

## OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

May 17, 2024

Wagner Regulatory Associates Inc. c/o Ogongi Ogongi Agent Tigris, LLC. 10025 Hwy. 264 Alternate Middlesex, NC 27557

Subject: Label Amendment – Add non-crop uses to sub-label A

Product Name: Tigris Sulfen 4 SC EPA Registration Number: 92647-6 Application Date: 02/02/2021

Case Number: 606324

Dear Mr. Ogongi:

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

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

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find

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or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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

If you have any questions, please contact Jamey Shuler by phone at (202) 566-2898, or via email at Shuler.Jamey@epa.gov.

Sincerely,

Kable Bo Davis

Senior Regulatory Specialist
Office of Pesticide Programs

Registration Division, Immediate Office

Enclosure

**Master Label includes:** 

Sublabel A: Agricultural Use (including sod farms)

Sublabel B: Turf and Non-Crop Use

SULFENTRAZONE GROUP 14 HERBICIDE

## Tigris<sup>[™]</sup> Sulfen 4 SC

## **Manufactured For:**

Tigris, LLC P.O. Box 250 10025 Hwy. 264 Alternate, Middlesex, NC 27557

EPA Reg. No. 92647-6

EPA Est. No.

## ACCEPTED

05/17/2024

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 20047

92647-6

## [Sublabel A: Agricultural Use (including sod farms)]

SULFENTRAZONE GROUP	14	HERBICIDE
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## Tigris<sup>[™]</sup> Sulfen 4 SC

[Herbicide]

ACTIVE INGREDIENT	AC	ΓIVE	INGRED	IENT
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 Sulfentrazone\*
 39.6%

 OTHER INGREDIENTS:
 60.4%

 TOTAL:
 100.0%

## KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID		
IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice.	
Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so		
by the poison control center or doctor.		
<ul> <li>Do not give anything by mouth to an unconscious person.</li> </ul>		
IF ON SKIN OR CLOTHING: • Take off contaminated clothing.		
	Rinse skin immediately with plenty of water for 15-20 minutes.	
	Call a poison control center or doctor for treatment advice.	
IF INHALED:	Move person to fresh air.	
• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by		
mouth-to-mouth, if possible.		
<ul> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>		
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes.	
	<ul> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> </ul>	
	Call a poison control center or doctor for treatment advice.	
HOTLINE NUMBER		
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency		
information concerning this	product, call your poison control center at 1-800-222-1222.	

[Optional referral statements when booklets and container labels are used:]

[See label booklet for [complete] [additional] [First Aid,] [Precautionary Statements,] [Directions For Use,] and [Storage and Disposal].]

**Manufactured For:** 

Tigris, LLC P.O. Box 250 10025 Hwy. 264 Alternate Middlesex, NC 27557

EPA Reg. No.	92647-
EPA Est. No.	

NET CONTENTS: \_\_\_\_GALS.

<sup>\*</sup>Equivalent to 4 pounds of active ingredient per gallon.

## PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed, absorbed through skin or inhaled. Avoid contact with skin or clothing. Avoid breathing spray mist. 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, mixers, loaders, and other pesticide handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mills, Neoprene rubber ≥14 mills, polyvinyl chloride (PVC) ≥14 mils, and viton ≥14 mills.
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not re-use them. 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.

#### 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 clothing.

#### **ENVIRONMENTAL HAZARDS**

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

#### **Groundwater Advisory:**

This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Do not use on coarse soils classified as sand, which have less than 1% organic matter.

### **Surface Water Advisory:**

Sulfentrazone can contaminate surface water through spray drift. Under some conditions, sulfentrazone may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, and areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

## **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.

Applicators must not exceed labeled rates of this product. Refer to specific crop directions for use for maximum use rates. Calculate the 12-month period for the purpose of maximum use rates from when **Tigris Sulfen 4 SC** is first applied.

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. These **Tigris Sulfen 4 SC** requirements 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.

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

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mills, Neoprene rubber ≥14 mills, polyvinyl chloride (PVC) ≥14 mils, and viton ≥14 mills.
- Shoes plus socks

#### WEED RESISTANCE MANAGEMENT

For resistance management, **Tigris Sulfen 4 SC** is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to **Tigris Sulfen 4 SC** and other Group 14 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 **Tigris Sulfen 4 SC** or other Group 14 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 from a different group if such use is permitted; where information on resistance in target weeds 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.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.
- 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.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your Tigris, LLC representative. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

#### PRODUCT INFORMATION

**Tigris Sulfen 4 SC** is a soil-applied selective herbicide. It will control listed grasses, sedges, and broadleaf weeds. **Tigris Sulfen 4 SC** is a flowable product that contains 4 pounds of active ingredient (sulfentrazone) per gallon.

The active ingredient sulfentrazone inhibits an enzyme required by plants in order to produce chlorophyll.

Inhibiting this enzyme leads to the release of singlet oxygen (O) which then disrupts cellular membranes, resulting in cellular leakage and cellular death ultimately resulting in plant death.

Tigris Sulfen 4 SC has a selective mode of action because sulfentrazone has a greater affinity for the PRO IX enzyme in listed weed species as opposed to listed crops.

Tigris Sulfen 4 SC must be prepared and used in such a way so as to prevent the following:

- Spills
- Improper disposal of spray mixtures, rinsate or any excess pesticide
- · Back siphoning in wells

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The following activities must not be carried out within 50 feet of any well (including drainage and abandoned wells) unless the activity is carried out on an impervious pad that has been built to withstand the heaviest possible weight that will be moved across the pad or placed upon it:

- Loading
- Mixing
- Washing/rinsing Tigris Sulfen 4 SC from application equipment

The impervious pad must be made to contain any leaks or spills, as well as any rinsate/washwaters and rain that may fall upon it. An impervious pad that does not have a roof must have enough capacity to contain a minimum of 110% of the volume of the largest container that will be placed on the pad. Those pads that are covered by a roof must have enough capacity to contain a minimum of 100% of the volume of the largest container that will be placed on the pad. The roof must be big enough to completely exclude contact with the pad from rainfall.

The above containment volume minimum must be maintained. The minimum capacity volumes do not apply to the following:

Vehicles delivering pesticide product to the load/mix area

Applicators must ensure that they are aware of any State requirements for containment and set back from wells.

The impervious pad must be self-contained so that surface water cannot flow over or from one pad. They must also be sloped to allow for material removal.

Do not load or mix **Tigris Sulfen 4 SC** within 50 feet of any sinkholes, reservoirs, impounded or natural lakes, wells (including drainage and abandoned wells) or intermittent/perennial rivers and streams. This restriction does not apply where there are properly diked loading/mixing areas or impervious pads. The restriction also does not apply where abandoned wells are properly plugged or capped.

#### **RESTRICTIONS**

This product may only be used to control the weeds under "LISTED WEED SPECIES" for the following uses: asparagus; brassica, head and stem; brassica, leafy greens; cabbage (transplanted only); corn; dry shelled beans and peas; fallow or post-harvest burndown; flax; fruiting vegetables, except cucurbits, and okra; horseradish; lima beans, succulent; melons; mint; peanuts; potatoes; soybeans; strawberry; succulent peas; sugarcane; sunflower; tobacco; tomato (transplanted only); turfgrasses.

Do not allow spray to drift onto adjacent plants as injury to other plants may occur.

## **APPLICATION INSTRUCTIONS**

Apply this product in one of the following ways:

- As a surface application, pre-emergence treatment (i.e., before crop and/or weed emergence)
- As an incorporated treatment prior to planting
- Post-plant application
- Over-the-top
- Lay-by

For further detail, refer to the Crop Specific Use Directions below.

When **Tigris Sulfen 4 SC** is used as an incorporated treatment, the product must be incorporated following a uniform surface application to a depth of 2 inches maximum. If it is incorporated to a greater depth, reduced control of target species may result. Applicators must ensure that there is no overlap between areas that have been treated with **Tigris Sulfen 4 SC** due to soil movement. Such an overlap could cause an adverse crop response.

When **Tigris Sulfen 4 SC** is soil applied or applied as a post-plant treatment, the herbicidal action of the product must be activated by moisture. The amount of moisture required depends upon a number of factors including:

- Soil type
- Organic matter content
- Tilth
- · Existing soil moisture at the time of treatment

For an effective application of **Tigris Sulfen 4 SC**, 0.5 to 1 inch of irrigation or rainfall is required within 7 to 10 days following treatment. If that level of moisture is not received, shallow incorporation must be undertaken in order to obtain sufficient control of target species. Activating moisture can be delayed for 10 - 14 days, and sometimes longer, depending on the factors listed above. If activating moisture is delayed, however, control of listed species may be reduced, due to the growth of weeds during the delay.

When **Tigris Sulfen 4 SC** has been activated, it will provide control of listed weed species. The level of control will depend on the size and type of weed species when **Tigris Sulfen 4 SC** is activated. The control of listed germinating weed species will be reduced when rain or irrigation follows a period of dry weather.

Apply **Tigris Sulfen 4 SC** prior to the germination of crop seeds in order to avoid damage to emerging seedlings. Crop damage may occur where treatment is delayed if seeds are germinating, or are close to the soil surface.

If **Tigris Sulfen 4 SC** is applied by surface application and activation has not been triggered by rainfall, or irrigation (1/2" to 1" moisture) within 10 days of treatment, make a shallow incorporation (less than 2") of the product so that germinating weed species can be controlled. Soil incorporation will also facilitate product activation with existing soil moisture.

Where there are prolonged periods when rainfall/irrigation is not available, alternative weed control methods should be considered. Follow Crop Specific Use Directions exactly and with care, particularly for post-plant treatments.

Lay-by/Over-the-top applications provide control of listed species through contact and residual control (depending on weed species). Combining this product with a surfactant may improve control of listed species, but may also increase the risk of crop injury.

Applicators must be aware that certain crops will react differently to treatment with **Tigris Sulfen 4 SC** according to the following factors:

- Use rate
- Specific crop species sensitivity
- Soil composition

Once a treatment with **Tigris Sulfen 4 SC** has been made, seedlings and germinating seeds absorb sulfentrazone from the soil solution. The amount of available active ingredient contained in the soil solution, is determined by the following factors:

- Soil type
- Soil pH

Soil organic matter content

Sulfentrazone is adsorbed by the organic matter and clay parts of soils. This absorption reduces the amount of active ingredient available for weed uptake. Clay content in soil tends to increase as the soil gets finer. Crop Use Directions are indicated per soil types. Refer to the following chart to determine the category of a particular soil type:

Coarse Soil	Sand
	Loamy Sand
	Sandy Loam
Medium Soil	Sandy Clay Loam
	Sandy Clay
	Loam
	Silt Loam
	Silt
Fine Soil	Silty Clay Loam
	Silty Clay
	Clay Loam
	Clay

The organic matter soil will vary widely within soil classifications. In order to assess organic matter soil content, a detailed analysis will be required.

The amount of sulfentrazone available for uptake by weed species will increase as the pH of the soil increases. The pH of the soil must be accurately assessed using representative soil samples. In addition, irrigation with water with a high pH (i.e., alkaline water) following treatment, will increase the amount of available sulfentrazone for uptake by target species. However, if irrigation water pH exceeds 7.5, crop damage may result. The likelihood of an adverse response by crops will decrease as the growth stage of crops advances.

The use rate of this product will be determined by the following factors:

- Timing of treatment
- The amount of activating moisture (rainfall/irrigation)
- Soil parameters
- Soil pH

The Crop Specific Use Directions (below) for each crop, are based on:

- Soil type
- Soil organic matter
- Soil pH interactions

The performance of **Tigris Sulfen 4 SC** and crop tolerance is based on strictly following the Crop Specific Use Directions.

## CALIFORNIA ONLY SPECIFIC RESTRICTIONS ON APPLICATIONS OF TIGRIS SULFEN 4 SC

**Runoff Ground Water Protection Areas.** Do not use in areas identified by the California Department of Pesticide Regulation as runoff ground water protection areas\* unless one of the following management practices can be met:

- a) Soil disturbance. Within seven days before this product is applied, the soil to be treated shall be disturbed by using a disc, narrow, rotary tiller, or other mechanical method. This subsection does not apply to the area to be treated that is immediately adjacent to the crop row and that does not exceed 33 percent of the distance between crop row or in citrus, to the band from the tree row to the dripline; or
- b) Incorporation of the pesticide. Within 48 hours after the day this product is applied, the pesticide shall be incorporated on at least 90 percent of the area treated; using a disc, harrow, rotary tiller, or other mechanical method, or by sprinkler or low flow irrigation, including chemigation where allowed by the label, using a minimum of ¼ inch of irrigation water and a maximum of one inch as described under Application Instructions, at application rates that do not cause surface water runoff from the treated property or to wells on the treated property; or
- c) Band treatment: This product is applied as band treatment immediately adjacent to the crop row so that not more than 33 percent of the distance between rows is treated, or, in citrus, not more than the area from the tree row to the dripline is treated; or
- d) Timing of application. This product is applied between April 1st and July 31st; or
- e) Retention of runoff on field. For six months following the application, the field shall be designed, by berms, levees, or nondraining circulation systems, to retain all irrigation runoff and all precipitation on, and drainage through, the field. The retention area on the field shall not have a percolation rate of more than 0.2 inch per hour (5 inches per 24 hours); or
- f) Retention of runoff in a holding area off the field. For six months following application, all runoff shall be channeled to a holding area off the application site, under the control of the property owner, that is designed to retain all irrigation runoff and all precipitation on, and drainage through, the treated field and all other areas draining onto that holding area. The holding area shall not have a percolation rate of more than 0.2 inch per hour (5 inches per 24 hours); or
- g) Runoff onto a fallow field. For six months following application, runoff shall be managed so that it runs off onto an adjacent unenclosed fallow field at least 300 feet long that is not irrigated for six months after application with the exception of the

addition of adequate moisture that is required for herbicidal activation following application as described under Application Instructions, with full consideration of any plant back restrictions.

Leaching Ground Water Protection Areas. Do not use in areas designated by the California Department of Pesticide Regulation as leaching ground water protection areas\* unless either (a) the user does not apply any irrigation water for six months following the application of this product, or (b) the user applies this product to the planting bed or the berm above the level of irrigation water in the furrow or basin and the water level shall remain at or below that level for six months following application of the pesticide with the exception of the addition of adequate moisture that is required for herbicidal activation following application as described under Application Instructions, or (c) irrigation is managed so that the ratio of the amount of irrigation water applied divided by the net irrigation requirement is 1.25 or less for six months following application of this product.

\*Consult with your County Agricultural Commissioner to determine whether the application will be within an area designated by the California Department of Pesticide Regulation as either a Runoff Ground Water Protection Area or a Leaching Ground Water Protection Area. Details regarding the locations of these Areas are also available via the internet at http://www.cdpr.ca.gov/docs/emon/ehap.htm

#### **Chemigation Application**

Tigris Sulfen 4 SC may be applied through sprinkler irrigation systems including center pivot, lateral move, end tow, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect any irrigation system (including greenhouse systems) used for pesticide application to a public water system. Crop injury, lack of effectiveness or illegal residues on or in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must also 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 systems either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

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

**Tigris Sulfen 4 SC** should be metered into the irrigation system continuously for the duration of the water application. **Tigris Sulfen 4 SC** should be diluted in sufficient volume to ensure accurate application over the area to be treated. Use the appropriate amount of water to carry the product to the soil surface. Continuous agitation is required to maintain product suspension in the solution tank. A jar test should be conducted to ensure that phase separation would not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable weed control. Flush the lines at the completion of the application and then turn the water off promptly.

When using water from public water systems; DO NOT APPLY **TIGRIS SULFEN 4 SC** THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED 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 of the year. **Tigris Sulfen 4 SC** may be applied through irrigation systems, which may be supplied by a public water system only if water from the water system is discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Crop response to treatment with Tigris Sulfen 4 SC will depend on the following factors:

- Application rate and timing
- Volume of water applied and pH
- Sensitivity of crop type to treatment with Tigris Sulfen 4 SC
- Growth stage of the crop when irrigated

The amount of sulfentrazone available for uptake by weed species will increase as the pH of the soil increases. The pH of the soil must be accurately assessed using representative soil samples. In addition, irrigation with water with a high pH (i.e., alkaline water) following treatment, will increase the amount of available sulfentrazone for uptake by target species. However, if irrigation water pH exceeds 7.5, crop damage may result. The likelihood of an adverse response by crops will decrease as the growth stage of crops advances.

## **Application in Combination with Dry Fertilizers**

- Tigris Sulfen 4 SC may impregnated on and applied in conjunction with a dry bulk fertilizer.
- Only apply, combinations of this product and dry fertilizer with ground equipment.
- Do not apply via aerial application.

• Applicators using dry fertilizer must follow State regulations on the preparation of the **Tigris Sulfen 4 SC**/fertilizer combination, including mixture preparation, storage, transportation, selling and treatment.

