**

Active Ingredient(s)	Directions
Atrazine	• Refer to Table 1 on this label for application rates and weeds controlled.
Nicosulfuron	• Use this mixture for additional grass control. Refer to product label for list of weeds controlled.
Bentazon	• Use this mixture for additional broadleaf weed control. Refer to product label for list of weeds controlled.
Rimsulfuron + thifensulfuron methyl	• Use this mixture for additional weed control. Refer to product label for list of weeds controlled.
Atrazine + s-metolachlor	• When using these tank mixtures, omit the nitrogen based adjuvant (UAN or AMS) from the mixture or apply as a post-directed spray to minimize contact with crop foliage.

Active Ingredient(s)	Directions
	<ul style="list-style-type: none"> <li>To further reduce the risk of crop injury, the user may also leave out the crop oil concentrate (COC), or replace it with a nonionic surfactant (NIS).</li> <li>In all cases, the control of emerged weeds may be reduced somewhat due to less than optimum adjuvant effect or weed coverage.</li> </ul>
Atrazine, glyphosate, metolachlor	<ul style="list-style-type: none"> <li>For use only in corn containing the Roundup Ready trait.</li> <li>Application of this mixture to a corn hybrid not containing the Roundup Ready trait will result in crop death</li> <li><b>DO NOT</b> add urea ammonium nitrate (UAN) or methylated seed oil (MSO) type adjuvants to this tank mixture or crop injury may occur.</li> </ul>
Bromoxynil + atrazine	<ul style="list-style-type: none"> <li>Use this mixture for additional broadleaf weed control.</li> <li>Refer to label for use rates</li> </ul>
Glufosinate	<ul style="list-style-type: none"> <li>Use this tank mixture only on corn designated as LibertyLink®.</li> <li>Application of this mixture to a corn hybrid that is not designated as LibertyLink® will result in severe crop injury or death.</li> <li><b>DO NOT</b> use crop oil concentrate (COC) as an adjuvant for this mixture or severe crop injury may occur.</li> </ul>
Glyphosate	<ul style="list-style-type: none"> <li>For use only in corn containing the Roundup Ready trait.</li> <li>Application of this mixture to a corn hybrid that is does not contain the Roundup Ready trait will result in crop death.</li> <li>Add spray-grade ammonium sulfate (AMS) at a rate that delivers 8.5-17.0 lbs. of AMS/100 gallons of water.</li> <li>If the glyphosate product label calls for an adjuvant in addition to AMS, add a non-ionic surfactant (NIS) at 0.25-0.5% v/v (1-2 quart/100 gallons).</li> <li><b>DO NOT</b> add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to this tank mixture or crop injury may occur.</li> </ul>
Imazethapyr + imazapyr	<ul style="list-style-type: none"> <li>For use only on corn designated as Clearfield® corn.</li> <li>Application of this mixture to a corn hybrid that is not Clearfield® corn will result in severe crop injury or death.</li> <li><b>DO NOT</b> use a Methylated Seed Oil (MSO), or an MSO blend with this mixture or severe crop injury may result</li> </ul>
Prosulfuron	<ul style="list-style-type: none"> <li>Use this mixture for additional weed control. Refer to product label for list of weeds controlled.</li> </ul>
Primisulfuron methyl + prosulfuron	<ul style="list-style-type: none"> <li>Use this mixture for additional weed control. Refer to product label for list of weeds controlled.</li> </ul>
Nicosulfuron + rimsulfuron	<ul style="list-style-type: none"> <li>Use this mixture for additional weed control. Refer to product label for list of weeds controlled.</li> </ul>
Nicosulfuron + thifensulfuron methyl	<ul style="list-style-type: none"> <li>Use this mixture for additional weed control. Refer to product label for list of weeds controlled.</li> </ul>
Primisulfuron methyl + sodium salt of dicamba	<ul style="list-style-type: none"> <li>Use this mixture for additional weed control. Refer to product label for list of weeds controlled.</li> </ul>

Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

## ASPARAGUS

Apply Tide Mesotrione 4SC broadcast or banded at a rate of 3.0-7.7 fl oz/A (0.094 – 0.24 lb a.i./A) to asparagus as a spring application prior to spear emergence, as a post-harvest application (after final harvest), or both.

Use the 3.0 fl oz/A (0.094 lb a.i./A) rate for post-emergence control or partial control of the emerged weeds listed in Table 1. Use the 6.0-7.7 fl oz/A (0.188 – 0.24 lb a.i./A) rate for pre-emergence control or partial control of the weeds listed in Table 2. For banded applications, the application must be made to account for band width, i.e., to deliver 3.0-7.7 fl oz/A (0.094 – 0.24 lb a.i./A) per treated acre. For the best pre-emergence weed control with spring applications, Tide Mesotrione 4SC must be applied after fern mowing, disking or other tillage operation but prior to asparagus spear emergence.

Post-harvest applications must be made in a way that minimizes contact with any standing asparagus spears or ferns and maximizes contact with the weeds and/or soil, e.g., by using a directed or semi-directed type application, or crop injury may occur. With post-harvest applications, the use of an adjuvant will increase the risk of crop injury.

If weeds are emerged at the time of the Tide Mesotrione 4SC application, the addition of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v **or** a nonionic surfactant (NIS) at the rate of 0.25% v/v is advised. In addition to COC or NIS, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% v/v **or** ammonium sulfate (AMS) at the rate of 8.5 lb./100 gallons of spray solution may be added for improved burndown of emerged weeds. If weeds have not yet emerged, no adjuvant is advised.

#### Restrictions

- Do not apply more than 7.7 fl oz/A (0.24 lb a.i./A) of Tide Mesotrione 4SC per application.
- Do not apply more than 7.7 fl oz/A (0.24 lb a.i./A) of Tide Mesotrione 4SC per year through any combination of applications.
- Do not make more than two applications of Tide Mesotrione 4SC per year when using reduced application rates.
- Do not make the second application within 14 days of the first application.
- Do not harvest asparagus within 7 days of application.

#### **BLUEGRASS, RYEGRASS (ANNUAL AND PERENNIAL) AND TALL FESCUE GROWN FOR SEED**

Apply Tide Mesotrione 4SC as a pre-emergence application to bare soil (new seeding) or as a post-emergence application to an emerged grass crop.

**Pre-emergence Application:** Apply Tide Mesotrione 4SC to a newly seeded crop as a broadcast, surface spray at a rate of 6.0 fl oz/A (0.188 lb a.i./A), prior to crop and weed emergence. Rainfall or irrigation as the newly seeded grass crop emerges from the soil may increase the risk of injury from Tide Mesotrione 4SC. Grass crop injury symptoms include temporary bleaching of newly emerged leaves, or in extreme conditions, stunting. For a list of pre-emergence weeds controlled or partially controlled see Table 2. In addition to the weeds listed in Table 2, Tide Mesotrione 4SC applied pre-emergence will control mannagrass.