## **Directions for Dry Fertilizer Impregnation:**

- 1. Use the following method for impregnation:
  - 1. Ensure that spray nozzles are calibrated and positioned for uniform **Tigris Sulfen 4 SC** coverage of the dry fertilizer during the mixture process.
  - 2. Make a slurry with **Tigris Sulfen 4 SC** and water in a clean container.
  - 3. Once made, add the Tigris Sulfen 4 SC/water slurry to the impregnation spray tank.
  - 4. Finish the solution by adding water as required.
- 2. For impregnation and application of **Tigris Sulfen 4 SC** and dry fertilizer, use a dry bulk fertilizer blender such as a closed rotary-drum mixer that is fitted with appropriate spray application equipment.
- 3. See the **Cleaning Application Equipment** section (below) prior to cleaning equipment used for impregnation, transportation, loading and application of the **Tigris Sulfen 4 SC**/dry fertilizer combination.
- 4. DO NOT attempt to impregnate coated ammonium nitrate or limestone with **Tigris Sulfen 4 SC** as neither can absorb the herbicide.

#### Application instructions for **Tigris Sulfen 4 SC** impregnated dry fertilizers:

- Dry fertilizer impregnated with **Tigris Sulfen 4 SC** must be applied using a dry fertilizer spreader. The application equipment must be correctly calibrated for sufficient and uniform coverage of the soil surface. If treatment is not uniform, some areas may go untreated which may cause reduced control of target species.
- Avoid overlapping applications, which may cause labeled use rates to be exceeded, and may cause adverse crop response.
- Apply the dry fertilizer/**Tigris Sulfen 4 SC** combination at a rate of at least 200 pounds of impregnated dry bulk fertilizer per acre in order to provide sufficient soil coverage.
  - o See the appropriate crop specific section of this label for the use rate of Tigris Sulfen 4 SC per acre.
  - Next, use the following equation to calculate the amount of Tigris Sulfen 4 SC that must be used to impregnate 2,000 pounds (one ton) of dry bulk fertilizer.

### Fl. oz. of Tigris Sulfen 4 SC to be

applied per ton of Dry Bulk Fertilizer = fl. oz. of **Tigris Sulfen 4 SC** per acre X 2,000 + lbs. dry bulk fertilizer applied per acre

Example 1: If use rate of Tigris Sulfen 4 SC is 8 fl. oz. per acre, and 200 lbs. fertilizer will be applied per acre:

(8) (2000 / 200) = 80 fl. oz. Tigris Sulfen 4 SC per ton of dry bulk fertilizer

Example 2: If use rate of Tigris Sulfen 4 SC is 12 fl. oz. per acre and 400 lbs. fertilizer will be applied per acre:

(12) (2000 / 400) = 60 fl. oz. Tigris Sulfen 4 SC per ton of dry bulk fertilizer

## **Application in Combination with Liquid Fertilizers**

- Tigris Sulfen 4 SC, when applied in combination with a liquid fertilizer will provide control of listed weeds.
- Sufficient soil coverage is crucial for control of target species.
- Fertilizer solutions that may be used as a carrier for **Tigris Sulfen 4 SC** may be concentrate formulations as blended or diluted in water.

#### **Directions for Liquid Fertilizer Combination:**

- The selected spray system must have the spray capacity to allow uniform application of the treatment solution, and must be capable of maintaining agitation in the spray tank throughout the mixture and application procedures.
- Some spray application systems might need separate pumps to apply the solution and maintain agitation at the same time.
- Prior to combining the liquid fertilizer and Tigris Sulfen 4 SC in the application tank, carry out a compatibility test to ensure that
  the mixture is stable, homogenous and compatible [In a lidded glass jar (~1 quart size), add all mix partners, in their relative
  proportions. Invert, shake or mix the jar thoroughly. If mixture forms precipitates (flakes or sludge), gels, balls up or forms oily
  films or layers, this indicates incompatibility. Though signs of incompatibility will typically be seen within 5 minutes of mixing,
  mixture should be observed for approximately 30 minutes].

## Combine Tigris Sulfen 4 SC and the carrier liquid fertilizer as follows:

- 1. Fill a clean spray tank ½ full of fertilizer solution.
- 2. Begin agitation of the fertilizer solution.
- 3. Use a clean container to create a slurry of Tigris Sulfen 4 SC and water (equal parts of both)\*.
- 4. Add the slurry slowly to the spray tank, continuing agitation throughout.
- 5. Rinse the slurry mix container and add rinsate solution to spray tank.
- 6. Finish filling spray tank to required level.
- 7. Maintain agitation throughout. The **Tigris Sulfen 4 SC**/water slurry must be mixed thoroughly prior to application.

  \*For best mixing of the **Tigris Sulfen 4 SC**/water slurry, add the slurry using induction systems on the sprayer fill plumbing system.
- Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

## Application instructions for Tigris Sulfen 4 SC mixed with liquid fertilizers:

• The spray application solution must be applied immediately following preparation.

- Maintain agitation throughout mixture and application.
- Do not store spray solution in the spray tank for an extended period of time, or overnight.
- A combination of Tigris Sulfen 4 SC and liquid fertilizer must not be premixed in nurse tanks.
- Applicators/sellers of liquid fertilizer must follow State regulations for liquid fertilizers, including those regarding preparation, blending, registration, transportation, selling, treatment and storage.

## **Band Treatment Applications**

**Tigris Sulfen 4 SC** can be applied as a banded treatment application. When calculating rates for band treatment, apply the equivalent volume per acre rate for broadcast treatment by using the following equation:

Band Rate or Volume = Broadcast Rate (fl. oz./acre) or Volume per Acre X Band Width (in Inches) + Row Width (in (Inches)

## **Mixing and Loading Instructions**

- Tigris Sulfen 4 SC may be applied on its own or in combination with other herbicides for a broader spectrum of weed control. Combinations with other products may not have been tested, therefore, carry out a compatibility test before mixing and applying [In a lidded glass jar (~1 quart size), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly. If mixture forms precipitates (flakes or sludge), gels, bails up or forms oily films or layers, this indicates incompatibility. Though signs of incompatibility will typically be seen within 5 minutes of mixing, mixture should be observed for approximately 30 minutes].
- Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- Spray equipment must be clean and free of product residue prior to mixing an application solution of **Tigris Sulfen 4 SC**. Refer to the **Cleaning Application Equipment** section below and to the cleaning directions of the product(s) previously applied.
- Mix Tigris Sulfen 4 SC using the following procedure:
  - 1. Fill a clean spray tank with ½ of Water required for treatment.
  - 2. Begin agitation.
  - 3. Use a clean container to create a slurry of Tigris Sulfen 4 SC and water\*.
  - 4. Add the slurry slowly to the spray tank, continuing agitation throughout.
  - 5. Rinse the slurry mix container and add rinsate solution to spray tank.
  - 6. Finish filling spray tank to required level.
  - 7. Maintain agitation throughout. The **Tigris Sulfen 4 SC**/water slurry must be mixed thoroughly prior to application.
    - \* For best mixing of the **Tigris Sulfen 4 SC**/water slurry, add the slurry using induction systems on the sprayer fill plumbing system.
- The spray application solution must be applied immediately following mixture.
- Maintain agitation throughout mixture and application.
- Do not store spray solution in the spray tank for an extended period of time, or overnight.
- A tank mixture containing Tigris Sulfen 4 SC must not be premixed in nurse tanks.

## **Cleaning Application Equipment**

Adverse crop reaction may result if residues of this product are left in spray equipment following application. Spray equipment must be cleaned immediately after treatment with **Tigris Sulfen 4 SC**, and before applications with other products.

- Use the following procedure:
  - 1. Drain the spray application equipment, including tank, hoses, spray boom and nozzles.
  - 2. Clean inside the spray tank with a high-pressure detergent, removing residues and sediment.
  - 3. Thoroughly rinse the spray tank.
  - 4. Flush the spray system out using water, including hoses, spray boom and spray nozzles.
  - 5. Combine 3 gallons of ammonia (with a minimum of 3% active ingredient) in 100 gallons of water. Make sufficient cleaning solution to operate the spray application equipment for a minimum of 15 minutes so that the system is thoroughly flushed.
  - 6. Remove spray tips, and all screens and filters and clean separately using the ammonia solution (step 5).
  - 7. Leave the cleaning solution or water in the nozzles, spray booms, hoses, and spray tank overnight (or during storage) to ensure thorough cleaning.
  - 8. Drain the system completely prior to re-use. Use clean water to rinse/flush nozzles, spray booms, hoses, and the spray tank. Remove spray tips, and all screens and filters and clean separately using the ammonia solution (step 5).
  - 9. Dispose of rinsate and excess cleaning solution in compliance with Federal, State, and local regulations and guidelines.
- Rinsate and cleaning solution must not be applied to sensitive crops.
- Spray application equipment must not be stored for any extended period while **Tigris Sulfen 4 SC** application solution remains in the spray lines, nozzles, strainers, or boom plumbing.
- When application equipment has been idle or in storage, flush the nozzles and spray boom with clean water prior to use for application of product.
- If small amounts of this product remain in equipment after cleaning, **Tigris Sulfen 4 SC** may be released during later applications, which may cause an adverse reaction from certain crops/other vegetation. The applicator is solely responsible for any damage caused by equipment that is not properly cleaned.
- Equipment must not be flushed or drained near desirable plants/trees.
- Ensure that bodies of water are not contaminated with application solution, rinsate or cleaning solution, including water that may be used for other crops, i.e., irrigation water.

#### MANDATORY SPRAY DRIFT MANAGEMENT

## **Ground Application:**

- For boom spraying, the maximum release height must be 30 inches from the soil.
- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- When sulfentrazone is tank mixed with a contact burndown herbicide, use a minimum spray volume of 15 gallons per acre.
- Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE\* standard S-572.
- Select coarse to very coarse droplet size when sulfentrazone is used as a preemergent/preplant application.
- Select medium to very coarse droplet size when sulfentrazone is used postemergence with a contact burndown herbicide.
- Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE\* standard).
- Applicators may spray only when wind speed is between 3 and 10 mph.

#### **Aerial Application:**

- Aerial application is allowed only when environmental conditions prohibit ground application.
- When this product is allowed to be applied by air, applicator must use a minimum finished spray volume of 5 gallons per acre.
- The maximum release height must be 10 feet from the top of the crop canopy, unless a greater application height is required for pilot safety.
- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE\* standard S-572.
- Select coarse to very coarse droplet size when sulfentrazone is used as a preemergent/preplant application.
- Select medium to very coarse droplet size when sulfentrazone is used postemergence with a contact burndown herbicide.
- Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE\* standard).
- Applicators may spray only when wind speed is between 3 and 10 mph.
- For Non-Crop use, application can be made by helicopter to railroad rights-of-way only.

\*ASABE – American Society for Agricultural and Biological Engineers.

The following drift management requirements must be followed to avoid off target movement from aerial applications. These requirements do not apply to forestry applications, public health uses or to applications of dry materials.

- 1. The distance of the outermost nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
- 2. Nozzles must always point backward, parallel with the air stream, and never be pointed downwards more than 45 degrees.
- 3. Observe the regulations of the State where applications are made.

#### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMETAL CONDITIONS.

## **Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage for pesticide performance. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions. (See information on Wind, Temperature and Humidity, and Temperature Inversions in subsequent sections).

## **Controlling Spray Droplet Size**

**Volume** – Use high flow rate nozzles to apply the greatest practical spray volume. Nozzles with higher rated flow generally produce larger droplets.

**Pressure** - When higher flow rates are needed, use higher flow rate nozzles rather than increasing spray pressure. Do not exceed the nozzle manufacturer's recommended pressures. Lower pressure produces larger droplets in many types of nozzles.

Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation** – For aerial application, the required practice is to orient nozzles so that the spray is released parallel to the airstream. This orientation usually produces larger droplets as compared to other nozzle orientations. Significant nozzle deflection from horizontal will reduce droplet size and increase drift potential.

**Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles for both ground and aerial applications. Solid stream nozzles oriented straight back usually produce the largest droplets and the lowest drift potential in aerial applications.

**Boom Length** – For some aerial use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height - Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment** – When aerial applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by the path of the aircraft upwind. Swath adjustment or offset distance should increase when conditions favor increased drift potential (higher winds, smaller droplets, etc.).

**Wind** – Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they may potentially affect spray drift.

**Temperature and Humidity** – When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions – Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the low speed and variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common during conditions of limited cloud cover and little to no wind. They often begin to form as the sun sets and may often continue into the morning. The presence of a temperature inversion may be indicated by ground fog. However, if fog is not present, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversions. Smoke that remains in layers and moves laterally in a concentrated cloud (under low speed wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## **REPLANTING AND ROTATIONAL CROPS**

- · During replanting, keep soil tillage to a minimum so that the herbicide barrier is preserved, thereby maximizing weed control.
- In the event-that the-planting of crops listed in label directions does not produce a stand, only crops specified in this label or the tank mix partner may be planted. Where there is a tank mixture, the most restrictive label directions must be followed.
- The planted area must not be retreated with **Tigris Sulfen 4 SC** or any other-product containing sulfentrazone.
- Do not plant crops in previously treated areas unless in full compliance with the Rotational Restrictions (below).

**Crop Rotation:** Refer to the table below for the minimum interval from the time **Tigris Sulfen 4 SC** was last applied until treated areas can be replanted with listed crops.

Стор	Minimum Rotational Interval
Barley	
Rye	4 months
Triticale	4 months
Wheat	
Corn, Field	
Rice	10 months
Sorghum <sup>1</sup>	
Alfalfa	
Cereal Grains (Buckwheat, Oats, Pearl Millet, Proso Millet, Teosinte, Wild Rice)	12 months
Sweet Potatoes	
Corn, Pop	
Corn, Sweet	18 months
Cotton	
Canola	24 months
Asparagus	
Berries	
Brassica, Head and Stem (Broccoli and Cabbage)	
Brassica, Leafy Greens	
Citrus	Crops can be planted at any
Cowpea, Succulent (TN Only)	point following the application of <b>Tigris</b>
Dry Shell Peas and Beans	Sulfen 4 SC.
Flax	Juneil 4 Je.
Fruiting Vegetables (except Cucurbits), Okra	
Grapes	
Horseradish	
Lima Beans, Succulent (TN Only)	

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Melons	
Mint	
Peanuts	
Potatoes	
Rhubarb	
Soybeans	
Strawberry	
Succulent Peas	
Sugarcane	
Sunflower Subgroup 20B	
Tobacco	
Tree Nuts	
Turf	
Turnips	
Wheat, Spring (Pacific Northwest states ID, OR, WA only)	

- Certain crops have a rotational interval of more than 12 months because of sensitivity and the risk of crop injury. Carry out a representative bioassay of the target area on the rotational crop in order to assess the crop's sensitivity to applications of this product.
- For all crops not listed in the table above, there must be a minimum rotational interval of 12 months.
- 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.

#### **LISTED WEED SPECIES**

When applied in accordance with these label directions (alone or in a tank mixture), Tigris Sulfen 4 SC will provide control of the following weed species (refer to crop specific section for more details):

Amaranth, Palmer (Amaranthus palmeri) Amaranth, Powell (Amaranthus Powell II) Amaranth, spiny (Amaranthus spinosus) Amaranth, spleen (Amaranthus dubius) Anoda, spurred (Anoda cristata) Bedstraw, catchweed (Galium aparine) Carpetweed (Mollugo verticillata) Chickweed, common (Stellaria media) Copperleaf, hophornbeam (Acalypha ostryifolia) Copperleaf, Virginia (Acalypha virginica) Crabgrass, large (Digitaria sanguinalis) Crabgrass, smooth (Digitaria ischaemum) Crabgrass, Southern (Digitaria ciliaris) Croton, tropic (Croton glandulosus) Crownbeard, golden (Verbesina encelioides) Cupgrass, wooly (Eriochloa villosa) Cyperus, hedgehog (Cyperus compressus) Daisy, American (Eclipta alba) Devilsclaw (Proboscidea Louisianica) Dock, curly (Rumex crispus) Eclipta (Eclipta prostrate) Filaree, redstem (Erodium cicutarium) Flixweed (Descurainia sophia) Galinsoga, hairy (Galinsoga ciliate) Goosegrass (Eleusine indica) Groundcherry, cutleaf (Physalis angulate) Kochia (ALS- and Triazine-Resistant) (Kochia scoparia)

Amaranth, livid (Amaranthus lividus)

Groundcherry, clammy (seedling) (Physalis heterophylla) Jimsonweed (Datura stramonium) Ladysthumb (Polygonum persicaria) Lambsquarters, common (Chenopodium album) Lettuce, miners (Montia perfoliata) Mallow, common (Malva neglecta wall r.) Mayweed, Chamomile (Anthemis cotula I.) Milkweed, honeyvine (Ampelamus albidus) Morningglory, entireleaf (Ipomoea hederacea integriuscula) Morningglory, ivyleaf (Ipomoea hederacea hederacea) Morningglory, palmleaf (Ipomoea wrightii)

Morningglory, purple (Ipomoea turbinate) Morningglory, red (Ipomoea, coccinea L) Morningglory, scarlet (Ipomoea coccinea)

Morningglory, smallflower (Jacquemontia tamnifolia)

Morningglory, tall (Ipomoea purpurea) Mustard, tumble (Sisymbrium altissimum) Nightshade, black (Solanum nigrum)

Nightshade, Eastern black (Solanum ptycanthum)

Nutsedge, purple (Cyperus rotundus) Nutsedge, yellow (Cyperus esculentus) Orchardgrass (Dactylis glomerata) Panicum, fall (Panicum dichotomiflorum) Pigweed, redroot (Amaranthus retroflexus) Pigweed, smooth (Amaranthus hybridus) Plantain, blackseed (Plantago rugelii decne) Plantain, narrow-leaved (Plantago lanceolata)

Poorjoe (Diodia feres)

Porophyllum (Porophyllum ruderale) Poinsettia, wild (Euphorbia heterophylla) Purslane, common (Portulaca oleracea)

Redmaids (Calandrinia ciliate) Redweed (Melochia corchorifolia)

Sedge annual (Carex spp.)

Senna, coffee (Cassia occidentalis) Shepherd's purse (Capsella bursa-pastoris)

Sida, prickly (Sida spinosa) Sida, Southern (Sida acuta)

Signalgrass, broadleaf (Brachiaria platyphylla)

Smartweed, PA (seedling) (Polygonum pensylvanicum)

Smellmellon (Cucumis melo)

Starbur, bristly (Acanthospermum hispidum)

Stinkgrass (Eragrostis cilianensis) Toadflax, yellow (Linaria vulgaris) Tassleflower, red (Emilio sonchifolia)

Thistle, Russian (Salsola kali)

Waterhemp, common (Amaranthus rudis) Waterhemp, tall (Amaranthus tuberculatus) Waterprimrose, winged (Ludwigia decurrens)

Witchgrass (Panicum capillare)

 $<sup>^1</sup>$ 18-month minimum rotational interval for sorghum where use rates are greater than 8 fl. oz. of **Tigris Sulfen 4 SC** per acre.

## ASPARAGUS[\*]

**Tigris Sulfen 4 SC** can be applied pre-emergence in the spring, prior to weed and crop emergence. Apply to asparagus crowns that have been established for at least one year.

When applied as indicated on this label, the following weeds in asparagus will be controlled with Tigris Sulfen 4 SC:

Amaranth, Palmer Galinsoga, hairy Lambsquarters, common

Morningglory, ivyleaf Nightshade, Eastern black Nutsedge, yellow

Pigweed (redroot, smooth)

See **LISTED WEED SPECIES** section of this label for information on additional weeds.

[\*Not for Use in California]

## **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 4.5 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 6.0 8.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 8.0 10.1 fl. oz. Tigris Sulfen 4 SC per acre

#### For Medium-Textured Soils

- Less than 1.5% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 8.0 10.1 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 10.1 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Fine-Textured Soils

- Less than 1.5% OM, apply 8.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5%to3.0% OM, apply 10.1 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to the soil in the spring, before crop or weeds have emerged. Apply product in 10 to 40 gallons of finished spray per acre.

#### **Tank Mixes**

For control of a broader spectrum of weeds or pests, **Tigris Sulfen 4 SC** can be mixed with other pesticides registered for use on asparagus. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

## **Precautions**

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of asparagus.

#### Restrictions

- This product may only be used to control Amaranth, Palmer; Galinsoga, hairy; Lambsquarters, common; Morningglory, ivyleaf; Nightshade, Eastern black; Nutsedge, yellow; Pigweed (redroot, smooth).
- The maximum single application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Pre-harvest interval (PHI) is 14 days.
- Do not make more than one Tigris Sulfen
   4 SC application in a 12-month period.
   The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').

## BRASSICA, HEAD AND STEM[\*]

(Broccoli, Chinese broccoli, brussels sprouts, Chinese (napa) cabbage, Chinese mustard, cauliflower, cavalo broccoli, kohlrabi)

To control susceptible weeds, **Tigris Sulfen 4 SC** can be applied to head and stem brassica at the following times: In the fall (pre-plant), before spring growing season.

In the spring (early pre-plant, pre-plant incorporated, pre-emergence).

When applied as indicated on this label, the following weeds in head and stem brassica will be controlled with Tigris Sulfen 4 SC:

Galinsoga, hairy Lambsquarters, common Pigweed, redroot Waterhemp (common, tall)

See **LISTED WEED SPECIES** section of this label for information on additional weeds. [\*Not for Use in California]

## **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 3.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.0 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 9.0 fl. oz. Tigris Sulfen 4 SC per acre

## For Medium-Textured Soils

- Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 6.0 9.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Fine-Textured Soils

- Less than 1.5% OM, apply 3.0 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 6.0 9.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 12.0 fl. oz. **Tigris Sulfen 4 SC** per acre

## Precautions

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of head and stem brassica.

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to stubble or to the soil surface, in the fall, or in the spring up to 72 hours before transplanting. Unless applying pre-plant incorporated, do not incorporate the product into the soil after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur. If applying this product pre-plant incorporated in the spring, prior to transplantation, mix thoroughly or shallowly incorporate the **Tigris Sulfen 4 SC** into the soil. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.

Moisture (in the form of rain or snow) after application will activate and move the product into the soil. To prevent runoff of **Tigris Sulfen 4 SC** from snowmelt or rain, do not apply **Tigris Sulfen 4 SC** to soils that are frozen or have an existing snow cover.

## **Tank Mixes**

**Tigris Sulfen 4 SC** can be split applied or mixed with burndown herbicides or residual soil herbicides labeled for use on head and stem brassica to control emerged weeds or broaden the herbicide control spectrum. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### Restrictions

- This product may only be used to control Galinsoga, hairy; Lambsquarters, common; Pigweed, redroot; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than five Tigris Sulfen 4 SC applications in a 12-month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Product is not to be incorporated any deeper than 2 inches.

## BRASSICA, LEAFY GREENS[\*]

(Broccoli raab, Chinese (bok choy) cabbage, collards, kale, mizuna, mustard greens, mustard spinach, rape greens)

To control susceptible weeds, **Tigris Sulfen 4 SC** can be applied to brassica, leafy greens at the following times: In the fall (pre-plant), before spring growing season.

In the spring (early pre-plant, pre-plant incorporated, pre-emergence).

When applied as indicated on this label, the following weeds in brassica, leafy greens will be controlled with Tigris Sulfen 4 SC:

Galinsoga, hairy Lambsquarters, common Pigweed, redroot Waterhemp (common, tall)

See **LISTED WEED SPECIES** section of this label for information on additional weeds.

[\*Not for Use in California]

## **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 3.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.0 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 6.4 fl. oz. Tigris Sulfen 4 SC per acre

## For Medium-Textured Soils

- Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 6.0 6.4 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 6.4 fl. oz. Tigris Sulfen 4 SC per acre

#### For Fine-Textured Soils

- Less than 1.5% OM, apply 3.0 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 6.0 6.4 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 6.0 6.4 fl. oz. Tigris Sulfen 4 SC per acre

## OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to stubble or to the soil surface, in the fall, or in the spring up to 72 hours before transplanting. Unless applying pre-plant incorporated, do not incorporate the product into the soil after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur. If applying this product pre-plant incorporated in the spring, prior to transplantation, mix thoroughly or shallowly incorporate the **Tigris Sulfen 4 SC** into the soil. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.

Moisture (in the form of rain or snow) after application will activate and move the product into the soil. To prevent runoff of **Tigris Sulfen 4 SC** from snowmelt or rain, do not apply **Tigris Sulfen 4 SC** to soils that are frozen or have an existing snow cover.

#### **Precautions**

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of brassica, leafy greens.

## Restrictions

- This product may only be used to control Galinsoga, hairy; Lambsquarters, common; Pigweed, redroot; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 6.4 fl. oz./A, the equivalent of 0.2 lb. a.i./A.
- The maximum annual application rate for **Tigris Sulfen 4 SC** is 6.4 fl. oz./A, the equivalent of 0.2 lb. a.i./A.
- Do not make more than two Tigris Sulfen 4 SC applications in a 12-month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Product is not to be incorporated any deeper than 2 inches.

## **Tank Mixes**

**Tigris Sulfen 4 SC** can be split-applied or mixed with burndown herbicides or residual soil herbicides labeled for use on brassica, leafy greens to control emerged weeds or broaden the herbicide control spectrum. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

## CABBAGE (Transplanted only)[\*]

To control susceptible weeds, **Tigris Sulfen 4 SC** can be applied cabbage (transplanted only) at the following times: In the fall (pre-plant), before spring growing season.

In the spring (early pre-plant, pre-plant incorporated, pre-emergence).

When applying early pre-plant to cabbage, the product may be applied only in CO,ID, MI, MN, MT, NE, ND, OR, SD, WA, WI, WY.

When applied as indicated on this label, the following weeds in cabbage will be controlled with Tigris Sulfen 4 SC:

Galinsoga, hairy Lambsquarters, common Pigweed, redroot Waterhemp (common, tall)

See LISTED WEED SPECIES section of this label for information on additional weeds.

[\*Not for Use in California]

#### **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 3.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.0 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 9.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Medium-Textured Soils

- Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 6.0 9.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Fine-Textured Soils

- Less than 1.5% OM, apply 3.0 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 6.0 9.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to stubble or to the soil surface, in the fall, or in the spring from 60 days prior to planting or transplanting up to 72 hours after transplant. Unless applying pre-plant incorporated, do not incorporate the product into the soil after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur.

If applying pre-emergence, applications before transplant can be broadcast or banded. Pre-emergence applications up to 72 hours after transplant should be a banded treatment in the row middles.

If applying this product pre-plant incorporated in the spring, prior to transplantation, mix thoroughly or shallowly incorporate the **Tigris Sulfen 4 SC** into the soil. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.

Moisture (in the form of rain or snow) after application will activate and move the product into the soil. To prevent runoff of **Tigris Sulfen 4 SC** from snowmelt or rain, do not apply **Tigris Sulfen 4 SC** to soils that are frozen or have an existing snow cover.

#### **Tank Mixes**

**Tigris Sulfen 4 SC** can be split-applied or mixed with burndown herbicides or residual soil herbicides labeled for use on cabbage to control emerged weeds or broaden the herbicide control spectrum. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

## **Precautions**

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of brassica, leafy greens.

#### Restrictions

- This product may only be used to control Galinsoga, hairy; Lambsquarters, common; Pigweed, redroot; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than five Tigris Sulfen 4 SC applications in a 12month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Product is not to be incorporated any deeper than 2 inches.

## CORN (Field Corn, Seed Corn, Popcorn)[\*] For use only with Varieties resistant to PRO Herbicides.

To control susceptible broadleaves, grasses and sedges in corn, **Tigris Sulfen 4 SC** can be applied to corn at the following times: In the fall (pre-plant), before spring planting of corn.

In the spring (early pre-plant, pre-plant incorporated or post-emergence) prior to planting.

[\*Not for Use in California]

**Application Rates**For Coarse-Textured Soils

Precautions

- Up to 3.0 % OM, apply 3.0 4.5 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 3.75 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre For Medium-Textured Soils
  - Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.75 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 4.5 to 6.75 fl. oz. Tigris Sulfen 4 SC per acre

#### For Fine-Textured Soils

- Less than 1.5% OM, apply 3.75 5.25 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 4.5 6.75 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

#### **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to stubble or to the soil surface, in the fall or in the spring 45 days prior to planting up to 3 days after planting (if seed furrow is closed completely and seedlings have not broken the soil surface), using a broadcast or banded soil application. **Tigris Sulfen 4 SC** can be applied in conventional, conservation, reduced or no tillage cropping systems. For application in the fall or up to 14 day prior to planting in the spring, use the mid to higher rate range for your soil type, because of the extended time period between application and planting.

If applying this product pre-plant incorporated in the spring, mix thoroughly or shallowly incorporate the **Tigris Sulfen 4 SC** into the soil using a field cultivator, disk harrower, field finisher or other correctly adjusted incorporation tool. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.

Moisture (in the form of rain or snow) should occur after application to move the product into the soil. If dry conditions persist, a shallow incorporation may be needed.

For maximum weed control, disturb the soil surface as little as possible after application. Minimize soil disturbance when planting into soil that has been treated with **Tigris Sulfen 4 SC**. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur. To prevent runoff of **Tigris Sulfen 4 SC** from snowmelt or rain, do not apply **Tigris Sulfen 4 SC** to soils that are frozen or have an existing snow cover.

More effective season-long control of existing weeds that are difficult to control or late emerging weeds can be obtained by applying **Tigris Sulfen 4 SC** in a split or sequential application.

### **Tank Mixes**

**Tigris Sulfen 4 SC** can be mixed with burndown herbicides or residual soil herbicides to control emerged weeds. **Tigris Sulfen 4 SC** can be mixed with insecticides including insecticides that contain the active ingredients (Mustang Max or Capture EC) to control cutworms, armyworms, or other insect pests. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of brassica, leafy greens.
- To prevent runoff of Tigris Sulfen
   4 SC from snowmelt or rain, do not apply Tigris Sulfen
   4 SC to soils that are frozen or have an existing snow cover.

#### Restrictions

- This product may only be used to control broadleaves, grasses and sedges.
- The maximum single application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- Do not make more than four Tigris Sulfen 4 SC applications in a 12-month period. The 12-month period starts at the point of first application.
- To prevent runoff of Tigris Sulfen
   4 SC from snowmelt or rain, do not apply Tigris Sulfen
   4 SC to soils that are frozen or have an existing snow cover.

## DRY SHELLED BEANS AND PEAS[\*]

(Dried cultivars of bean (*Lupinus*); bean (*Phaseolus*) (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean (Vigna) (includes adzuki bean, blackeyed pea, catjang, cowpea, crowder pea moth bean, lentil, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lab lab bean; pea (*Pisum*) (includes field pea) and pigeon pea

To control susceptible weeds, **Tigris Sulfen 4 SC** can be applied to dry shelled beans at the following times: In the fall (pre-plant), before spring growing season (only in CO,ID, KS, MI, MN, MT, NE, ND, OR, SD, WA, WI, WY). In the spring (early pre-plant, pre-plant incorporated, pre-emergence).

When applied as indicated on this label, the following weeds in dry shelled beans and peas will be controlled with **Tigris Sulfen 4 SC**:

Amaranth, Palmer Kochia (ALS- and Triazone-Resistant) Morningglory (ivyleaf, tall) Pigweed (redroot, smooth) Thistle, Russian Filaree, redstem Lambsquarters, common Nightshade, Eastern black Sida, prickly Waterhemp (common, tall)

See **LISTED WEED SPECIES** section of this label for information on additional weeds. [\*Not for Use in California]

Application Rates

For Coarse-Textured Soils

• Less than 1.5% OM, apply 2.25 - 3.0 fl. oz. Tigris Sulfen 4 SC per acre

**Precautions** 

• Reduce rate of **Tigris Sulfen 4 SC** on coarse-textured soil with organic

- 1.5% to 3.0% OM, apply 3.0 4.5 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 3.75 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre For Medium-Textured Soils
  - Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 3.75 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 4.5 6.75 fl. oz. **Tigris Sulfen 4 SC** per acre For Fine-Textured Soils
  - Less than 1.5% OM, apply 3.0 4.5.fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 4.5 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
  - Greater than 3.0% OM, apply 5.25 8.0 fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to stubble or to the soil surface, in the fall, or in the spring from 60 days prior to planting up to 3 days after planting (if seed furrow is completely closed and if seedlings have not broken the soil furrow).

When applying pre-plant fall applications, do not incorporate the product into the soil after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur. Moisture (in the form of rain or snow) after application will activate and move the product into the soil. To prevent runoff of **Tigris Sulfen 4 SC** from snowmelt or rain, do not apply **Tigris Sulfen 4 SC** to soils that are frozen or have an existing snow cover, product is incorporated deeper than the maximum incorporation depth of 2 inches.

When applying in the spring early pre-plant greater than three weeks prior to planting, use the higher rate listed in Application Rates' for appropriate soil and organic matter type. Wait a minimum of 7 days after application to plant in coarse-textured soils with less than 1.5% organic matter. Moisture (in the form of rain or snow) should occur after application to move the product into the soil. If dry conditions persist, a shallow incorporation may be needed. If applying this product pre-plant incorporated in the spring prior to planting reduced and conventional tillage dry beans and dry peas, mix thoroughly or shallowly incorporate the **Tigris Sulfen 4 SC** into the soil.

#### **Tank Mixes**

**Tigris Sulfen 4 SC** can be split-applied or mixed with burndown herbicides or soil-applied herbicides labeled for use on dry beans and peas to control emerged weeds or broaden the herbicide control spectrum. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

- matter less than 1.5% and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings to minimize adverse crop response.
- Planting less than 1 inch in depth or inadequate seed furrow closure or poor growing conditions (diseases, low temperature, soil compaction, excessive moisture) can also cause adverse crop response.
- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of dry beans and peas.