**Post-Emergence Application:** Apply Tide Mesotrione 4SC as a broadcast post-emergence spray to emerged bluegrass, perennial ryegrass or tall fescue grown for seed at a rate of 3.0 – 6.0 fl oz/A (0.094 – 0.188 lb a.i./A). Use the 3.0 fl oz/A (0.094 lb a.i./A) rate for post-emergence control or partial control of the weeds listed in Table 1. In addition to the weeds listed in Table 2, Tide Mesotrione 4SC applied post-emergence will control mannagrass (up to 3 tillers).

Use the 6.0 fl oz/A (0.188 lb a.i./A) rate for post-emergence weed control plus extended residual weed control (see Table 2). The addition of a crop oil concentrate type adjuvant at 1% v/v **or** a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v is advised. Post-emergence applications of Tide Mesotrione 4SC may result in temporary bleaching of the grass crop.

In addition to COC or NIS, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% v/v **or** ammonium sulfate (AMS) at the rate of 8.5 lb./100 gallons of spray solution may also be added for improved control of emerged weeds. The addition of UAN or AMS will improve consistency of post-emergence weed control but will also increase the risk of grass crop injury, especially at Tide Mesotrione 4SC rates greater than 3.0 fl oz/A (0.094 lb a.i./A). If grass crop injury is a concern, do not add UAN or AMS to the spray solution.

Tank mixing other pesticides with Tide Mesotrione 4SC post-emergence may increase the risk of crop injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to Tide Mesotrione 4SC for applications made post-emergence to the crop.

#### Restrictions

- Do not harvest the grass crop for seed or straw within 60 days following the application of Tide Mesotrione 4SC.
- Do not graze or feed forage from treated areas within 14 days following harvest of seed or straw and at least 74 days after application of Tide Mesotrione 4SC.
- Do not make more than two applications of Tide Mesotrione 4SC per year when using reduced application rates.

- Minimum retreatment interval is 14 days.
- Do not apply more than 6 fl oz/A (0.188 lb a.i./A) in a single application and not more than 9 fl oz/A (0.282 lb a.i./A) of Tide Mesotrione 4SC per year through any combination of applications.
- Applications of Tide Mesotrione 4SC to grasses grown for seed species not listed on this label may result in severe injury.

### **BUSH AND CANEBERRIES (CROP GROUP 13-07A and 13-07B)**

**Note:** Not all cultivars and types of berries that are included within the Environmental Protection Agency's definition of bush and caneberreries (Crop Subgroups 13-07A and 13-07B) have been tested and shown to have adequate crop safety to products containing mesotrione. Those that have been tested, and are believed to be reasonably fit, are listed below along with use directions for that crop. If Tide Mesotrione 4SC is used on bush or caneberreries not listed below, severe crop injury may occur.

**High bush blueberry, lingonberry, red currant, black raspberry, red raspberry, and blackberry:** For a list of weeds controlled see Tables 1 and 2. Apply Tide Mesotrione 4SC as a pre-bloom post-directed spray in these crops. Apply to bush or caneberreries at a rate up to 6 fl oz/A (0.188 lb. a.i./A). A split application of 3 fl oz/A (0.094 lb. a.i./A) followed by 3 fl oz/A (0.094 lb. a.i./A) may be used, with a 14-day spray interval. The use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is advised, but avoid using COC adjuvants that are injurious to bush or caneberry leaves.

**Low bush blueberries:** Apply Tide Mesotrione 4SC only in the non-bearing year. This application may be a broadcast application. Apply at a rate up to 6 fl oz/A (0.188 lb a.i./A). A split application of 3 fl oz/A (0.094 lb. a.i./A) followed by 3 fl oz/A (0.094 lb a.i./A) may be used, with a 14-day spray interval. The use of a crop oil concentrate (COC) type adjuvant at 1% v/v is advised. Applications of Tide Mesotrione 4SC during dry weather conditions and/or temperatures above 85° can cause injury to Lowbush blueberries. Applications of Tide Mesotrione 4SC can cause yellowing or necrosis of leaves and under severe conditions, leaf drop may occur especially on "Sourtop" variety blueberries.

### **Restrictions**

- Do not make more than two applications of Tide Mesotrione 4SC at 14-days intervals per year when using reduced application rates.
- Do not apply more than 6 fl oz/A (0.188 lb a.i./A) in a single application
- Do not apply more than a total of 6 fl. oz/A (0.188 lb a.i./A) Tide Mesotrione 4SC per year through any combination of applications.
- Do not make the second application within 14 days of the first application.
- Do not apply Tide Mesotrione 4SC to bush or caneberreries after bloom begins, or illegal residues may occur

### **CITRUS FRUIT, POME FRUIT, STONE FRUIT AND TREE NUTS**

Apply Tide Mesotrione 4SC for post-emergence and residual control of weeds listed in Tables 1 and 2.

**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, sour orange, sweet orange, pummelo, Russell River lime, Satsuma mandarin, sweet lime, Tachibana orange, Tahiti lime, tangelo, tangerine (Mandarin), tangor, trifoliate orange, unqi fruit, cultivars, varieties and/or hybrids of these)

**Pome Fruit Group 11-10** (apple, azarole, crabapple, loquat, mayhaw, medlar, pear, Asian pear, quince, Chinese quince, Japanese quince, tejocote, cultivars, varieties and/or hybrids of these)

**Stone Fruit Group 12-12** (apricot, Japanese apricot, capulin, black cherry, Nanking cherry, sweet cherry, tart cherry, Chinese jujube, nectarine, peach, plum, American plum, beach plum, Canada plum, cherry plum, Chickasaw plum, Damson plum, Japanese plum, Klamath plum, prune plum, plumcot, sloe, cultivars, varieties and/or hybrids of these)

**Tree Nut Group 14-12** (African nut-tree, almond, beech nut, Brazil nut, Brazilian pine, bunya, bur oak, butternut, Cajou nut, candlenut, cashew, chestnut, chinquapin, coconut, Coquito nut, Dika nut, ginkgo, Guiana chestnut, hazelnut (filbert), heartnut, hickory nut, Japanese horse-chestnut, macadamia nut, Mongongo nut, monkey-pot,

monkey puzzle nut, Okari nut, Pachira nut, peach palm nut, pecan, pequi, pili nut, pine nut, pistachio, Sapucaia nut, tropical almond, black walnut, English walnut, yellowhorn, cultivars, varieties and/or hybrids of these)

### Precautions

- To avoid crop injury, apply the spray to the grove or orchard floor and to the weeds, avoiding contact with crop foliage, stems or fruit. Contact of Tide Mesotrione 4SC with the crop may result in bleaching injury that is typically temporary. Use trunk guards to protect plants until adequate bark has developed.
- Specified rates are based on broadcast treatment. For band applications around trees in fruit or nut plantings, reduce the broadcast rate of Tide Mesotrione 4SC and carrier per acre in proportion to the area actually sprayed. (See Banded Applications section).