#### Restrictions

- This product may only be used to control Amaranth, Palmer; Filaree, redstem; Kochia (ALS- and Triazone-Resistant); Lambsquarters, common; Morningglory (ivyleaf, tall); Nightshade, Eastern black; Pigweed (redroot, smooth); Sida, prickly; Thistle, Russian; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- Do not make more than three Tigris Sulfen 4 SC applications in a 12-month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Product is not to be incorporated any deeper than 2 inches.
- If seedlings are close to soil surface or crop has emerged, do not apply Tigris Sulfen 4 SC.
- To prevent runoff of Tigris Sulfen 4 SC from snowmelt or rain, do not apply Tigris Sulfen 4 SC to soils that are frozen or have existing snow cover.

# FALLOW OR POST-HARVEST BURNDOWN[\*] Fall Application (MN, ND, SD, MT, CO, NE, WY, ID, WA, OR, WI, MI) Or Spring Pre-Emerge Application

To control or suppress susceptible weeds, **Tigris Sulfen 4 SC** can be applied at the following times: In the fall, after crop has been harvested.

In the spring, before weeds have emerged.

- Fall applications can be made in the states of MN, ND, SD, MT, CO, NE, WY, ID, OR, WI, or MI.
- Spring application can be made to existing fallow fields of asparagus, cabbage, corn, dry shell peas and beans, horseradish, limas, mint, peanuts, potatoes, soybeans, sugarcane, sunflowers, or tobacco.

When applied as indicated on this label, **Tigris Sulfen 4 SC** will control the following weeds:

Filaree, redstem Kochia (ALS- and Triazine-Resistant) Lambsquarters, common Morningglory (ivyleaf, tall) Nightshade, Eastern black Pigweed (redroot, smooth) Waterhemp (common, tall)

See **LISTED WEED SPECIES** section of this label for information on additional weeds.

[\*Not for Use in California]

#### **Application Rates**

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For Coarse-Textured Soils

- Less than 1.5% OM, apply 3.0 3.75 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0 % OM, apply 3.75 5.25 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 4.5 6.0 fl. oz. Tigris Sulfen 4 SC per acre For Medium-Textured Soils
  - Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 3.75 6.0 fl. oz. Tigris Sulfen 4 SC per acre
  - Greater than 3.0% OM, apply 4.5 8.0 fl. oz. Tigris Sulfen 4 SC per acre
  - Less than 1.5% OM, apply 3.75 5.25 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 4.5 6.75 fl. oz. **Tigris Sulfen 4 SC** per acre
  - Greater than 3.0% OM, apply 5.25 8.0 fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher Tigris Sulfen 4 SC rates with lower soil pH rates (7.0 and lower) and lower Tigris Sulfen 4 SC rates with higher soil pH rates (greater than 7.0).

## Application Instructions

Apply amount of Tigris Sulfen 4 SC indicated above to stubble or soil surface in the fall, or as a fallow treatment in the spring. Do not incorporate Tigris Sulfen 4 SC into the soil.

Moisture (in the form of rain or snow) after application will move the product into the soil. For maximum weed control, disturb the soil surface as little as possible after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur. To prevent runoff of Tigris Sulfen 4 SC from snowmelt or rain, do not apply Tigris Sulfen 4 SC to soils that are frozen or have an existing snow cover.

If weed size is such that the weeds interfere with Tigris Sulfen 4 SC getting to soil surface, a separate burndown herbicide should be used prior to application of Tigris Sulfen 4 SC. Use higher listed application rates, or more than one application of a burndown herbicide, if necessary, to remove emerged weeds. If applying aerially, use higher listed spray volumes of burndown herbicide to control dense weeds or canopy.

#### **Tank Mixes**

Tigris Sulfen 4 SC can be mixed with burndown herbicides or residual soil herbicides to control emerged weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### Precautions

- Read and follow all precautions, instructions, replanting instructions, and any other information on this label prior to use.
- Follow rotational crop guidelines listed on this table when planting crops in the next season.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 **SC** with specific local varieties of given crop species.

#### Restrictions

- · This product may only be used to control Filaree, redstem; Kochia (ALS-Triazone-Resistant); Lambsquarters, common; Morningglory (ivyleaf, tall); Nightshade, Eastern black; Pigweed (redroot, smooth); Thistle, Russian; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- Do not make more than two Tigris Sulfen 4 SC applications in a 12month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- To prevent runoff of Tigris Sulfen 4 SC from snowmelt or rain, do not apply **Tigris Sulfen 4 SC** to soils that are frozen or have an existing snow cover.

#### [Note to Reviewer: Brackets [ ] denote optional language]

## FLAX[\*]

To control susceptible weeds, Tigris Sulfen 4 SC can be applied pre-emergence to flax.

When applied as indicated on this label, the following weeds in flax will be controlled with Tigris Sulfen 4 SC:

Copperleaf, hophornbeam Morningglory (entireleaf, ivyleaf, tall)

Kochia (ALS- and Triazine-Resistant) Nightshade, Eastern black

Pigweed (redroot, smooth)

See LISTED WEED SPECIES section of this label for information on additional weeds.

## [\*Not for Use in California] **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 3.0 fl. oz. Tigris Sulfen 4 SC per
- 1.5% to 3.0% OM, apply [3.0 6.0] [3.0 4.5] fl. oz. Tigris Sulfen 4 **SC** per acre
- Greater than 3.0% OM, apply [6.0 9.0] [3.75 6.0] fl. oz. **Tigris** Sulfen 4 SC per acre

For Medium-Textured Soils

- Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per
- 1.5% to 3.0% OM, apply [6.0 9.0] [3.75 6.0] fl. oz. **Tigris Sulfen** 4 SC per acre
- Greater than 3.0% OM, apply [6.0 12.0] [4.5 6.75] fl. oz. Tigris Sulfen 4 SC per acre

For Fine-Textured Soils

#### **Precautions**

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of
- Planting less than 1 inch in depth or inadequate seed furrow closure or poor growing conditions (diseases, low temperature, soil compaction, excessive moisture) can also cause adverse crop response.
- Reduced weed control can occur if crop is experiencing extended periods of dry weather.

## Restrictions

- Less than 1.5% OM, apply [3.0 6.0] [3.75 5.25] fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, [6.0 9.0] [4.5 6.75] fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply [6.0 12.0] [6.0 8.0] fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

#### **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above as a pre-emergence treatment prior to planting up to just before seedling emergence. To avoid severe injury to flax, do not make application after seedings have emerged.

For enhanced control of broadleaf and grass weeds, **Tigris Sulfen 4 SC** application can be followed with a post-emergence flax herbicide.

#### **Tank Mixes**

**Tigris Sulfen 4 SC** can be applied alone or in combination with other herbicides labeled for use on flax to enhance control to broadleaf weeds and grasses. Tank mix **Tigris Sulfen 4 SC** with burndown herbicides to control emerged weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

- This product may only be used to control Copperleaf, hophornbeam; Kochia (ALS- and Triazone-Resistant); Morningglory (entireleaf, ivyleaf, tall); Nightshade, Eastern black; Pigweed (redroot, smooth).
- The maximum single application rate for Tigris Sulfen 4
   SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than five **Tigris Sulfen 4 SC** applications in a 12-month period. The 12-month period starts at the point of first application.
- Wait a minimum of 7 days after application to plant in coarse-textured soils with less than 1.5% organic matter.
- Eliminate use or reduce rate of **Tigris Sulfen 4 SC** to 3.0 fl. oz./acre (0.94 lb. a.i.) on coarse-textured soil with organic matter less than 1.5% and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings to minimize adverse crop response.
- Product is not to be incorporated any deeper than 2 inches.
- To prevent runoff of Tigris Sulfen 4 SC from snowmelt or rain, do not apply Tigris Sulfen 4 SC to soils that are frozen or have an existing snow cover.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- If seedlings are close to soil surface or have emerged, do not apply Tigris Sulfen 4 SC directly to crop.

## FRUITING VEGETABLES (except Cucurbits) [\*] and OKRA[\*]

Eggplant; groundcherry (*Physalis* spp.); pepino; pepper (including bell pepper, chili pepper, cooking pepper, pimento, sweet pepper); okra; tomatillo; tomato

To control susceptible weeds, Tigris Sulfen 4 SC can be applied pre-emergence to fruiting vegetables.

When applied as indicated on this label, the following weeds in fruiting vegetables will be controlled with Tigris Sulfen 4 SC:

Lambsquarters, common Morningglory, ivyleaf Pigweed, redroot Waterhemp (common, tall)

Nutsedge, yellow

See **LISTED WEED SPECIES** section of this label for information on additional weeds. [\*Not for Use in California]

## **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 3.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.0 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- $\bullet$  Greater than 3.0% OM, apply 6.0 9.0 fl. oz. Tigris Sulfen 4 SC per acre For Medium-Textured Soils
  - Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 6.0 9.0 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 6.0 12.0 fl. oz. **Tigris Sulfen 4 SC** per acre For Fine-Textured Soils
  - Less than 1.5% OM, apply 3.0 6.0 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 6.0 9.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 12.0 fl. oz. **Tigris Sulfen 4 SC** per acre OM Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

#### **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above as a pre-emergence treatment (broadcast or banded) to fruiting vegetables. Make applications before transplanting.

#### Precautions

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of fruiting vegetables.

#### Restrictions

- This product may only be used to control Lambsquarters, common; Morningglory, ivyleaf; Nutsedge, yellow; Pigweed, redroot; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than five **Tigris Sulfen 4 SC** applications in a 12-month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').

### HORSERADISH[\*]

To control susceptible weeds, **Tigris Sulfen 4 SC** can be applied to horseradish at the following times: In the fall (pre-plant), before spring growing season.

In the spring (early pre-plant, pre-plant incorporated, pre-emergence).

When applying early pre-plant to horseradish, the product may be applied only in CO,ID, MI, MN, MT, NE, ND, OR, SD, WA, WI, WY.

When applied as indicated on this label, the following weeds in horseradish will be controlled with Tigris Sulfen 4 SC:

Lambsquarters, common Morningglory, ivyleaf Nutsedge, yellow

Pigweed, redroot Waterhemp (common, tall)

See **LISTED WEED SPECIES** section of this label for information on additional weeds. [\*Not for Use in California]

## **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 4.5 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 7.5 fl. oz. **Tigris Sulfen 4 SC** per acre For Medium- or Fine-Textured Soils
  - Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 6.0 8.0 fl. oz. **Tigris Sulfen 4 SC** per acre
  - Greater than 3.0% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre

## OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to stubble or to the soil surface. Unless applying pre-plant incorporated, do not incorporate the product into the soil after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur.

If applying pre-plant in the spring, product can be applied 60 days prior to planting up to planting.

If applying pre-emergence, applications before planting, and up to 5 days before crop emergence can be broadcast or banded. After crop emergence, **Tigris Sulfen 4 SC** can be applied to row middles as a banded treatment. If soil has more than 1% organic matter or is clay, higher rates of **Tigris Sulfen 4 SC** should be used.

If applying this product pre-plant incorporated in the spring, prior to planting, mix thoroughly or shallowly incorporate the **Tigris Sulfen 4 SC** into the soil. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.

Moisture (in the form of rain or snow) after application will activate and move the product into the soil. To prevent runoff of **Tigris Sulfen 4 SC** from snowmelt or rain, do not apply **Tigris Sulfen 4 SC** to soils that are frozen or have an existing snow cover.

#### **Tank Mixes**

**Tigris Sulfen 4 SC** can be split-applied or mixed with burndown herbicides, residual soil herbicides or other pesticides labeled for use on horseradish to control emerged weeds or broaden the pesticide control spectrum. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

## Precautions

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of horseradish.

#### Restrictions

- This product may only be used to control Lambsquarters, common; Morningglory, ivyleaf; Nutsedge, yellow; Pigweed, redroot; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- The maximum annual application rate for **Tigris Sulfen 4 SC** is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- Do not make more than three Tigris Sulfen
   4 SC applications in a 12-month period.
   The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Product is not to be incorporated any deeper than 2 inches.
- If seedlings are close to soil surface or have emerged, do not apply Tigris Sulfen 4 SC directly to the crop (apply a banded treatment to row middles).

## LIMA BEANS, SUCCULENT (TENNESSEE ONLY)

To control susceptible weeds, **Tigris Sulfen 4 SC** can be applied pre-emergence to succulent lima beans (TN only).

When applied as indicated on this label, the following weeds in lima beans will be controlled with **Tigris Sulfen 4 SC**:
Copperleaf, hophornbeam Morningglory (entireleaf, ivyleaf)
Pigweed (redroot, smooth)

See LISTED WEED SPECIES section of this label for information on additional weeds.

## **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 3.75 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.0 4.5 fl. oz. **Tigris Sulfen 4 SC** per

## Precautions

 Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use Greater than 3.0% OM, apply 3.75 - 6.0 fl. oz. Tigris Sulfen 4 SC

#### For Medium-Textured Soils

- Less than 1.5% OM, apply 3.0 6.0 fl. oz. Tigris Sulfen 4 SC per
- 1.5% to 3.0% OM, apply 3.75 6.0 fl. oz. Tigris Sulfen 4 SC per
- Greater than 3.0% OM, apply 4.5 6.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Fine-Textured Soils

- Less than 1.5% OM, apply 3.75 6.0 fl. oz. Tigris Sulfen 4 SC per
- 1.5% to 3.0% OM, apply 4.5 6.0 fl. oz. Tigris Sulfen 4 SC per
- Greater than 3.0% OM, apply 5.25 6.0 fl. oz. Tigris Sulfen 4 SC per acre

## OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher Tigris Sulfen 4 SC rates with lower soil pH rates (7.0 and lower) and lower Tigris Sulfen 4 SC rates with higher soil pH rates (greater than

#### **Application Instructions**

Apply amount of Tigris Sulfen 4 SC indicated above as a preemergence treatment. Apply product in at least 10 gallons of finished spray per acre. Make application with ground equipment.

- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of lima beans.
- Planting less than 1 inch in depth or inadequate seed furrow closure or poor growing conditions (diseases, low temperature, soil compaction, excessive moisture) can also cause adverse crop response.
- Reduced weed control can occur if crop is experiencing extended periods of dry weather.

#### Restrictions

- This product may only be used to control Copperleaf, hophornbeam; Morningglory (entireleaf, ivyleaf); Pigweed (redroot, smooth).
- The maximum single application rate for Tigris Sulfen 4 SC is 6.0 fl. oz./A, the equivalent of 0.1875 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 6.0 fl. oz./A, the equivalent of 0.1875 lb. a.i./A.
- Do not make more than two Tigris Sulfen 4 SC
- applications in a 12-month period. The 12-month period starts at the point of first application.
- Wait a minimum of 7 days after application to plant in coarse-textured soils with less than 1.5% organic matter.
- Reduce rate of Tigris Sulfen 4 SC on coarse-textured soil with organic matter <1.5% and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings to minimize adverse crop response.
- Do not incorporate Tigris Sulfen 4 SC into the soil when using product on lima beans (TN).

#### MELONS[\*]

#### (Citron melon, muskmelon, watermelon)

To control susceptible weeds, Tigris Sulfen 4 SC can be applied pre-emergence to melons.

When applied as indicated on this label, the following weeds in melons will be controlled with Tigris Sulfen 4 SC:

Morningglory, ivyleaf Lambsquarters, common

Pigweed, redroot Waterhemp (common, tall) Nutsedge, yellow

See LISTED WEED SPECIES section of this label for information on additional weeds. [\*Not for Use in California]

## **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 3.0 3.75 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 3.75 6.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Medium-Textured Soils

- Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.75 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 4.5 6.8 fl. oz. Tigris Sulfen 4 SC per acre

## For Fine-Textured Soils

- Less than 1.5% OM, apply 3.75 5.25 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 4.5 6.8 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher Tigris Sulfen 4 SC rates with lower soil pH rates (7.0 and lower) and lower Tigris Sulfen 4 SC rates with higher soil pH rates (greater than 7.0).

#### **Application Instructions**

Apply amount of Tigris Sulfen 4 SC indicated above as a pre-emergence treatment from 48 hours prior to planting up to just before seedling emergence. To avoid severe injury to melons, do not make application after seedings have emerged. For enhanced control of broadleaf and grass weeds, Tigris Sulfen 4 SC application can be followed with a postemergence melon herbicide.

## **Tank Mixes**

Tigris Sulfen 4 SC can be split-applied or mixed with burndown herbicide to control emerged weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### Precautions

- · Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of melons.

## Restrictions

- This product may only be used to control Lambsquarters, common; Morningglory, ivyleaf; Nutsedge, yellow; Pigweed, redroot; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- The maximum annual application rate for **Tigris Sulfen 4 SC** is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- Do not make more than two Tigris Sulfen 4 SC applications in a 12-month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').

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## MINT[\*]

To control susceptible weeds, **Tigris Sulfen 4 SC** can be applied to established stands of dormant mint or to newly planted mint, prior to emergence of new growth.

When applied as indicated on this label, the following weeds in mint will be controlled with Tigris Sulfen 4 SC:

Amaranth, Powell Kochia (ALS- and Triazine-Resistant) Nightshade, Eastern black Shepherd's purse Waterhemp (common, tall) Bedstraw, catchweed Lambsquarters, common Nutsedge, yellow Thistle, Russian Chamomile, mayweed Morningglory, ivyleaf Pigweed, redroot Toadflax, yellow

See **LISTED WEED SPECIES** section of this label for information on additional weeds. [\*Not for Use in California]

#### **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 4.5 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 6.0 8.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 8.0 10.1 fl. oz. **Tigris Sulfen 4 SC** per acre

#### For Medium-Textured Soils

- Less than 1.5% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 8.0 10.1 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 10.1 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Fine-Textured Soils

- Less than 1.5% OM, apply 8.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, 10.1 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

### **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above can be applied to dormant mint in the fall or spring, or pre-emergence to new mint plantings.

**Dormant Applications:** Application can be made to established stands of mint in the spring (after spring cultivation has been completed) or in the fall (after post-harvest cultivation has been completed), prior to emergence of new growth. Split applications of **Tigris Sulfen 4 SC** can be used for pre-emergence control of winter and spring annual weeds.

**New Planting Applications:** When applying to new mint plantings, reduce rate of application by 25% of the rate listed for established plantings. Apply product preemergence to both weeds and mint.

#### **Tank Mixes**

**Tigris Sulfen 4 SC** can be mixed with burndown herbicides labeled for use on mint to control emerged weeds. Enhanced control of emerged weeds can be obtained by also adding a surfactant to the tank mix. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### **Precautions**

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of mint.

#### Restrictions

- This product may only be used to control Amaranth, Powell; Bedstraw, catchweed; Chamomile, mayweed; Kochia (ALS- and Triazine-Resistant); Lambsquarters, common; Morningglory, ivyleaf; Nightshade, Eastern black; Nutsedge, yellow; Pigweed, redroot; Shepherd's purse; Thistle, Russian; Toadflax, yellow; Waterhemp (common, tall).
- The maximum single application rate for **Tigris Sulfen 4 SC** is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than two Tigris Sulfen
   4 SC applications in a 12-month period.
   The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Do not apply Tigris Sulfen 4 SC to mint plantings once new growth has emerged, to avoid severe injury to plant tissue.
- Application to mint fields under stress (environmental, cultural, pests, disease) may result in crop injury. Apply to healthy mint fields only.
- To activate herbicide and move product into the soil, moisture (in the form of rain or overhead irritation) is required after application.

#### PEANUTS[\*]

## Southeastern United States Only (AL, GA. MS, NC, SC, VA)

To control broadleaf weeds and grasses in peanut production, **Tigris Sulfen 4 SC** can be applied to peanuts pre-plant incorporated up to 14 days prior to planting, at plant, or up to 12 hours after planting.

Use **Tigris Sulfen 4 SC** on peanuts only in AL, GA, MS, NC, SC, and VA.

[\*Not for Use in California]

#### **Application Rates**

For Coarse-Textured Soils

- Application rate (1): apply 4.8 fl. oz. Tigris Sulfen 4 SC per acre
- Application rate (2): apply 6.4 fl. oz. **Tigris Sulfen 4 SC** per acre
- Application rate (3): apply 8.0 fl. oz. Tigris Sulfen 4 SC per acre

For Medium- and Fine-Textured Soils

- Application rate (1): apply 6.4 fl. oz. Tigris Sulfen 4 SC per acre
- Application rate (2): apply 8.0 fl. oz. Tigris Sulfen 4 SC per acre
- Application rate (3): apply 9.6 fl. oz. **Tigris Sulfen 4 SC** per acre

Consult preceding information regarding Coarse, Medium, or Fine soil categories.

## **pH Considerations**

- Use the next lower application rate if the pH of the soil is greater than 7.
- Irrigation with alkaline water of pH 8 or greater can result in adverse crop response.
- Do not irrigate with water that has a pH greater than 9.
- Alkalinity of irrigation water will have minimal impact once peanuts reach 4" to 6" across in size.

Application Rate(1) will control:

Amaranth, spleen Copperleaf, hophornbeam Croton. tropic Crownbeard, golden

Devils claw Jimsonweed

Lambsquarters, common Morningglory, entireleaf

Morningglory, red

Application Rate (2) will additionally control:

Amaranth, palmer Crabgrass, large

Crabgrass, Southern Eclipta

Goosegrass Morningglory, pitted
Morningglory, smallflower Poinsettia, wild\*
Redweed Senna, coffee

Signalgrass, broadleaf Smartweed, PA (seedling)

Application Rate (3) will additionally control:

Anoda, spurred Cocklebur, common
Nutsedge, yellow Nutsedge, purple\*\*
Purslane, common Sida, prickly

Starbur, prickly

\*Wild Poinsettia - Application rate (2) will control initial germination as well as several continuing germinations of wild poinsettia.

See **LISTED WEED SPECIES** section of this label for information on additional weeds.

#### **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to soil surface via broadcast or banded application. If applying a broadcast application, apply **Tigris Sulfen 4 SC** in a minimum of 10 gallons of water per acre. If applying a banded application, proportionally adjust the use rate according to the band width.

If applying the product pre-plant incorporated, mix thoroughly or shallowly incorporate the **Tigris Sulfen 4 SC** into the soil. Inconsistent weed control can result if product is incorporated deeper than the maximum incorporation depth of 2 inches.

#### **Tank Mixes**

Tank mixing **Tigris Sulfen 4 SC** with a grass herbicide labeled for peanuts will give optimum control of weeds. Applying **Tigris Sulfen 4 SC** with a post-emergent peanut herbicide can be used for weeds not controlled by sulfentrazone, or under conditions of excessive weed presence. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### **Precautions**

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local peanut varieties or cultivars.

#### Restrictions

- This product may only be used to control broadleaf weeds and grasses.
- The maximum single application rate for **Tigris Sulfen 4 SC** is 9.6 fl. oz./A, the equivalent of 0.3 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 9.6 fl. oz./A, the equivalent of 0.3 lb. a.i./A.
- Do not make more than two Tigris Sulfen 4 SC applications in a 12month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Do not feed livestock peanut forage or hay that has been treated with Tigris Sulfen 4 SC.
- Do not irrigate crops treated with Tigris Sulfen 4 SC with high pH water (greater than 9).
- To avoid significant adverse crop response, do not apply to exposed peanut tissue or "at-crack".

POTATOES[\*]

To control undesirable weeds and grasses in potato production, **Tigris Sulfen 4 SC** can be applied pre-emergence to potatoes.

When applied as indicated on this label, the following weeds in potatoes will be controlled with **Tigris Sulfen 4 SC**:
Amaranth, Palmer Filaree, redstem Kochia (ALS- and Triazine-Resistant)

Lambsquarters, common Morningglory (ivyleaf, tall) Nightshade, Eastern black

<sup>\*\*</sup>Purple nutsedge - Application rate (3) will control purple nutsedge if applied pre-plant incorporated. Partial control will be obtained by pre-emergence application (up to 85% control) or other application methods (71% to 84% control).

Pigweed (redroot, smooth)

Thistle, Russian

Waterhemp (common, tall)

See **LISTED WEED SPECIES** section of this label for information on additional weeds. [\*Not for Use in California]

## **Application Rates**

For Coarse-Textured Soils

- Up to 3.0% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 4.5 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre For Medium-Textured Soils
  - Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 3.75 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 5.25 6.75 fl. oz. **Tigris Sulfen 4 SC** per acre For Fine-Textured Soils
  - Less than 1.5% OM, apply 3.75 5.25 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 4.5 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
  - Greater than 3.0% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre

## OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

#### **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above by aerial or ground application to potatoes as a pre-emergence treatment. Treatment should be made to the soil surface before potatoes emerge, but after planting and drag-off. Undesirable crop response can occur if **Tigris Sulfen 4 SC** is applied after potatoes have emerged. Mix **Tigris Sulfen 4 SC** in water to make a minimum of 5 gallons of spray solution for aerial application or 10 gallons of spray solution for ground application.

For best results, moisture (rain or irrigation) should occur after application to move the product into the soil. If dry conditions persist within 7 days of application, **Tigris Sulfen 4 SC** can be incorporated to a depth of no more than 2 inches, to activate the product.

## **Chemigation Applications**

**Tigris Sulfen 4 SC** can also be applied pre-emergence by chemigation, using enough water for soil surface coverage, but not to runoff (0.25 to 0.5 inch per acre). **Tigris Sulfen 4 SC** can be applied prior to potato emergence through solid set, lateral move, end tow, hand move or center pivot sprinkler irrigation systems.

## pH Considerations

- An undesirable crop response can result from irrigation with alkaline water of pH 7.5 or greater.
- Following a Tigris Sulfen 4 SC soil application, the amount of available sulfentrazone in the soil can be significantly increased by irrigation with highly alkaline water (high pH).
- Younger or more stressed crops, or crops subjected to higher rates of Tigris Sulfen
   4 SC are more susceptible to adverse effects from higher pH irrigation water. As potato growth stage progresses, risks of undesirable crop response is minimized.

#### **Tank Mixes**

**Tigris Sulfen 4 SC** can be mixed with other soil applied herbicides to improve performance or for use on weeds not controlled by sulfentrazone. **Tigris Sulfen 4 SC** can be mixed with burndown herbicides and adjuvants labeled for use on potatoes to control emerged weeds. During chemigation, **Tigris Sulfen 4 SC** can be applied with other properly labeled products used for chemigation in potatoes. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### Precautions

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of potatoes.
- Certain potato varieties can exhibit sensitivity to Tigris Sulfen 4 SC. Be cautious if planting sensitive varieties (f. ex., Sangre, Shepody, Snowden) on marginal coarse soil. Crop tolerance of untested potato varieties should be tested prior to planting.

#### Restrictions

- This product may only be used to control Amaranth, Palmer; Filaree, redstem; Kochia (ALS- and Triazine-Resistant); Lambsquarters, common; Morningglory, (ivyleaf, tall); Nightshade, Eastern black; Pigweed, (redroot, smooth); Thistle, Russian; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- Do not make more than two Tigris Sulfen 4 SC
- applications in a 12-month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- To avoid undesirable crop response, do not apply to emerged potatoes.

#### SOYBEANS[\*]

To control susceptible weeds in soybeans, **Tigris Sulfen 4 SC** can be applied to soybeans in the spring (pre-emergence or pre-plant incorporated). **Tigris Sulfen 4 SC** can also be applied in the fall, before spring planting of soybeans.

When applied as indicated on this label, the following weeds in soybeans will be controlled with Tigris Sulfen 4 SC:

Amaranth, Palmer Lambsquarters, common Pigweed (redroot, smooth)

Waterhemp (common, tall).

Copperleaf, hophornbeam Morningglory spp. Prickly sida

Kochia (ALS- and Triazine-Resistant) Nightshade (Black, Eastern black)

Russian Thistle

See **LISTED WEED SPECIES** section of this label for information on additional weeds.

[\*Not for Use in California]

#### **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 4.5 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0 % OM, apply 6.0 8.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 8.0 10.1 fl. oz. **Tigris Sulfen 4 SC** per acre

## For Medium-Textured Soils

- Less than 1.5% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 8.0 10.1 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 10.1 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Fine-Textured Soils

- Less than 1.5% OM, apply 8.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 10.1 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 12.0 fl. oz. **Tigris Sulfen 4 SC** per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to the soil surface in the spring, preplant incorporated or pre-emergence, up to 3 days after planting (applications more than 3 days after planting can result in injury, if seeds are germinating) in conventional, conservation, reduced or no-tillage cropping systems. If seedlings are close to soil surface or have emerged, do not apply **Tigris Sulfen 4 SC**.

The listed amount of **Tigris Sulfen 4 SC** can also be applied in the fall in conservation and no-tillage cropping systems for burndown of existing crop stubble and weeds and for preemergence control of weeds. For optimum results, fall applications should be a part of weed control programs that include spring herbicide applications the following crop season, as needed. Apply in the fall when soil temperature is sustained at 55°F down to a depth of 4 inches. If using a ridge till production system, form ridges or beds prior to **Tigris Sulfen 4 SC** application.

Observe the following date restrictions:

Areas north of Interstate 90 - Apply after September 30<sup>th</sup>.

Areas north of Interstate 70 - Apply after October 15<sup>th</sup>.

Areas south of Interstate 70 - Do not make fall application.

**Tigris Sulfen 4 SC** can be applied by ground or aerial application. Mix **Tigris Sulfen 4 SC** in water to make a minimum of 5 gallons of spray solution for aerial application or 10 gallons of spray solution for ground application. Be sure to use enough spray volume for acceptable soil coverage. Spray must be applied with nozzles that produce a minimum amount of fine droplets, but also generate optimum soil coverage.

If applying the product pre-plant incorporated, in the spring, mix thoroughly and shallowly incorporate the **Tigris Sulfen 4 SC** into the soil. Inconsistent weed control can result if product is not uniformly incorporated or incorporated deeper than the maximum incorporation depth of 2 inches.

#### **Tank Mixes**

**Tigris Sulfen 4 SC** can be mixed with a burndown herbicide to control emerged weeds. For adequate weed coverage when applying in the fall, mix products with water to make a minimum of 20 gallons of finished spray per acre. If weeds are emerged, adjuvants (such as COC or MSO) can be added to the mix for enhanced burndown activity. For enhanced control of grasses and broad leaf weeds in the spring, **Tigris Sulfen 4 SC** can be tank mixed with or followed by an application of a post-emergence soybean herbicide. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### Precautions

- Adverse or poor growing conditions (disease, cool weather, pH of 7.5 and above, prolonged, and excessive moisture, poor agronomic practices) can cause undesirable crop response (such as discoloration or stunting). Normal growing conditions will lessen and diminish these effects.
- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on his label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of soybean.

#### Restrictions

- This product may only be used to control Amaranth. Palmer: Copperleaf, hophornbeam; Kochia (ALS-Triazine-Resistant); and Lambsquarters, common; Morningglory spp.; Nightshade, (Black, Eastern black); Pigweed, (redroot, smooth); Prickly sida; Waterhemp Thistle, Russian; (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than two Tigris Sulfen 4 SC applications in a 12month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- To prevent runoff of Tigris Sulfen 4 SC from snowmelt or rain, do not apply Tigris Sulfen 4 SC to soils that are frozen or have an existing snow cover.
- Do not apply after soybean seed has germinated.

#### STRAWBERRY[\*]

To control susceptible weeds, Tigris Sulfen 4 SC can be applied pre-emergence to strawberries.

When applied as indicated on this label, the following weeds in strawberry will be controlled with Tigris Sulfen 4 SC:

Corn Spurry Ladysthumb Morningglory, ivyleaf Pineapple weed Waterhemp (common, tall)

Yellow nutsedge

Field Pansy Lambsquarters, common Nutsedge, yellow Prostrate knotweed White Campion Yellow Woodsorrel

Mayweed Pigweed, redroot Shepherd's purse Wild buckwheat

Groundsel, common

See **LISTED WEED SPECIES** section of this label for information on additional weeds. [\*Not for Use in California]

## **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 3.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply [3.0 6.0] [3.0 4.0] fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply [6.0 9.0] [4.0 8.0] fl. oz. **Tigris Sulfen 4 SC** per acre For Medium-Textured Soils
  - Less than 1.5% OM, apply [3.0 4.5] [4.0 4.5] fl. oz. **Tigris Sulfen 4 SC** per acre
  - 1.5% to 3.0% OM, apply [6.0 9.0] [4.0 8.0] fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply [6.0 12.0] [4.0 8.0] fl. oz. **Tigris Sulfen 4 SC** per acre For Fine-Textured Soils
  - Less than 1.5% OM, apply [3.0 6.0] [4.0 6.0] fl. oz. **Tigris Sulfen 4 SC** per acre
  - 1.5% to 3.0% OM, apply [6.0 9.0] [4.0 8.0] fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply [6.0 12.0] [4.0 8.0] fl. oz. **Tigris Sulfen 4 SC** per Acre

OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above as a pre-emergence treatment prior to planting up to just before seedling emergence. To avoid severe injury to strawberry crop, do not make application after seedlings have emerged.

For enhanced control of broadleaf and grass weeds, **Tigris Sulfen 4 SC** application can be followed with a post-emergence melon herbicide.

#### **Tank Mixes**

**Tigris Sulfen 4 SC** can be split-applied or mixed with other herbicides labeled for use on strawberries to enhance control to broadleaf weeds and grasses. Tank mix **Tigris Sulfen 4 SC** with burndown herbicides to control emerged weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### **Precautions**

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of strawberries.