### Restrictions

- Apply only in pome fruit, stone fruit and nut trees that have been established for a minimum of 12 months. Tide Mesotrione 4SC can be applied in citrus trees or plantings that are less than 12 months old which are exhibiting normal growth and vigor.
- Do not apply in orchards that are stressed due to poor weather or other abiotic factors.
- Do not apply when nuts or fruits are on the ground at harvest.
- Do not apply more than a total of 12 fl oz/A (0.376 lb a.i./A) of Tide Mesotrione 4SC per year or in a 12-month period through any combination of applications.
- Do not apply more than 6 fl oz per acre (0.188 lb a.i./A) in a single application.
- Do not make more than 3 applications of Tide Mesotrione 4SC per year or in a 12-month period.
- Allow at least 5 months between applications of Tide Mesotrione 4SC at 6 fl oz/A (0.188 lb a.i./A) and at least 6 weeks between applications of 6 fl oz/A (0.188 lb a.i./A) and subsequent applications of 3 fl oz/A (0.094 lb a.i./A). (Applications must follow one of the four programs listed in Table 6 below.)
- Do not harvest pome fruit, stone fruit or tree nuts within 30 days after application.
- Do not harvest citrus fruit within 1 day after application.
- Do not use on soils with greater than 20% gravel.
- Do not apply through any type of irrigation system.
- Do not apply by air.

### Spray Additives

For application to emerged weeds, the use of crop oil concentrate (COC) type adjuvant at 1% v/v or non-ionic surfactant (NIS) at 0.25% v/v is advised. Addition of ammonium sulfate or other nitrogen-based adjuvants will increase efficacy when used in combination with COC or NIS. For more information see Spray Additives section on this label.

### Banded Applications

When applying a row or banded treatment of Tide Mesotrione 4SC, use the following formula to calculate the amount per acre:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{Amount needed per acre of field}$$

### Tank Mix Instructions

Tide Mesotrione 4SC may be mixed and applied in combination with most commonly used herbicides registered for use in the approved crops in order to expand the post-emergence weed control spectrum and to help control or manage the development of resistant weeds.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive direction for use and precautionary statements of each product in the tank mixture.

ACTIVE INGREDIENT
Bromacil
Diuron
Glufosinate

Glyphosate
Indaziflam
Norflurazon
Oryzalin
Oxyfluorfen
Paraquat
Pendimethalin
Rimsulfuron
Simazine
Bromacil + diuron

**Weed Control (Table 1 and 2)**

Tide Mesotrione 4SC provides both post-emergence and pre-emergence control of susceptible weeds. For best results, make post-emergence applications before weeds are 5 inches tall (Table 1), or before germination of seed for pre-emerged control (Table 2). Rainfall or irrigation soon after application will improve pre-emergence activity.

**Use Directions**

Apply as a directed or shielded spray. Avoid contact with trunk surfaces, fruit or crop foliage. Ensure that the soil is settled, firm and relatively free of debris at time of application. Also ensure that the soil is free of depressions around trees where rain or irrigation water can concentrate. Make the first application of Tide Mesotrione 4SC in late fall/early winter or spring and follow one of the programs noted in the Table 6 for subsequent applications.

**Table 6. Application Programs, Rates and Intervals**

Apply Tide Mesotrione 4SC in a spray volume of 10-40 gal/A.

Program	Application Rate			Application Interval
	1 <sup>st</sup> Application	2 <sup>nd</sup> Application	3 <sup>rd</sup> Application	
1	6 fl oz/A	6 fl oz/A	-	20 weeks
2	6 fl oz/A	3 fl oz/A	-	6 weeks
3	6 fl oz/A	3 fl oz/A	3 fl oz/A	6 weeks
4	3 fl oz/A	3 fl oz/A	3 fl oz/A	6 weeks

3 fl oz/A Tide Mesotrione 4SC = 0.094 lb a.i./A; 6 fl oz/A Tide Mesotrione 4SC = 0.188 lb a.i./A

For optimum post-emergence weed control, apply Tide Mesotrione 4SC to actively growing weeds in tank mixture with burndown herbicides approved for use on these crops. Apply before weeds are 5 inches tall.

For effective residual weed control, Tide Mesotrione 4SC must be moved into the weed seed germination zone. For pre-emergence weed control, apply Tide Mesotrione 4SC before rainfall or irrigation. Subsequent application(s) of Tide Mesotrione 4SC can be made alone or in a tank mixture, with the herbicides noted above, if weed emergence occurs.

**CRANBERRIES**

Apply Tide Mesotrione 4SC to bearing or non-bearing cranberry beds for control or suppression of bog St. John's wort (*Hypericum boreala*), rushes (*Juncus canadensis*, *J. effuses*, *J. bufonlus*, *J. tenuis*), sedges spp. (*Carex* spp.), yellow loosestrife (*Lysimachia terrestris*) and silverleaf (*Potentilla pacifica*) in addition to the weeds listed in Tables 1 and 2. The use of a crop oil concentrate (COC) type adjuvant at 1% v/v or non-ionic surfactant (NIS) at 0.25% v/v is advised, however COC adjuvants that are injurious to cranberry leaves must not be used.

In non-bearing cranberries, make the Tide Mesotrione 4SC application(s) after the bud break stage, but at least 45 days before flooding in fall or winter. In bearing cranberries, make the Tide Mesotrione 4SC application(s) after the bud break stage, but at least 45 days prior to flooding or harvest.

Tide Mesotrione 4SC may be applied through irrigation systems (chemigation) including center pivot or solid set.

**Chemigation – Sprinkler Irrigation Application for Cranberry Only**

Check the irrigation system to ensure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Maintain good agitation in the pesticide supply tank prior to and during the entire

application period. Apply by injecting the specified rate of Tide Mesotrione 4SC herbicide into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target areas in 0.1 – 0.2 acre-inch of water. In general, use the least amount of water in this range required for proper distribution and coverage.

Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system. In addition to the above directions, if application is being made during a normal irrigation set of a stationary sprinkler, inject the labeled rate of Tide Mesotrione 4SC herbicide for the area covered into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

#### **Chemigation Use Restrictions – Sprinkler Irrigation Application**

Apply this product only through sprinkler irrigation systems including center pivot or solid set. **DO NOT** apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

Contact State Extension Service Specialists, equipment manufacturers or other experts with any questions about calibration.

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 if the need arises.

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 back-flow.

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 pressure decreases to the point where pesticide distribution is adversely affected.

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

Any alternatives to the above required safety devices must conform to the list of EPA approved alternative devices.

#### **Restrictions:**

- Do not make more than 2 applications of Tide Mesotrione 4SC per year.
- Do not make the second application within 14 days of the first application.
- Do not apply more than 8 fl oz/A (0.25 lb a.i./A) Tide Mesotrione 4SC in a single application.
- Do not apply more than a total of 16 fl oz/A (0.5 lb a.i./A) Tide Mesotrione 4SC per year through any combination of applications.
- Do not apply directly to water or areas where surface water is present outside the bog system.
- Do not apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system. 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.

- Do not contaminate water when disposing of equipment wash water or rinsate.
- Do not apply within 10 feet of surface water outside the bog system.
- Do not spray to runoff.
- Do not apply within 45 days of harvest.

### **FLAX**

Apply Tide Mesotrione 4SC pre-emergence at a rate up to 6 fl oz/A (0.188 lb a.i./A). For a list of weeds controlled see Tables 1 and 2. If weeds are emerged at the time of application, the use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is advised. In addition, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% (v/v) or AMS at the rate of 8.5 lb./100 gals. of spray solution may be added to improve the burndown of existing weeds. Application of Tide Mesotrione 4SC to emerged flax can result in severe crop injury.

### **Restrictions**

- Do not make more than one application of Tide Mesotrione 4SC per year.
- Do not apply more than 6 fl oz/A (0.188 lb a.i./A) Tide Mesotrione 4SC in a single application.
- Do not apply more than 6 fl oz/A (0.188 lb a.i./A) Tide Mesotrione 4SC per year.

### **OATS**

Apply Tide Mesotrione 4SC pre-emergence or post-emergence (but not both).

For pre-emergence control or partial control of the weeds listed in Table 2, apply Tide Mesotrione 4SC broadcast at a rate of 6.0 fl oz/A (0.188 lb a.i./A) prior to oat emergence. For best pre-emergence weed control, the Tide Mesotrione 4SC application must be made before weed emergence.

For post-emergence (after oat emergence) control or partial control of the weeds listed in Table 1, apply Tide Mesotrione 4SC at a rate of 3.0 fl oz/A (0.094 lb a.i./A). For best results, apply to emerged weeds that are less than 5" tall. Post-emergence applications of Tide Mesotrione 4SC may result in temporary injury of the oat crop, with symptoms including leaf bleaching, leaf burn and in extreme conditions, stunting.

If emerged weeds are present at the time of the Tide Mesotrione 4SC application, the addition of a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v **or** a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v is advised. In addition to COC or NIS, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% v/v **or** ammonium sulfate (AMS) at the rate of 8.5 lb./100 gallons of spray solution may be added for improved weed control. If emerged weeds are not present at the time of the Tide Mesotrione 4SC application, no additives are advised. If oat injury is a concern, eliminating the use of UAN or AMS will reduce the risk for post-emergence crop injury. Additionally, the use of NIS instead of COC will also reduce the oat injury risk. However, weed control is also reduced if UAN or AMS is eliminated and when switching from COC to NIS.

Tank mixing other pesticides with Tide Mesotrione 4SC post-emergence may increase the risk of injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to Tide Mesotrione 4SC for applications made post-emergence to the crop.

### **Restrictions**

- Do not graze or feed forage from treated areas within 30 days following an application of Tide Mesotrione 4SC.
- Do not harvest oats within 50 days following the application of Tide Mesotrione 4SC.
- Do not make more than one application of Tide Mesotrione 4SC per year.
- Do not apply more than 6 fl. oz/A (0.188 lb a.i./A) Tide Mesotrione 4SC in a single application.
- Do not apply more than 6 fl. oz/A (0.188 lb a.i./A) Tide Mesotrione 4SC per year.
- Do not apply Tide Mesotrione 4SC pre-emergence (prior to oat emergence) at more than 6.0 fl oz/A/year.
- Do not apply Tide Mesotrione 4SC post-emergence at more than 3.0 fl oz/A/year.
- If the oat crop treated with Tide Mesotrione 4SC is lost or destroyed, oats may be replanted immediately. If Tide Mesotrione 4SC was applied to the lost oat crop, no additional Tide Mesotrione 4SC can be applied to the replanted oat crop.

### **OKRA**

Apply Tide Mesotrione 4SC as either a row-middle or as a hooded post-directed treatment (but not both).



**Pre-emergence row-middle application:** Apply Tide Mesotrione 4SC at a rate of 6.0 fl oz/A (0.188 lb a.i./A) as a banded application to the row middles before weed emergence. For this banded application, leave one foot of untreated area over the okra row or 6" to each side of the planted row. For banded applications, the application must be made to account for band width, i.e., to deliver 6.0 fl oz per treated acre (0.188 lb a.i. per treated acre).

**Post-emergence hooded application:** Apply Tide Mesotrione 4SC at a rate of 3.0 fl oz/A (0.094 lb a.i./A) as a post-emergence directed application using a hooded sprayer for control or partial control of the weeds listed in Table 1. Okra must be at least 3" tall at the time of this application. It is advised that a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v be added to the spray solution. For post-emergence hooded applications, the spray equipment must be set up to minimize the amount of Tide Mesotrione 4SC that contact the okra foliage or crop injury will occur. For best post-emergence results, Tide Mesotrione 4SC must be applied to actively growing weeds.

#### Restrictions

- Do not harvest okra within 28 days following the application of Tide Mesotrione 4SC.
- Do not make more than one application of Tide Mesotrione 4SC per year.
- Do not apply more than 6.0 fl oz (0.188 lb a.i.) of Tide Mesotrione 4SC in a single application.
- Do not apply Tide Mesotrione 4SC as a row-middle application at more than 6.0 fl oz (0.188 lb a.i.) per treated acre per year.
- Do not apply Tide Mesotrione 4SC as a post-directed application at more than 3.0 fl oz (0.094 lb a.i.) per acre per year.
- Do not apply as a broadcast pre-emergence or broadcast post-emergence application to okra or severe injury will occur.
- Do not apply Tide Mesotrione 4SC directly over the planted okra row or severe crop injury may occur. Injury risk is greatest on coarse textured soils (sand, sandy loam or loamy sand).
- If the okra crop treated with Tide Mesotrione 4SC is lost or destroyed, okra may be replanted only in the soil band that was not treated with Tide Mesotrione 4SC.