#### Restrictions

- This product may only be used to control Corn Spurry; Field Pansy; Groundsel, common; Ladysthumb; Lambsquarters, common; Mayweed; Morningglory, ivyleaf.; Nutsedge, yellow; Pigweed, redroot; Pineapple weed; Prostrate knotweed; Shepherd's purse; Waterhemp (common, tall); White Campion; Wild buckwheat; Yellow nutsedge; Yellow Woodsorrel.
- The maximum single application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than five Tigris Sulfen 4 SC applications in a 12month period. The 12-month period starts at the point of first application.
- If seedlings are close to soil surface or have emerged, do not apply Tigris Sulfen 4 SC directly to crop.

## SUCCULENT PEAS[\*]

Cajanus cajan (includes pigeon pea); Cicer spp. (includes chickpea and garbanzo bean); Lens culinaris (lentil); Pisum spp. (includes dwarf pea, garden pea, green pea, English pea, field pea and edible pod pea)

To control susceptible weeds, Tigris Sulfen 4 SC can be applied pre-emergence to succulent peas.

When applied as indicated on this label, the following weeds in succulent peas will be controlled with **Tigris Sulfen 4 SC**:

Copperleaf, hophornbeam Morningglory (entireleaf, ivyleaf)

Pigweed (redroot, smooth)

See **LISTED WEED SPECIES** section of this label for information on additional weeds. [\*Not for Use in California]

#### **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 3.75 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 3.75 6.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Medium-Textured Soils

- Less than 1.5% OM, apply 3.0 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.75 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 4.5 6.0 fl. oz. Tigris Sulfen 4 SC per acre

For Fine-Textured Soils

#### **Precautions**

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of succulent peas.
- Reduce rate of Tigris Sulfen 4 SC on coarse-textured soil with organic matter < 1.5% and pH of 7.8 or higher, or on highly eroded soils, or in areas of calcareous outcroppings to minimize adverse crop response.
- Planting less than 1 inch in depth or inadequate seed furrow closure or poor growing conditions (diseases, low temperature, soil compaction, excessive moisture) can also cause adverse crop response.

- Less than 1.5% OM, apply 3.75 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 4.5 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 5.25 6.0 fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0)

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above as a preemergence treatment. Apply product in at least 10 gallons of finished spray per acre. Make application with ground equipment.  Reduced weed control can occur if crop is experiencing extended periods of dry weather.

## Restrictions

- This product may only be used to control Copperleaf, hophornbeam; Morningglory (entireleaf, ivyleaf); Pigweed (redroot, smooth).
- The maximum single application rate for **Tigris Sulfen 4 SC** is 6.0 fl. oz./A, the equivalent of 0.1875 lb. a.i./A.
- The maximum annual application rate for **Tigris Sulfen 4 SC** is 6.0 fl. oz./A, the equivalent of 0.1875 lb. a.i./A.
- Do not make more than two **Tigris Sulfen 4 SC** applications in a 12-month period. The 12-month period starts at the point of first application.
- Wait a minimum of 7 days after application to plant in coarse-textured soils with less than 1.5% organic matter.
- Do not incorporate **Tigris Sulfen 4 SC** into the soil when using product on succulent peas.

## SUGARCANE[\*]

To control susceptible broadleaves, grasses and sedges in sugarcane, **Tigris Sulfen 4 SC** can be applied to sugarcane at the following times:

Pre-emergent (newly planted) - broadcast or banded; aerial or ground application. Lay-by - directed spray; ground application.

When applied as indicated in this label, the following weeds in sugarcane will be controlled with **Tigris Sulfen 4 SC**:
Morningglory (entireleaf, ivyleaf, red, tall)

Pigweed, redroot

Nutsedge, yellow

See **LISTED WEED SPECIES** section of this label for information on additional weeds. [\*Not for Use in California]

#### **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 4.5 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 6.0 8.3 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 8.0 10.1 fl. oz. **Tigris Sulfen 4 SC** per acre

## For Medium-Textured Soils

- Less than 1.5% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 8.0 10.1 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 10.1 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### For Fine-Textured Soils

- Less than 1.5% OM, apply 8.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 10.1 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 12.0 fl. oz. Tigris Sulfen 4 SC per acre

## OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of **Tigris Sulfen 4 SC** indicated above to ratoon or newly planted sugarcane (pre-emergent) or to sugarcane at lay-by timing (directed spray).

**Tigris Sulfen 4 SC** can be applied aerially (for pre-emergent application), in a minimum of 5 gallons of spray per acre or by ground equipment (pre-emergent application or lay-by application), in a minimum of 15 gallons of spray per acre For all applications, use the higher rate on soils with organic matter content higher than 2% or on clay soils.

## **Tank Mixes**

**Tigris Sulfen 4 SC** can be applied with other herbicides or insecticides registered for use in sugarcane. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### Precautions

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of sugarcane.

#### Restrictions

- This product may only be used to control Morningglory (entireleaf, ivyleaf, red, tall); Pigweed redroot; Nutsedge, yellow.
- The maximum single application rate for **Tigris Sulfen 4 SC** is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than two Tigris Sulfen 4 SC applications in a 12month period. The 12-month period starts at the point of first application.
- Pre-harvest interval is 120 days.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Do not contact crop leaves with Tigris Sulfen 4 SC.

## SUNFLOWER[\*]

To control or suppress weeds in sunflowers, **Tigris Sulfen 4 SC** can be applied at the following times: In the fall (pre-plant), before spring planting of sunflowers (Fall applications allowed only in ND, SD, MT, MN, WY, CO, NE, KS). In the spring (early pre-plant, pre-emergence, pre-plant incorporated), prior to planting up to three days after planting.

When applied as indicated on this label, the following weeds in sunflowers will be controlled with Tigris Sulfen 4 SC: Kochia (ALS- and Triazine-Resistant)

Amaranth, Palmer Filaree, redstem

Lambsquarters, common Morningglory (ivyleaf, tall) Pigweed (redroot, smooth) Sida, prickly

Waterhemp (common, tall)

Nightshade, Eastern black Thistle, Russian

See LISTED WEED SPECIES section of this label for information on additional weeds [\*Not for Use in California]

## **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 3.0 3.75 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 3.75 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre For Medium-Textured Soils
  - Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 3.75 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 4.5 6.75 fl. oz. Tigris Sulfen 4 SC per acre For Fine-Textured Soils
  - Less than 1.5% OM, apply 3.75 5.25 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 4.5 6.75 fl. oz. Tigris Sulfen 4 SC per acre
  - Greater than 3.0% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre

OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher Tigris Sulfen 4 SC rates with lower soil pH rates (7.0 and lower) and lower Tigris Sulfen 4 SC rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Apply amount of Tigris Sulfen 4 SC indicated above to stubble or to the soil surface pre-plant in the fall (fall use only in ND, SD, MT, MN, WY, CO, NE or KS), or early preplant, pre-emergence or pre-plant incorporated in the spring prior to planting up to three days after planting (if seed furrow is closed completely and seedlings have not broken the soil surface). For applications in the fall, use a mid to high rate range for your soil type and for applications in the spring greater than three weeks prior to planting, use a high rate range for your soil type, because of the extended time period between application and planting. Plant a minimum of 7 days after application if soil is coarse-textured and contains less than 1.5% organic matter.

If applying this product pre-plant incorporated in the spring, to reduced or conventional tillage sunflowers, mix thoroughly or shallowly incorporate the Tigris Sulfen 4 SC into the soil. Inconsistent weed control could result if product is incorporated deeper than the maximum incorporation depth of 2 inches.

Moisture (in the form of rain or snow) should occur after application to move the product into the soil. If dry conditions persist, a shallow incorporation may be needed.

For maximum weed control, disturb the soil surface as little as possible after application. Destroying the herbicide barrier by mechanically incorporating can allow weed escapes to occur. To prevent runoff of Tigris Sulfen 4 SC from snowmelt or rain, do not apply Tigris Sulfen 4 SC to soils that are frozen or have an existing snow cover.

## **Tank Mixes**

Tigris Sulfen 4 SC can be tank mixed or split-applied with burndown herbicides such as paraquat or glyphosate at their full labeled rate to control emerged weeds. Tigris Sulfen 4 SC can be tank mixed with other herbicides labeled for use on sunflowers to enhance weed control and suppression. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings and other restrictions.

#### **Precautions**

- · Reduce rate of Tigris Sulfen 4 SC on coarsetextured soil with organic matter less than 1.5% and pH of 7.8 or higher, or on highly eroded soils or in areas of calcareous outcroppings to minimize adverse crop response.
- Planting less than 1 inch in depth or inadequate seed furrow closure or poor growing conditions (diseases, temperature, soil compaction, excessive moisture) can also cause adverse crop response.
- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of sunflowers.

#### Restrictions

- This product may only be used to control Amaranth, Palmer; Filaree, redstem; Kochia (ALS- and Triazine-Resistant); Lambsquarters, common; Morningglory (ivyleaf, tall); Nightshade, Eastern black; Pigweed, (redroot, smooth); Sida, Prickly; Thistle, Russian; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- Do not make more than one Tigris Sulfen 4 SC application in a 12-month period. The 12-month period starts at the point of first application.
- To prevent runoff of **Tigris Sulfen 4 SC** from snowmelt or rain, do not apply Tigris Sulfen 4 SC to soils that are frozen or have an existing snow cover.
- Do not use on soils that contain less than 1% organic matter (soils classified as
- Product is not to be incorporated any deeper than 2 inches.

## TOBACCO (Burley, Flue-Cured and Dark)[\*]

Tigris Sulfen 4 SC can be applied pre-emergence or pre-plant incorporated to tobacco transplants, for control of susceptible weeds.

When applied as indicated on this label, the following weeds in tobacco will be controlled with Tigris Sulfen 4 SC:

Amaranthus, livid Filaree, redstem Galinsoga, hairy

Lambsquarters, common Morningglory (ivyleaf, tall) Pigweed (redroot, smooth) Sida, prickly Signalgrass, broadleaf Smartweed, Pennsylvania

See **LISTED WEED SPECIES** section of this label for information on additional weeds.

[\*Not for Use in California]

#### **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 4.5 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- 1.5% to 3.0% OM, apply 6.0 8.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 8.0 10.1 fl. oz. **Tigris Sulfen 4 SC** per acre For Medium-Textured Soils
  - Less than 1.5% OM, apply 6.0 8.0 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 8.0 10.1 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 10.1 12.0 fl. oz. **Tigris Sulfen 4 SC** per acre For Fine-Textured Soils
  - Less than 1.5% OM, apply 8.0 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 10.1 fl. oz. Tigris Sulfen 4 SC per acre
  - Greater than 3.0% OM, apply 12.0 fl. oz. Tigris Sulfen 4 SC per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

## **Application Instructions**

Amount of **Tigris Sulfen 4 SC** indicated above can be broadcast applied to the soil surface pre-plant or pre-plant incorporated, in a minimum of 10 gallons of finished product per acre, from 14 days to 12 hours before transplanting tobacco.

If applying the product pre-plant incorporated, shallowly incorporate the **Tigris Sulfen 4 SC** into the soil. Inconsistent weed control can result if product is not uniformly incorporated or incorporated deeper than the maximum incorporation depth of 2 inches.

When applying on Non-Bedded Fields (i.e., raised beds not formed prior to transplanting) and **Tigris Sulfen 4 SC** is surface applied - use light finishing equipment to remove equipment tracks from the field after application, and do not disturb the soil to a depth greater than 2 inches. Reduced or unacceptable weed control could occur in the drill if pre-transplant surface applications are not followed by timely cultivations.

When applying to Bedded Fields (i.e., raised beds formed prior to transplanting), any dragging or knocking down of beds prior to transplanting must occur prior to **Tigris Sulfen 4 SC** application. **Tigris Sulfen 4 SC** can concentrate in the bed if the product is not mixed thoroughly and uniformly into the soil, or incorporated deeper than the maximum incorporation depth of 2 inches.

New tobacco transplants can be replanted if the first transplant does not produce a uniform stand. If replanting:

- Do not re-treat fields with a second application of Tigris Sulfen 4 SC or any other sulfentrazone product.
- Do not reform beds prior to replanting; plant new transplants into existing beds that have already been treated with **Tigris Sulfen 4 SC**.

#### **Tank Mixes**

**Tigris Sulfen 4 SC** can be mixed with a grass herbicide (or grass herbicide can be applied separately), to give optimum broad-spectrum grass weed control. Read and follow the label of each product used for precautionary statements, directions for use, rates and timings, and other restrictions.

#### **Precautions**

- Adverse or poor growing conditions (disease, cold weather, unfavorable pH soils, excessive moisture or drought, poor agronomic practices or other unfavorable conditions) can cause undesirable crop response in tobacco transplants, particularly if they are weakened and are in conditions of compacted or saturated soil or poor drainage. Normal growing conditions will lessen and diminish these effects.
- If transplants are set too shallowly, if heavy rainfall occurs after transplant, temporary stunting of transplants can occur.
- Observe responsible transplanting practices to avoid exposure (i.e., washing or crusting over) of transplants to treated soil. Necrosis (typically localized and inconsequential) can be caused If treated soil is splashed onto tobacco leaves.
- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of tobacco, and for agronomic recommendations for local conditions and specific tobacco varieties.

#### Restrictions

- This product may only be used to control Amaranthus, livid; Filaree, redstem; Galinsoga, hairy; Lambsquarters, common; Morningglory (ivyleaf, tall); Pigweed, (redroot, smooth); Sida, Prickly; Signalgrass, broadleaf; smartweed, Pennsylvania.
- The maximum single application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than two Tigris Sulfen 4 SC
- applications in a 12-month period. The 12month period starts at the point of first application.
- Do not apply Tigris Sulfen 4 SC to shade grown tobacco, tobacco seedling beds or tobacco in greenhouses.
- To avoid unacceptable injury, do not apply Tigris Sulfen 4 SC post-transplant.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').
- Mix thoroughly and uniformly and do not incorporate product deeper than the maximum incorporation depth of 2 inches to avoid inconsistent weed control or concentrating Tigris Sulfen 4 SC into the soil (which can result in crop injury). Additionally, do not perform other tillage practices that could concentrate Tigris Sulfen 4 SC into the soil.

## TOMATO (Transplanted only)[\*]

To control susceptible weeds, **Tigris Sulfen 4 SC** can be applied to tomato (transplanted only) at the following times: Pre-emergence, prior to transplant.

When applied as indicated on this label, the following weeds in tomato will be controlled with Tigris Sulfen 4 SC:

Lambsquarters, common Pigweed, redroot

Morningglory, ivyleaf Waterhemp (common, tall)

Nutsedge, yellow

See **LISTED WEED SPECIES** section of this label for information on additional weeds.

[\*Not for Use in California]

#### **Application Rates**

For Coarse-Textured Soils

- Less than 1.5% OM, apply 2.25 3.0 fl. oz. Tigris Sulfen 4 SC per acre
- 1.5% to 3.0% OM, apply 3.0 6.0 fl. oz. **Tigris Sulfen 4 SC** per acre
- Greater than 3.0% OM, apply 6.0 8.0 fl. oz. **Tigris Sulfen 4 SC** per acre For Medium-Textured Soils
  - Less than 1.5% OM, apply 3.0 4.5 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 6.0 fl. oz. Tigris Sulfen 4 SC per acre
- Greater than 3.0% OM, apply 8.0 fl. oz. **Tigris Sulfen 4 SC** per acre For Fine-Textured Soils
  - Less than 1.5% OM, apply 3.0 6.0 fl. oz. Tigris Sulfen 4 SC per acre
  - 1.5% to 3.0% OM, apply 6.0 8.0 fl. oz. **Tigris Sulfen 4 SC** per acre
  - Greater than 3.0% OM, apply 8.0 fl. oz. **Tigris Sulfen 4 SC** per acre

#### OM - Organic Matter

Consult preceding information regarding Coarse, Medium, or Fine soil categories. Use rate is inversely dependent on soil pH - use higher **Tigris Sulfen 4 SC** rates with lower soil pH rates (7.0 and lower) and lower **Tigris Sulfen 4 SC** rates with higher soil pH rates (greater than 7.0).

### **Application Instructions:**

Apply amount of **Tigris Sulfen 4 SC** indicated above as a banded or broadcast treatment on tomato (transplanted only). Make application before tomato is transplanted.

#### **Precautions**

- Read and follow all precautions, instructions, rotational crop guidelines, replanting instructions, and any other information on this label prior to use.
- Consult with university or extension weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of tomato.

#### Restrictions

- This product may only be used to control Lambsquarters, common; Morningglory, ivyleaf; Nutsedge, yellow; Pigweed redroot; Waterhemp (common, tall).
- The maximum single application rate for Tigris Sulfen 4 SC is 8.0 fl. oz./A, the equivalent of 0.25 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than five **Tigris Sulfen 4 SC** applications in a 12-month period. The 12-month period starts at the point of first application.
- Do not use on soils that contain less than 1% organic matter (soils classified as 'sand').