#### PEARL MILLET

Tide Mesotrione 4SC may be applied pre-emergence in pearl millet, i.e., after planting but before crop emergence, at a rate up to 6 fl oz/A (0.188 lb a.i./A). For a list of weeds controlled see Table 2. If weeds are emerged at the time of application, the use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is advised. In addition, a spray grade UAN (e.g., 28-0-0) at the rate of 2.5% (v/v) or AMS at the rate of 8.5 lb./100 gals. of spray solution may be added to improve the burndown of existing weeds. Applications of Tide Mesotrione 4SC to emerged pearl millet can result in severe crop injury.

#### Restrictions

- Do not make more than one application of Tide Mesotrione 4SC per year.
- Do not apply more than 6 fl oz/A (0.188 lb a.i./A) of Tide Mesotrione 4SC in a single application.
- Do not apply more than 6 fl oz/A (0.188 lb a.i./A) per year.

#### RHUBARB

Apply Tide Mesotrione 4SC prior to crop emergence in established rhubarb.

Apply Tide Mesotrione 4SC at a rate of 6.0 fl oz/A (0.188 lb a.i./A) to dormant rhubarb (before spring green-up) for control or partial control of the weeds listed in Table 2. If weeds are emerged at the time of application, it is advised that a crop oil concentrate (COC) type adjuvant at 1% v/v or a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v be added to the spray solution. Applications of Tide Mesotrione 4SC to rhubarb that is not dormant may result in temporary bleaching symptoms. Rainfall or irrigation after the Tide Mesotrione 4SC application may increase the risk of injury to emerging rhubarb.

#### Restrictions

- Do not harvest rhubarb within 21 days following the application of Tide Mesotrione 4SC.
- Do not make more than one application of Tide Mesotrione 4SC per year.
- Do not apply more than 6.0 fl oz/A (0.188 lb a.i./A) of Tide Mesotrione 4SC in a single application
- Do not apply more than 6.0 fl oz/A (0.188 lb a.i./A) Tide Mesotrione 4SC per year.

## **SORGHUM (GRAIN AND SWEET)**

**Pre-emergence Application:** Apply Tide Mesotrione 4SC pre-emergence or pre-plant non-incorporated up to 21 days before planting sorghum for control or partial control of the weeds listed in Table 2.

Apply pre-emergence at a rate of 6.0 – 6.4 fl oz/A (0.188 – 0.2 lb a.i./A) as a broadcast non-incorporated application prior to sorghum emergence. Applying Tide Mesotrione 4SC less than 7 days before sorghum planting will increase the risk of crop injury, especially if irrigation or rainfall is received following the application. Injury symptoms include temporary bleaching of newly emerging sorghum leaves. Applying Tide Mesotrione 4SC more than 7 days (but not more than 21) prior to planting will reduce the risk of crop injury.

If Tide Mesotrione 4SC is applied prior to planting, minimize disturbance of the herbicide treated soil barrier during the planting process in order to lessen the potential for weed emergence.

If emerged weeds are present at the time of the pre-emergence application, it is advised that a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v **or** a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v be added to the spray solution. In addition to COC or NIS, a spray grade UAN at a rate of 2.5% v/v or ammonium sulfate (AMS) at a rate of 8.5 lb./100 gallons of spray solution can be added to the spray solution.

### **Pre-emergence Application Restrictions:**

- Do not apply more than 6.4 fl oz/A (0.20 lb a.i./A) of Tide Mesotrione 4SC in a single application.
- Do not apply more than 6.4 fl oz/A (0.20 lb a.i./A) of Tide Mesotrione 4SC per year.
- Do not make more than one application of Tide Mesotrione 4SC per year.
- Do not apply Tide Mesotrione 4SC to emerged sorghum or severe crop injury may occur.
- Do not use Tide Mesotrione 4SC in the production of forage sorghum, sudangrass, sorghum-sudangrass hybrids, or dual purpose sorghum.
- Do not apply Tide Mesotrione 4SC to sorghum that is grown on coarse textured soils (e.g., sandy loam, loamy sand, sand).
- In the State of Texas, do not apply Tide Mesotrione 4SC to sorghum grown south of Interstate 20 (I-20) or east of Highway 277.

**Post-Directed:** Apply Tide Mesotrione 4SC post-directed to grain sorghum for control or partial control of the weeds listed in Table 1. For best results, apply Tide Mesotrione 4SC to actively growing weeds.

Apply at a rate of 3 fl oz/A (0.094 lb a.i./A) as a post-directed application when the grain sorghum is at least 8 inches tall, by directing the spray between the crop rows and towards the base of the grain sorghum plant. Direct application of Tide Mesotrione 4SC onto grain sorghum foliage can result in crop injury including temporary bleaching. If crop injury does occur, newly emerging leaves following application are typically unaffected.

It is advised that a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v **or** a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v be added to the spray solution. In addition to COC or NIS, a spray grade Urea Ammonium Nitrate (UAN) at a rate of 2.5% v/v **or** ammonium sulfate (AMS) at a rate of 8.5 lb./100 gallons of spray solution can be added to the spray solution.

Tide Mesotrione 4SC may be tank mixed with other herbicides registered for grain sorghum for improved spectrum of weed control. Additionally, these tank mixtures can be used to include a herbicide with a different mode of action to help control or manage the development of resistant weed biotypes. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, 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.

### **Post-Directed Application Restrictions:**

- Do not make more than one post-directed application of Tide Mesotrione 4SC per year.
- Do not apply more than 3 fl oz/A (0.094 lb a.i./A) of Tide Mesotrione 4SC in a single application.
- Do not apply more than 3.0 fl oz/A (0.094 lb a.i./A) of Tide Mesotrione 4SC post-directed and not more than 6.4 fl oz/A (0.20 lb a.i./A) of Tide Mesotrione 4SC per year.
- Do not apply Tide Mesotrione 4SC broadcast over-the-top to emerged sorghum or severe crop injury may occur.

- Do not harvest grain sorghum for forage for 30 days following application.
- Do not harvest for grain or stover for 60 days following application.
- Do not apply Tide Mesotrione 4SC after the sorghum seedhead has begun to emerge.
- Do not use Tide Mesotrione 4SC in the production of forage sorghum, sudangrass, or sorghum-sudangrass hybrids.

## SOYBEANS

Tide Mesotrione 4SC can be applied pre-emergence to mesotrione resistant soybeans. Applications to soybeans that are not designated as mesotrione resistant will result in significant crop injury.

### Pre-emergence Application:

For pre-emergence control of the weeds listed in Table 2, apply Tide Mesotrione 4SC prior to soybean emergence at a rate of 6.0 fl oz/A (0.188 lb a.i./A). Use the higher rate for longer residual control. This product may be tank mixed with other registered soybean herbicides. Refer to the tank mix partner label and follow all precautions and 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.

If weeds are emerged at the time of application, add either a non-ionic surfactant (NIS) at 1 qt./100 gallons (0.25% v/v) or a crop oil concentrate (COC) at 1 gallon/100 gallons (1% v/v). In addition to NIS or COC, it is also advised to add either ammonium sulfate (AMS) at 8.5-17 lbs./100 gallon (or equivalent).

### Restrictions

- Do not apply more than 6.0 fl oz/A (0.188 lb a.i./A) of Tide Mesotrione 4SC in a single application.
- Do not apply more than 6.0 fl oz/A (0.188 lb a.i./A) per year.
- Do not make more than one application of Tide Mesotrione 4SC per year.
- Do not apply Tide Mesotrione 4SC to emerged soybeans.
- Do not graze or feed soybean forage or hay to livestock.

## SUGARCANE

Apply Tide Mesotrione 4SC by ground for pre-emergence, post-emergence over-the-top or post-emergence directed weed control.

Tide Mesotrione 4SC may also be applied aerially for pre-emergence or post-emergence weed control in Florida, Louisiana and Texas only.

**Pre-emergence Applications:** Apply Tide Mesotrione 4SC for pre-emergence weed control at 6.0-7.7 fl oz/A (0.188 – 0.24 lb a.i./A) after the planting of plant-cane or after harvest of ratoon-cane. For a list of weeds controlled pre-emergence, refer to Table 2. If some weeds are already emerged at the time of application, add a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v **or** a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v to the spray solution. In addition to COC or NIS, a spray grade UAN at a rate of 2.5% v/v **or** ammonium sulfate (AMS) at a rate of 8.5 lb./100 gallons of spray solution can be added to the spray solution. For improved pre-emergence weed control, AAtrex or Evik® can be tank mixed with Tide Mesotrione 4SC. Refer to the tank mix partner label for specific rates and use directions. 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.

**Post-emergence Applications:** Apply Tide Mesotrione 4SC post-emergence at 3.0 fl oz/A (0.094 lb a.i./A) for control of the weeds listed in Table 1. Post-emergence applications may be made as a post-over-the-top or as a post-directed spray to the base of the sugarcane. If a pre-emergence application was made earlier in the season, only one post-emergence application can be made. If no pre-emergence application was made earlier in the season, both a post-over-the-top and a post-directed application can be made. For best results, Tide Mesotrione 4SC must be applied to actively growing weeds.

For post-emergence applications, it is advised that a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v **or** a nonionic surfactant (NIS) type adjuvant be added to the spray solution. In addition to COC or NIS, the use of

a spray grade UAN (e.g., 28-0-0) at 2.5% v/v **or** ammonium sulfate (AMS) at a rate of 8.5 lb./100 gallons of spray solution can be added for improved control of weeds.

For additional post-emergence weed control, Tide Mesotrione 4SC can be tank mixed with atrazine, asulam-sodium and/or trifloxysulfuron-sodium. Refer to the tank mix product labels for specific rates and use directions. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, 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.

### **Restrictions**

- Do not apply more than 7.7 fl oz/A (0.24 lb a.i./A) of Tide Mesotrione 4SC as a pre-emergence application.
- Do not apply more than 3.0 fl oz/A (0.094 lb a.i./A) of Tide Mesotrione 4SC in a post-emergence application.
- Do not make more than two applications of Tide Mesotrione 4SC per year. If a pre-emergence application of Tide Mesotrione 4SC is made, only post-emergence application is allowed.
- Do not make two Tide Mesotrione 4SC applications less than 14 days apart.
- Do not apply more than 10.7 fl oz/A (0.334 lb a.i./A) of Tide Mesotrione 4SC per year.
- Do not harvest sugarcane within 114 days following a post-over-the-top application of Tide Mesotrione 4SC (114-day PHI).
- Do not harvest sugarcane within 100 days following a post-directed application of Tide Mesotrione 4SC (100-day PHI).

### **TURF GRASS USES**

Tide Mesotrione 4SC is applied pre-emergence and post-emergence to provide selective contact and residual control of turfgrass weeds. If applied pre-emergence, Tide Mesotrione 4SC is absorbed by the weeds as they emerge from the soil. Pre-emergence activity and control is reduced under dry conditions, and therefore Tide Mesotrione 4SC must be activated with 0.15 inches of irrigation if rain hasn't fallen within 10 days of application.

Post-emergent control is obtained by absorption into the soil and contact with foliage. Growth ceases post-application, weeds turn white from chlorophyll loss, and die within three weeks. A repeat application 2-3 weeks after the initial application will improve post-emergence weed control. Add a non-ionic surfactant (NIS) when making post-emergence applications.

Turfgrass color can temporarily become white after treatment, typically occurring 5-7 days post-application and lasting for several weeks. A second application to the same site will cause less whitening of plant tissue.

Tide Mesotrione 4SC controls weeds prior to and during seeding of certain turfgrasses during turf renovation (see New Seedings). If making pre-emergence application to established turf, tank mix Tide Mesotrione 4SC with other pre-emergence herbicides including those containing pendimethalin for longer residual and broad spectrum control.

Apply Tide Mesotrione 4SC at reduced rates of 4 fl oz/A (0.125 lb a.i./A) or less if tank mixing with atrazine, bentazon, or simazine. Before tank mixing Tide Mesotrione 4SC with other herbicides, conduct a compatibility, safety, and efficacy test before treating larger areas. See tank mix partner labels for directions and precautions. The most restrictive directions apply. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### **Use Sites**

Tide Mesotrione 4SC may be applied to commercial and residential turfgrasses. Non-crop area use sites include golf courses, sod farms, athletic fields, parks, residential and commercial properties, cemeteries, airports, and lawns.