#### **TURFGRASSES**

**Tigris Sulfen 4 SC** can be used to control broadleaf, grass, and sedge weeds in established turfgrasses (seeded, sodded, or sprigged). Turfgrasses should be established (good root system; uniform stand) resistant to **Tigris Sulfen 4 SC** (see below). A healthy root system is necessary to fill in exposed edges, which are more susceptible to **Tigris Sulfen 4 SC**.

## **Resistant Turfgrasses**

Cool Season Grasses - Apply Tigris Sulfen 4 SC at 4 to 8 fl. oz. per acre (unless noted) to:

Bentgrass, Creeping\*

Fescue Fine\*\* (Festuca rubra)

Fescue, Tall\*\* (Festuca arundinacea)

Ryegrass, Perennial (Lolium perenne)

Bluegrass, Kentucky (Poa pratensis)

Bluegrass, Rough\*\*\* (Poa trivialis)

#### Warm Season Grasses - Apply Tigris Sulfen 4 SC at 8 to 12 fl. oz. per acre to:

Bahiagrass\*\*\* (Paspalum notatum)

Buffalograss (Buchloe dactyloides)

Carpetgrass (Axonopus affinis)

Centipedegrass (Eremochloa ophiuroides)

Kikuyugrass (Pennisetum clandestinum)

Seashore Paspalum (Paspalum vaginatum)

Zoysiagrass\*\*\* (Zoysia japonica)

Bermudagrass (Cynodon dactylon)

Bermudagrass Hybrids (Cyn bluegrass)

St. Augustinegrass\*\*\* (Stenotaphrum secundatum)

- \*Apply a maximum of 4 fl. oz. Tigris Sulfen 4 SC to creeping bentgrass.
- \*\*An undesirable plant response can occur if applying Tigris Sulfen 4 SC to certain varieties of Chewings fine fescue or tall fescue.
- \*\*\*St. Augustine grass and some varieties of bahiagrass, rough bluegrass or zoysiagrass, particularly turfgrass that has been stress-weakened can experience temporary leaf surface discoloration (removed upon mowing) upon application of **Tigris Sulfen 4 SC**. Chemicals, certain cultural practices, disease, mechanical exposure and cultivation and weather can all be causes of stress-weakened turf.

Not all varieties or cultivars have been tested with **Tigris Sulfen 4 SC**. Consult with university or weed management specialists for information on using **Tigris Sulfen 4 SC** with specific local varieties or cultivars of turfgrass. Prior to treatment on new turfgrass varieties, test response to **Tigris Sulfen 4 SC** by applying to a small area of turfgrass.

Do not apply more than 0.375 lb. sulfentrazone (12.0 fl. oz. of product) per acre per 12-month period. The 12-month period starts at the point of first application.

## **Pre-Emergence Weed Control**

When applied as indicated on this label, the following weeds will be controlled or suppressed with Tigris Sulfen 4 SC.

	Page <b>31</b> c
Summer Annual Weeds - Apply in early spring, prior to	germination of weed seeds.
Broadleaf Weeds:	Grassy Weeds:
Black medic (Medicago lupulina)	Barnyardgrass (Echinochloa crusgalli)
Common purslane (Portulaca oleracea)	Crabgrass, large (Digitaria sanguinalis)
Pigweed, redroot (Amaranthus retroflexus)	Crabgrass, smooth (Digitana ischaemum)
Pigweed, smooth (Amaranthus hybridus)	Foxtail, green (Setaria viridis)
Prostrate knotweed (Polygonum aviculare)	Foxtail, yellow (Setaria glauca)
Spurge (Euphorbia spp.)	Goosegrass (Eleusine indica)
Spurge, prostrate (Euphorbia supine)	
Spurge, spotted (Euphorbia maculate)	
Winter Annual Weeds - Apply in late summer or early	fall.
Broadleaf Weeds:	Grassy Weeds:
Buttercups (Ranunculus spp.)	Annual bluegrass (Poa annua)
Carolina geranium (Geranium carolinianum)	Annual ryegrass (Lolium multiflorum)
Chickweed, common (Stellaria media)	
Chickweed, mouseear (Cerastium vulgatum)	

Post-Emergence Weed Control

Common groundsel (Senecio vulgaris) Corn Speedwell (Veronica arvensis) Hairy bittercress (Cardamine hirsute) Henbit (Lamium amplexicaule) Knawel (Scleranthus annuus)

Large Hop clover (Trifolium campestre) Parsley piert (Alchemilla microcarpa) Spurweed (Soliva pterosperma)

Violet, Johnny-jump-up (Viola rafinesquii)

When applied as indicated on this label, the following weeds in turfgrass will be controlled or suppressed with Tigris Sulfen 4 SC:

**Broadleaf Weeds:** Bedstraw, catchweed (Galium aparine) Lambsquarters, common (Chenopodium album) Beggarweed, Florida (Desmodium tortuosum) Lawn burweed (spurweed) (Soliva pterosperma) Bittercress (Cardamine spp.) Lespedeza, common (Lespedeza striata) Black Medic (Medicago lupulina) Mallow, common (Malva neglecta) Buttercup (Ranunculus spp.) Onion, wild (Allium canadense) Carolina geranium (Geranium carolinianum) Parslev piert (Alchemilla arvensis) Carpetweed (Mollugo verticillata) Pigweed, redroot (Amaranthus retroflexus) Chickweed, common (Stellaria media) Pigweed, smooth (Amaranthus hybridus) Chickweed, mouseear (Cerastium vulgatum) Pigweed, tumble (Amaranthus albus) Cinquefoil (Potentilla spp.) Pineapple weed (Matricaria matricarioides) Clover (Trifolium spp.) Plantain, buckhorn (Plantago lanceolata) Copperleaf (Acalypha spp.) Puncture weed (Tribulus terrestris) Cudweed (Gnaphalium spp.) Purslane, common (Portulaca oleracea) Dandelion (*Taraxacum officinale*) Pusley, Florida (Richardia scabra)

Dollarweed (Hydrocotyle umbellata) Rocket, London (Sisymbrium irio) Eclipta (Eclipta prostrata) Shepherd's purse (Capsella bursa-pastoris) Evening primrose (Oenothera biennis) Smartweed, PA (Polygonum pensylvanicum)

Sorrel, red (Rumex acetosella) Fiddleneck (Amsinckia spp.) Filaree (Erodium spp.) Speedwell (Veronica spp.) Galinsoga (Galinsoga ciliata) Spurge, annual (Euphorbia spp.) Garlic, wild (Allium vineale) Spurge, prostrate (Euphorbia humistrata) Goldenrod (Solidago spp.) Spurge, spotted (Euphorbia maculata) Ground ivy (Glechoma hederacea) Star of Bethlehem (Ornithogalum umbellatum)

Groundsel, common (Senecio vulgaris) Velvetleaf (Abutilon theophrasti) Henbit (Lamium amplexicaule) Violet, Johnny-jump-up (Viola rafinesquii)

Knawel (Scleranthus annuus) Violet, wild (Viola pratincola)

Knotweed, prostrate (Polygonum aviculare) Woodsorrel, creeping (Oxalis corniculata) Woodsorrel, yellow (Oxalis stricta) Kochia (Kochia scoparia)

**Grassy Weeds:** 

Goosegrass (Eleusine indica)

Dock, curly (Rumex crispus)

Sedges:

Kyllinga, green (Kyllinga brevifolia) Kyllinga, false green (Kyllinga gracillima) Nutsedge, purple (Cyperus rotundus)\* Nutsedge, yellow (Cyperus esculentus) Sedge, cylindrical (Cyperus retrorsus) Sedge, globe (Cyperus globulosus) Sedge, Surinam (Cyperus surinamensis) Sedge, Texas (Cyperus polystachyos)

\*NOTE: Split applications give optimum control of purple nutsedge. When actively growing purple nutsedge is evident, apply as indicated below:

Cool season grasses: 2 - 4 fl. oz. Tigris Sulfen 4 SC per acre first application, followed by second application of 4 - 6 fl. oz. per acre (do not exceed 8 fl. oz. total on cool season grasses).

Redweed (Melochia corchorifolia)

Warm season grasses: 6 - 8 fl. oz. Tigris Sulfen 4 SC per acre first application, followed by second application of 4 - 6 fl. oz. per acre (do not exceed 12 fl. oz. total on warm season grasses).

Observe maximum rate per acre based on turf variety, as indicated above.

Allow 35 days between applications.

#### **Application Instructions**

Apply amount of Tigris Sulfen 4 SC indicated above to turfgrass to control or suppress indicated weeds.

Best control is achieved with grassy weeds when applied with grasses are actively growing and small (pre-tiller stage). Application rates lower than 12 fl. oz./acre will control grasses for 60 days.

Optimum control of broadleaf weeds will occur if application is made shortly after weed emergence.

Applications to sprigged, overseeded or reseeded areas: Turfgrasses can be sprigged, overseeded or reseeded after Tigris Sulfen 4 SC applications. Best results are obtained from waiting at least 1 month after Tigris Sulfen 4 SC application before sprigging, overseeding or reseeding. If slight plant response can be tolerated, overseeding of Bermudagrass with perennial ryegrass can be done between 2 to 4 weeks after **Tigris Sulfen 4 SC** application.

Observing proper fertilization, irrigation and soil cultivating practices, and using mechanical or power seeding equipment will give optimum overseeding or reseeding results.

Optimum weed control is obtained with thorough spray coverage.

## **Tank Mixes and Adjuvants**

Tank mixing with other pesticides registered for use on turfgrass can extend the weed control range and enhance efficacy of Tigris Sulfen 4 SC for both pre-emergence and post-emergence control. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Use of adjuvants or surfactants with **Tigris Sulfen 4 SC** can cause short-term discoloration of some turf species.

Tigris, LLC does not advise use of **Tigris Sulfen 4 SC** with surfactants or adjuvants.

#### **Precautions**

- Temporary undesirable effects can be caused by the use of surfactants with Tigris Sulfen 4 SC. Perform an on-site evaluation of surfactants for effects to turfgrasses and mixture compatibility prior to use.
- Use of **Tigris Sulfen 4 SC** mixed with or applied within 7 days of herbicides containing the active ingredient trinexapac-ethyl can result in temporary turfgrass discoloration. Applying Tigris Sulfen 4 SC and trinexapac-ethyl herbicides 7 or more days apart decreases possibility of discoloration.

#### Restrictions

- The maximum single application rate for **Tigris Sulfen 4 SC** is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than three Tigris Sulfen 4 SC applications in a 12-month period. The 12-month period starts at the point of first application.
- Establish sod production areas for three (3) months before initial treatment with Tigris Sulfen 4 SC.
- Do not apply more than 0.375 lb. sulfentrazone (12.0 fl. oz. product) per acre per 12-month period. The 12-month period starts at the point of first application.
- Pre-harvest interval is 3 months.
- Do not apply to ornamental beds or landscape ornamental plants.
- Do not feed forage or allow grazing of turf treated with **Tigris Sulfen 4 SC**.
- Use of Tigris Sulfen 4 SC with surfactants is not advised unless surfactant/sulfentrazone combinations have previously proven to be safe to a particular turf variety.

## **NON-CROP USES**

For use in Railroad, Highway, Roadside, Pipeline and Utility Rights of Way, Industrial Areas, Fence Rows, and Other Listed Non-Crop Sites

Apply Tigris Sulfen 4 SC to control susceptible weeds, maintain bare ground and complete vegetation control, and for residual control of germinating weeds in non-cropland.

When applied as indicated on this label, the following weeds will be controlled with Tigris Sulfen 4 SC:

Beggarweed, Florida (Desmodium tortuosum) Lambsquarters, common (Chenopodium album)

Carpetweed (Mollugo verticillata) Lettuce, wild (Lactuca virosa) Chickweed, common (Stellaria media) Mallow, common (Malva neglecta)

Copperleaf Hophornbeam (Acalypha ostryifolia) Mexicanweed (Caperonia castanifolia) Crabgrass species (*Digitaria* spp.)
Croton, tropic (*Cretan glandulosus*)

Daisy, American (Coreopsis grand/flora)

Dayflower, common (Commelina communis)

Dayflower, Virginia (Commelina virginica)

Dock, curly (Rumex crispus)
Fixweed (Descurainia sophia)

Galinsoga, hairy (Galinsoga ciliata)
Groundcherry, clammy (seedling) (Physalis heterophylla)

Groundcherry, cutleaf (*Physalis angulata*)

Jimsonweed (Datura stramonium)

Kochia (Kochia scoparia)

ALS/Triazine-resistant Kochia (Kochia scoparia)

Milkweed, honeyvine (Ampelamus albidus)
Morningglory species (Ipomoea spp.)
Mustard species (Brassica spp.)
Nightshade species (Solanum spp.)
Nutsedge species (Cyperus spp.)
Palmer amaranth (Amaranthus-palmeri)
Pigweed, redroot (Amaranthus retroflexus)

Pigweed, smooth (Amaranthus hybridus)
Texasweed (Caperonia palustris)

Thistle, Russian (Salsola iberica)
Waterhemp, common (Amaranthus ru

Waterhemp, common (Amaranthus rudis)
Waterhemp, tall (Amaranthus tuberculatus)

See LISTED WEED SPECIES section of this label for information on additional weeds.

Application can be made to non-crop use sites including:

- Railroad Rights-of-Way including railroad yards, railroad crossings, and railroad bridge abutments.
- **Highway, Roadside, Pipeline, and Utility Rights-Of-Way** including, but not limited to guardrails, road shoulders, electric utility substations, pipeline pumping stations, around electric transmission towers, around distribution line poles, and other areas where complete vegetation control is needed.
- Industrial Areas, Fence Rows, and Other Non-Crop Sites including production facilities, tank farms, storage areas, parking areas, lumber yards, airports, military installations, along fence rows, and similar non-crop sites.

## **Application Rates**

Apply 8 - 12 fl. oz./acre

Use higher rates:

- To extend length of control.
- On soils with fine soil textures.
- On soils with more than 2% organic matter.

Do not use on soils with less than 1% organic matter (sandy soils).

## **Application Instructions**

Apply **Tigris Sulfen 4 SC** as a broadcast treatment at rates indicated, in enough water to obtain good coverage and to make at least 10 gallons finished spray per acre.

In order to assure appropriate amounts of moisture for activation of product, best results will be obtained if **Tigris Sulfen 4 SC** is applied in early spring, late summer, or fall.

Make application with a boom and nozzle sprayer or boomless application system. Make application at spray pressure of 25 PSI or below, unless the manufacturer specifies otherwise. Achieve best possible spray delivery and coverage with minimum amounts of fine spray droplets by utilizing properly chosen and adjusted nozzles, spray tips, and screens. Applications only to railroad rights of way can be made by helicopter.

## Tank Mixes

Tank mix **Tigris Sulfen 4 SC** with burndown herbicides (such as 2,4-D, dicamba, diquat, glyphosate, glyphosate trimesium, etc.). Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions. Adjuvants recommended for tank mix partner can be used.

#### Restrictions

- The maximum single application rate for Tigris Sulfen
   4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for **Tigris Sulfen 4 SC** is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than one **Tigris Sulfen 4 SC** application in a 12-month period. The 12-month period starts at the point of first application.
- Do not use on soils with less than 1% organic matter (sandy soils).
- Applications by helicopter can only be made to railroad rights of way.

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not use or store around the home.

**PESTICIDE STORAGE:** Store product in original container only, away from other pesticides, fertilizer, food, or feed. Store in a cool, dry place and avoid excess heat.

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

**Nonrefillable Container (Equal to or Less than 5 Gallons):** Do not reuse or refill this container. 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available. If recycling is not available, puncture or dispose of in a sanitary landfill or incineration or if allowed by state and local authorities, by burning. If burned stay out of smoke.

Nonrefillable Container (Greater than 5 Gallons): Do not reuse or refill this container. 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 ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available. If recycling is not available, puncture or dispose of in a sanitary landfill or incineration or if allowed by state and local authorities, by burning. If burned stay out of smoke.

### CONTAINER HANDLING: Refillable container.

Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing 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, or by other procedures approved by State and local authorities.

#### Steps to be taken in case material is released or spilled:

In case of release or spill, isolate area and keep unprotected persons or animals away from area. Dike and contain the spill with inert material (sand, earth, cat litter or commercial clay, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing and was affected skin areas with soap and water. Wash clothing before re-use. Keep the spill out of all sewers and open bodies of water.

#### LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT:** READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following 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. Ineffectiveness, injury, and other unintended consequences may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of Tigris, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Tigris, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither Tigris, LLC, the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. 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, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

Tigris Sulfen 4 SC is a trademark of Tigris, LLC.

[All trademarks are the property of their respective owners.]