### **Turfgrass Use Precautions**

- Thoroughly clean application equipment after use to avoid injury to sensitive plants.
- To avoid injury to sensitive species, keep traffic out of treated areas until sprays have dried; irrigate soil lightly to move Tide Mesotrione 4SC from turf foliage before resuming normal irrigation.
-

## Turfgrass Use Restrictions

- Do not use on golf course putting greens; maintain a minimum of a 5-foot buffer between putting greens and treated areas.
- Do not overspray or allow spray to drift to ornamentals or flower beds and gardens. Roses and daylilies are particularly sensitive to Tide Mesotrione 4SC.
- Do not apply more than 8 fl oz/A (or 0.25 lb. a.i./A) in a single application.
- Do not apply more than 8 fl oz/A (or 0.25 lb. a.i./A) per year.
- Do not make more than two applications per acre per year.
- Do not make the second application within 2 weeks of the first application.
- Do not plant any crop other than turfgrass for 18 months post-application of Tide Mesotrione 4SC to avoid turfgrass injury.
- Do not apply organophosphate or carbamate insecticides within 7 days of applying Tide Mesotrione 4SC.
- Residential Lawns: Do not make broadcast applications for pre- and post-emergent weed control unless the home lawn is being reseeded and/or renovated as whitening of some turfgrasses may occur.
- Do not apply Tide Mesotrione 4SC through any type of irrigation system.
- Do not apply by air.
- Do not use treated clippings to mulch trees or vegetable/flower gardens.
- Do not apply this product on bentgrass, *Poa annua*, kikuyugrass, zoysiagrass, seashore paspalum, and bermudagrass when plant injury is unacceptable. Maintain a 5-foot buffer between treated areas and bentgrass or *Poa annua* greens.
- Do not apply over the top of exposed roots of trees and ornamentals.
- Do not use on golf course putting greens; maintain a minimum of a 5-foot buffer between putting greens and treated areas.

## Turfgrass Species Controlled by Tide Mesotrione 4SC

Species	Application Rate Fl Oz per Acre (lb a.i./A)
Kentucky bluegrass ( <i>Poa pratensis</i> )	5-8 fl oz (0.156 – 0.25 lb a.i.)
Centipedegrass ( <i>Eremochloa ophiuroides</i> )	5-8 fl oz (0.156 – 0.25 lb a.i.)
Buffalograss ( <i>Buchloe dactyloides</i> )	5-8 fl oz (0.156 – 0.25 lb a.i.)
Tall fescue ( <i>Festuca arundinacea</i> )	5-8 fl oz (0.156 – 0.25 lb a.i.)
Perennial ryegrass* ( <i>Lolium perenne</i> )	5 fl oz (0.156 lb a.i.)
Fine fescue* (creeping red, chewings and hard) ( <i>Festuca</i> spp.)	5 fl oz (0.156 lb a.i.)
St. Augustinegrass* (grown for sod) ( <i>Stenotaphrum secundatum</i> )	4 fl oz (0.125 lb a.i.)

\*See additional rate instructions below.

## APPLICATION INSTRUCTIONS

### Pre-Emergence Applications

Apply 4-8 fl oz/A (0.125 – 0.25 lb a.i.) of Tide Mesotrione 4SC in at least 30 gallons of water per acre before seeds germinate and as close to seed germination as possible. Combine this product with another pre-emergence herbicide including UP-End Hydrocap for extended control of crabgrass and foxtail.

### Pre-Emergence Application Precautions

- Tide Mesotrione 4SC is most effective on established turf when applied post-emergence unless it is combined with another soil active herbicide.

### Pre-Emergence Application Restrictions

- Do not exceed 5 fl oz/A (0.157 lb a.i./A) per application to perennial ryegrass, fine fescues, or mixed stands that consist of >50% perennial ryegrass and/or fine fescue.

- St. Augustinegrass sod: Do not exceed 4 fl oz (0.125 lb a.i.) per acre per year.

### Application to New Seedlings/New Lawns

Apply 5-8 fl oz/A (0.156 – 0.25 lb a.i./A) Tide Mesotrione 4SC in at least 30 gallons of water per acre before seeding or after seeding of non-sensitive turfgrass species listed below, except fine fescue, as application to fine fescue can reduce grass density. Tide Mesotrione 4SC can be effectively used on grass seed blends that contain <20% by weight hard/fine fescue. For optimal control, apply at grass seeding or as close to seeding as possible.

### New Seedlings/New Lawns Restrictions

- Do not spray on newly germinated turfgrass. Delay treatment until grass has been mowed 2-4 times and/or 4 weeks after emergence (whichever is longer).

### Post-Emergence Application Instructions

Apply 4-8 fl oz/A (0.125 – 0.25 lb a.i.) of Tide Mesotrione 4SC in at least 30 gallons of water per acre with a NIS surfactant. Make a repeat application 2-3 weeks later for optimal weed control. Apply to young, actively growing weeds.

### Post-Emergence Application Precautions:

- Moisture stress and application to mature weeds can reduce herbicide efficacy.

### Bentgrass (*Agrostis* spp.) /Nimbleweed (*Muhlenbergia schreberi*) Treatment

Apply 5 fl oz/A (0.156 lb a.i./A) Tide Mesotrione 4SC in at least 30 gallons of water per acre combined with a NIS surfactant at 2-3 week intervals for a maximum of 3 applications. For optimal weed control, apply in late summer/early fall just prior to new growth.

### St. Augustinegrass (Sod uses only) and Centipedegrass Treatment

Apply to established turf ONLY.

### St. Augustinegrass (Sod uses only) and Centipedegrass Restrictions

- Do not exceed 4 fl oz/A (0.125 lb a.i./A) per application of Tide Mesotrione 4SC if tank mixing with Atrazine or Simazine.
- Do not exceed 0.5 lb./A atrazine or simazine active ingredient per application. See atrazine/simazine labels for precautions and restrictions.

### Dormant Bermudagrass Application only

Apply 5 fl oz/A (0.156 lb a.i./A) of Tide Mesotrione 4SC to control winter weeds listed in the Weeds Controlled table below. Make a repeat application 2-3 weeks later. Application of Tide Mesotrione 4SC to semi-dormant turf will cause bermudagrass whitening.

### Spot Applications of this product:

Spray Mix	Application Rate	Rate of this Product	Rate of NIS Adjuvant
2 gallons	1 gallon per 1,000 sq. ft.	1 teaspoon	3 teaspoons

### Spot Application Restrictions

- Do not apply more than 16 fl oz/A (0.5 lb a.i./A) of Tide Mesotrione 4SC per year.

### WEEDS CONTROLLED USING PRE-EMERGENCE APPLICATION

Apply Tide Mesotrione 4SC with a grass pre-emergence herbicide except when used to control weeds in new seedlings. Tide Mesotrione 4SC will control the following weeds using pre-emergence application:

Common Name	Scientific Name
Barnyardgrass	<i>Echinochloa crusgalli</i>
Bentgrass (Creeping)	<i>Agrostis stolonifera</i>
Bluegrass (Annual) – suppression only	<i>Poa annua</i>
Buckhorn Plantain	<i>Plantago lanceolata</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed (Common)	<i>Stellaria media</i>

Common Name	Scientific Name
Chickweed (Mouseear)	<i>Cerastium vulgatum</i>
Clover (Large Hop)	<i>Trifolium aureum</i>
Clover (White)	<i>Trifolium repens</i>
Crabgrass (Large)	<i>Digitaria sanguinalis</i>
Crabgrass (Smooth)	<i>Digitaria ischaemum</i>
Crabgrass (Southern)	<i>Digitaria ciliaris</i>
Foxtail (Yellow)	<i>Setaria glauca</i>
Galinsoga	<i>Galinsoga ciliate</i>
Lambsquarters (Common)	<i>Chenopodium album</i>
Pigweed (Redroot)	<i>Amaranthus retroflexus</i>
Pigweed (Smooth)	<i>Amaranthus hybridus</i>
Purslane (Common)	<i>Portulaca oleracea</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>
Smartweed (Pale)	<i>Polygonum lapathifolium</i>
Smartweed (Pennsylvania)	<i>Polygonum pennsylvanicum</i>
Speedwell (Persian)	<i>Veronica persica</i>
Speedwell (Purslane)	<i>Veronica peregrine</i>
Wild Carrot	<i>Daucus carota</i>

#### WEEDS CONTROLLED USING POST-EMERGENCE APPLICATION

Make a second application of Tide Mesotrione 4SC 2-3 weeks after initial treatment. For optimal control add a NIS-type surfactant and apply to young, actively growing weeds. Tide Mesotrione 4SC will control the following weeds using post-emergence application:

Common Name	Scientific Name
Barnyardgrass	<i>Echinochloa crusgalli</i>
Bentgrass (Creeping)	<i>Agrostis stolonifera</i>
Buckhorn Plantain	<i>Plantago lanceolata</i>
Buttercup	<i>Ranunculus sardous</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed (Common)	<i>Stellaria media</i>
Chickweed (Mouseear)	<i>Cerastium vulgatum</i>
Clover (Large Hop)	<i>Trifolium aureum</i>
Clover (White)	<i>Trifolium repens</i>
Crabgrass (Large)*	<i>Digitaria sanguinalis*</i>
Crabgrass (Smooth)*	<i>Digitaria ischaemum*</i>
Crabgrass (Southern)*	<i>Digitaria ciliaris*</i>
Curly dock	<i>Rumex crispus</i>
Dandelion (Catsear)	<i>Hypochoeris radicata</i>
Dandelion (Common)	<i>Taraxacum officinale</i>
Florida Betony	<i>Stachys floridana</i>
Florida Pusley	<i>Richardia scabra</i>
Foxtail (Yellow)	<i>Setaria glauca</i>
Galinsoga	<i>Galinsoga ciliate</i>
Goosegrass*	<i>Eleusine indica*</i>
Ground Ivy	<i>Glechoma hederacea</i>
Healall	<i>Prunella vulgaris</i>
Henbit	<i>Lamium amplexicaule</i>
Lambsquarters (Common)	<i>Chenopodium album</i>
Lawn Burweed	<i>Soliva sessilis</i>
Lovegrass (Tufted)	<i>Eragrostis pectinacean</i>
Marestail	<i>Conyza Canadensis</i>
Nimblewill	<i>Muhlenbergia schreberi</i>
Nutsedge (Yellow)	<i>Cyperus esculentus</i>
Oxalis	<i>Oxalis stricta</i>

Common Name	Scientific Name
Pigweed (Redroot)	<i>Amaranthus retroflexus</i>
Pigweed (Smooth)	<i>Amaranthus hybridus</i>
Purslane (Common)	<i>Portulaca oleracea</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>
Smartweed (Pale)	<i>Polygonum lapathifolium</i>
Smartweed (Pennsylvania)	<i>Polygonum pennsylvanicum</i>
Sowthistle	<i>Sonchus oleraceus</i>
Swinecress	<i>Coronopus didymus</i>
Thistle (Canada)	<i>Cirsium arvense</i>
Verbena	<i>Verbena hastata</i>
Wild Carrot	<i>Daucus carota</i>
Wild Violet	<i>Viola pratincole</i>
Windmillgrass	<i>Chloris verticillata</i>

\*For optimal control, apply to less than 4 tiller crabgrass and goosegrass.

### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Keep container tightly closed when not in use. Do not store near seed, fertilizers, or foodstuffs. Can be stored at temperatures as low as -20°F. Keep away from heat and flame.

**PESTICIDE DISPOSAL:** Open dumping is prohibited. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

#### CONTAINER HANDLING:

**[Nonrefillable Container (five gallons or less):]** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) 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 1/4 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

**[Nonrefillable Container (greater than five gallons):]** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND DISCLAIMER

NOTICE: Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Tide International, USA, Inc. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, TIDE INTERNATIONAL, USA, INC. MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. NO AGENT OF TIDE INTERNATIONAL, USA, INC. IS AUTHORIZED TO MAKE ANY WARRANTIES BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE



WARRANTIES CONTAINED HEREIN, TIDE INTERNATIONAL, USA, INC. DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

**LIMITATIONS OF LIABILITY:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID, OR AT TIDE INTERNATIONAL, USA, INC.'S ELECTION, THE REPLACEMENT OF PRODUCT.

[EPA approval date]

**{LANGUAGE ON LABEL AFFIXED TO CONTAINER}**

**TIDE MESOTRIONE 4SC**

**ACTIVE INGREDIENT:**

Mesotrione: (CAS No. 104206-82-8) ..... 40.0%

**OTHER INGREDIENTS:**..... 60.0%

**TOTAL:**..... 100.0%

Contains 4 lbs. active ingredient mesotrione per gallon.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

<b>FIRST AID</b>	
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by the poison control center or doctor.</li> <li>• Do not give anything to an unconscious person.</li> </ul>
<b>HOT LINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at 1-800-424-9300 for emergency medical treatment information.	

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Keep container tightly closed when not in use. Do not store near seed, fertilizers, or foodstuffs. Can be stored at temperatures as low as -20°F. Keep away from heat and flame.

**PESTICIDE DISPOSAL:** Open dumping is prohibited. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING:**

**[Nonrefillable Container (five gallons or less):]**  
Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) 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 1/4 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

**[Nonrefillable Container (greater than five gallons):]**  
Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by incineration.

[See] [inside] [label] [booklet] [for] [First Aid][,] [additional] [Precautionary Statements][,] [and] [Directions for Use] [including] [Storage and Disposal] [instructions][.]

**EPA Reg. No. 84229-48  
EPA Est. No. xxxxxx-xx-xxx**

Lot No.: see container

**Net Contents:** \_\_\_\_\_

**Manufactured For:**  
Tide International, USA, Inc.  
21 Hubble  
Irvine, CA 92618