# [Sublabel B: Turf and Non-Crop Use]

SULFENTRAZONE   GROUP   14   HERBICIDE
--

# Tigris<sup>[™]</sup> Sulfen 4 SC

[Herbicide]

**ACTIVE INGREDIENT:** 

 $\begin{array}{lll} \text{Sulfentrazone*} & & 39.6\% \\ \textbf{OTHER INGREDIENTS:} & & \underline{60.4\%} \\ \textbf{TOTAL:} & & \textbf{100.0\%} \\ \end{array}$ 

# KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID					
IF SWALLOWED:	<ul> <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. Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>				
IF ON SKIN OR CLOTHING:	<ul> <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>				
IF INHALED:	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>				
IF IN EYES:	<ul> <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>				
HOTLINE NUMBER					

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency

information concerning this product, call your poison control center at **1-800-222-1222**. [Optional referral statements when booklets and container labels are used:]

[See label booklet for [complete] [additional] [First Aid,] [Precautionary Statements,] [Directions For Use,] and [Storage and Disposal].]

**Manufactured For:** 

Tigris, LLC P.O. Box 250 10025 Hwy. 264 Alternate Middlesex, NC 27557

<b>EPA</b> F	Reg.	No.	92647	-6
EPA E	st.	No.		

NET CONTENTS: \_\_\_\_GALS.

<sup>\*</sup>Equivalent to 4 pounds of active ingredient per gallon.

#### PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed, absorbed through skin or inhaled. Avoid contact with skin or clothing. Avoid breathing spray mist. 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, mixers, loaders, and other pesticide handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mills, Neoprene rubber ≥14 mills, polyvinyl chloride (PVC) ≥14 mils, and viton ≥14 mills.
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not re-use them. 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.

#### **Re-Entry Interval**

The REI for sulfentrazone products is 12 hours, unless the acute toxicity of the product indicates the need for a longer REI.

#### **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 clothing.

#### **ENVIRONMENTAL HAZARDS**

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

#### **Groundwater Advisory:**

This chemical is known to leach through soil into groundwater under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Do not use on coarse soils classified as sand, which have less than 1% organic matter.

#### **Surface Water Advisory:**

Sulfentrazone can contaminate surface water through spray drift. Under some conditions, sulfentrazone may also have a high potential for runoff into surface water (primarily via dissolution in runoff water), for several to many months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

# **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.

Applicators must not exceed labeled rates of this product. Refer to specific crop directions for use for maximum use rates. Calculate the 12-month period for the purpose of maximum use rates from when **Tigris Sulfen 4 SC** is first applied.

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. These **Tigris Sulfen 4 SC** requirements 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.

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

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mills, Neoprene rubber ≥14 mills, polyvinyl chloride (PVC) ≥14 mils, and viton ≥14 mills.
- Shoes plus socks

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

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

**Re-Entry Statement:** Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment area until sprays have dried.

#### WEED RESISTANCE MANAGEMENT

For resistance management, **Tigris Sulfen 4 SC** is a Group 14 herbicide. Any weed population may contain or develop plants naturally resistant to **Tigris Sulfen 4 SC** and other Group 14 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 **Tigris Sulfen 4 SC** or other Group 14 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 from a different group if such use is permitted; where information on resistance in target weeds 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.
- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective.
- 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.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your Tigris, LLC representative. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemical means to remove escapes, as practical, with the goal of preventing further seed production.

#### **PRODUCT INFORMATION**

**Tigris Sulfen 4 SC** is a soil-applied selective herbicide. It will control listed grasses, sedges, and broadleaf weeds. **Tigris Sulfen 4 SC** is a flowable product that contains 4 pounds of active ingredient (sulfentrazone) per gallon.

The active ingredient sulfentrazone inhibits an enzyme required by plants in order to produce chlorophyll.

Inhibiting this enzyme leads to the release of singlet oxygen (O) which then disrupts cellular membranes, resulting in cellular leakage and cellular death ultimately resulting in plant death.

**Tigris Sulfen 4 SC** has a selective mode of action because sulfentrazone has a greater affinity for the PRO IX enzyme in listed weed species as opposed to listed crops.

Tigris Sulfen 4 SC must be prepared and used in such a way so as to prevent the following:

- Spills
- Improper disposal of spray mixtures, rinsate or any excess pesticide
- Back siphoning in wells

#### Setback

The following activities must not be carried out within 50 feet of any well (including drainage and abandoned wells) unless the activity is carried out on an impervious pad that has been built to withstand the heaviest possible weight that will be moved across the pad or placed upon it:

- Loading
- Mixing
- Washing/rinsing Tigris Sulfen 4 SC from application equipment

The impervious pad must be made to contain any leaks or spills, as well as any rinsate/washwaters and rain that may fall upon it. An impervious pad that does not have a roof must have enough capacity to contain a minimum of 110% of the volume of the largest container that will be placed on the pad. Those pads that are covered by a roof must have enough capacity to contain a minimum of 100% of the volume of the largest container that will be placed on the pad. The roof must be big enough to completely exclude contact with the pad from rainfall.

The above containment volume minimum must be maintained. The minimum capacity volumes do not apply to the following:

Vehicles delivering pesticide product to the load/mix area

Applicators must ensure that they are aware of any State requirements for containment and set back from wells.

The impervious pad must be self-contained so that surface water cannot flow over or from one pad. They must also be sloped to allow for material removal.

Do not load or mix **Tigris Sulfen 4 SC** within 50 feet of any sinkholes, reservoirs, impounded or natural lakes, wells (including drainage and abandoned wells) or intermittent/perennial rivers and streams. This restriction does not apply where there are properly diked loading/mixing areas or impervious pads. The restriction also does not apply where abandoned wells are properly plugged or capped.

#### RESTRICTIONS

This product may only be used to control the weeds listed under each use for the following uses: turfgrasses and non-crop uses.

Do not allow spray to drift onto adjacent plants as injury to other plants may occur.

#### APPLICATION INSTRUCTIONS

Apply **Tigris Sulfen 4 SC** as a broadcast treatment at rates indicated, in enough water to obtain good coverage and to make at least 10 gallons finished spray per acre.

When Tigris Sulfen 4 SC is tank mixed or applied alone, use water, as the carrier.

In order to assure appropriate amounts of moisture for activation of product, best results will be obtained if **Tigris Sulfen 4 SC** is applied in early spring, late summer, or fall.

Make application with a boom and nozzle sprayer or boomless application system. Make application at spray pressure of 25 PSI or below, unless the manufacturer specifies otherwise. Achieve best possible spray delivery and coverage, with minimum amounts of fine spray droplets by utilizing properly chosen and adjusted nozzles, spray tips, and screens.

Applications only to railroad rights of way can be made by helicopter.

When **Tigris Sulfen 4 SC** has been activated, it will provide control of listed weed species. The level of control will depend on the size and type of weed species when **Tigris Sulfen 4 SC** is activated. The control of listed germinating weed species will be reduced when rain or irrigation follows a period of dry weather.

Where there are prolonged periods when rainfall/irrigation is not available, alternative weed control methods should be considered.

Once a treatment with **Tigris Sulfen 4 SC** has been made, seedlings and germinating seeds absorb sulfentrazone from the soil solution. The amount of available active ingredient contained in the soil solution, is determined by the following factors:

- Soil type
- Soil pH
- · Soil organic matter content

#### CALIFORNIA ONLY SPECIFIC RESTRICTIONS ON APPLICATIONS OF TIGRIS SULFEN 4 SC

**Runoff Ground Water Protection Areas.** Do not use in areas identified by the California Department of Pesticide Regulation as runoff ground water protection areas\* unless one of the following management practices can be met:

- a) Incorporation of the pesticide. Within 48 hours after the day this product is applied, the pesticide shall be incorporated on at least 90 percent of the area treated; using a disc, harrow, rotary tiller, or other mechanical method, or by sprinkler or low flow irrigation, including chemigation where allowed by the label, using a minimum of ¼ inch of irrigation water and a maximum of one inch as described under Application Instructions, at application rates that do not cause surface water runoff from the treated property or to wells on the treated property; or
- b) Retention of runoff on field. For six months following the application, the field shall be designed, by berms, levees, or nondraining circulation systems, to retain all irrigation runoff and all precipitation on, and drainage through, the field. The retention area on the field shall not have a percolation rate of more than 0.2 inch per hour (5 inches per 24 hours); or
- c) Retention of runoff in a holding area off the field. For six months following application, all runoff shall be channeled to a holding area off the application site, under the control of the property owner, that is designed to retain all irrigation runoff and all precipitation on, and drainage through, the treated field and all other areas draining onto that holding area. The holding area shall not have a percolation rate of more than 0.2 inch per hour (5 inches per 24 hours); or

d) Runoff onto a fallow field. For six months following application, runoff shall be managed so that it runs off onto an adjacent unenclosed fallow field at least 300 feet long that is not irrigated for six months after application with the exception of the addition of adequate moisture that is required for herbicidal activation following application as described under Application Instructions, with full consideration of any plant back restrictions.

Artificial Recharge Basins. Do not use below the high water line inside artificial recharge basins (a surface facility, such as an infiltration pond or basin, or spreading ground that is specifically designed and managed to increase the infiltration of introduced surface water supplies into a ground water basin), unless this product is applied six months or more before the basin is used to recharge ground water. Unlined Canals and Ditches. Do not use below the high water line inside unlined canals and ditches unless either (a) the pesticide user can document that the percolation rate of the canal or ditch is equal to or less than 0.2 inch per hour (0.002 gallon per minute per square foot), or (b) the pesticide is applied six months before water is run in the canal or ditch.

**Rights-of-Way.** Do not use on engineered rights-of-way in areas established by the California Department of Pesticide Regulation as leaching or runoff ground water protection areas\* unless either (a) any runoff from the treated right-of-way shall pass through a non-crop fully vegetated area adjacent, and equal in area, to the treated area, or spread out onto an adjacent unenclosed fallow field that is at least 300 feet long and that will not be irrigated for six months following application with the exception of the addition of adequate moisture that is required for herbicidal activation following application as described under Application Instructions, with full consideration of any plantback restrictions, or (b) the property operator complies with any permit issued pursuant to the storm water provisions of the Federal Clean Water Act pertaining to the treated area.

Leaching Ground Water Protection Areas. Do not use in areas designated by the California Department of Pesticide Regulation as leaching ground water protection areas\* unless either (a) the user does not apply any irrigation water for six months following application of this product or (b) the user applies this product to the planting bed or the berm above the level of irrigation water in the furrow or basin and the water level shall remain at or below the level for six months following application of the following application as described under Application Instructions, or (c) irrigation is managed so that the ratio of the amount of irrigation water applied divided by the net irrigation requirement is 1.25 or less for six months following application of this product.

\*Consult with your County Agricultural Commissioner to determine whether the application will be within an area designated by the California Department of Pesticide Regulation as either a Runoff Ground Water Protection Area or a Leaching Ground Water Protection Area. Details regarding the locations of these areas are also available via the internet at http://www.cdpr.ca.gov/docs/emon/ehap.htm.

#### **Mixing with Liquid Fertilizers**

Tigris Sulfen 4 SC may be applied in combination with liquid fertilizers. Local advice regarding fertilizers can yield recommendations of products best suited in your area (e.g., urea or DAN solutions). Follow use and mixing and directions on fertilizer labels. Determine the compatibility of a liquid fertilizer combination before mixing [In a lidded glass jar (~1 quart size), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly. If mixture forms precipitates (flakes or sludge), gels, balls up or forms oily films or layers, this indicates incompatibility. Though signs of incompatibility will typically be seen within 5 minutes of mixing, mixture should be observed for approximately 30 minutes].

#### **Mixing and Loading Instructions**

- Tigris Sulfen 4 SC may be applied on its own or in combination with other herbicides for a broader spectrum of weed control. Combinations with other products may not have been tested, therefore, carry out a compatibility test before mixing and applying [In a lidded glass jar (~1 quart size), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly. If mixture forms precipitates (flakes or sludge), gels, balls up or forms oily films or layers, this indicates incompatibility. Though signs of incompatibility will typically be seen within 5 minutes of mixing, mixture should be observed for approximately 30 minutes].
- Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.
- Spray equipment must be clean and free of product residue prior to mixing an application solution of **Tigris Sulfen 4 SC**. Refer to Cleaning Directions below and to the cleaning directions of the product(s) previously applied.
- Mix Tigris Sulfen 4 SC using the following procedure:
  - 1. Fill a clean spray tank with ½ of water required for treatment.
  - 2. Begin agitation.
  - 3. Use a clean container to create a slurry of **Tigris Sulfen 4 SC** and water\*.
  - 4. Add the slurry slowly to the spray tank, continuing agitation throughout.
  - 5. Rinse the slurry mix container and add rinsate solution to spray tank.
  - 6. Finish filling spray tank to required level.
  - 7. Maintain agitation throughout. The Tigris Sulfen 4 SC/water slurry must be mixed thoroughly prior to application.
    - \* For best mixing of the Tigris Sulfen 4 SC/water slurry, add the slurry using induction systems on the sprayer fill plumbing system.
- The spray application solution must be applied immediately following mixture.
- Maintain agitation throughout mixture and application.
- Do not store spray solution in the spray tank for an extended period of time, or overnight.
- A tank mixture containing **Tigris Sulfen 4 SC** must not be premixed in nurse tanks.

#### **Cleaning Application Equipment**

Adverse crop reaction may result if residues of this product are left in spray equipment following application. Spray equipment must be cleaned immediately after treatment with **Tigris Sulfen 4 SC**, and before applications with other products.

- · Use the following procedure:
  - 1. Drain the spray application equipment, including tank, hoses, spray boom and nozzles.
  - 2. Clean inside the spray tank with a high-pressure detergent, removing residues and sediment.
  - 3. Thoroughly rinse the spray tank.
  - 4. Flush the spray system out using water, including hoses, spray boom and spray nozzles.
  - 5. Combine 3 gallons of ammonia (with a minimum of 3% active ingredient) in 100 gallons of water. Make sufficient cleaning solution to operate the spray application equipment for a minimum of 15 minutes so that the system is thoroughly flushed.
  - 6. Remove spray tips, and all screens and filters and clean separately using the ammonia solution (step 5).
  - 7. Leave the cleaning solution or water in the nozzles, spray booms, hoses, and spray tank overnight (or during storage) to ensure thorough cleaning.
  - 8. Drain the system completely prior to re-use. Use clean water to rinse/flush nozzles, spray booms, hoses, and the spray tank. Remove spray tips, and all screens and filters and clean separately, using the ammonia solution (step 5).
  - 9. Dispose of rinsate and excess cleaning solution in compliance with Federal, State, and local regulations and guidelines.
- Rinsate and cleaning solution must not be applied to sensitive crops.
- Spray application equipment must not be stored for any extended period while **Tigris Sulfen 4 SC** application solution remains in the spray lines, nozzles, strainers, or boom plumbing.
- When application equipment has been idle or in storage, flush the nozzles and spray boom with clean water prior to use for application of product.
- If small amounts of this product remain in equipment after cleaning, **Tigris Sulfen 4 SC** may be released during later applications, which may cause an adverse reaction from certain crops/other vegetation. The applicator is solely responsible for any damage caused by equipment that is not properly cleaned.
- Equipment must not be flushed or drained near desirable plants/trees.
- Ensure that bodies of water are not contaminated with application solution, rinsate or cleaning solution, including water that may be used for other crops, i.e. irrigation water.

#### **MANDATORY SPRAY DRIFT MANAGEMENT**

#### **Ground Application:**

- For boom spraying, the maximum release height must be 30 inches from the soil.
- Ground applicators must use a minimum finished spray volume of 10 gallons per acre.
- When [sulfentrazone is] tank mixed with a contact burndown herbicide, use a minimum spray volume of 15 gallons per acre.
- Select nozzles and application pressure that deliver medium [to coarse] or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE\* standard S-572.
- Select coarse to very coarse droplet size when sulfentrazone is used as a preemergent/preplant application.
- Select medium to very coarse droplet size when sulfentrazone is used postemergence with a contact burndown herbicide.
- Do not apply as spray droplets smaller than medium [to coarse] (defined by the ASABE\* standard).
- Applicators may spray only when wind speed is between 3 and 10 mph.

#### Aerial Application:

- Aerial application is allowed only when environmental conditions prohibit ground application.
- When this product is allowed to be applied by air, applicator must use a minimum finished spray volume of 5 gallons per acre.
- The maximum release height must be 10 feet from the top of the crop canopy, unless a greater application height is required for pilot safety.
- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Select nozzles and application pressure that deliver medium to coarse or larger spray droplets as indicated in the nozzle manufacturer's recommendations and in accordance with ASABE\* standard S-572.
- Select coarse to very coarse droplet size when sulfentrazone is used as a preemergent/preplant application.
- Select medium to very coarse droplet size when sulfentrazone is used postemergence with a contact burndown herbicide.
- Do not apply as spray droplets smaller than medium to coarse (defined by the ASABE\* standard).
- Applicators may spray only when wind speed is between 3 and 10 mph.
- · For Non-Crop use, application can be made by helicopter to railroad rights-of-way only.

\*ASABE – American Society for Agricultural and Biological Engineers.

The following drift management requirements must be followed to avoid off target movement from aerial applications. These requirements do not apply to forestry applications, public health uses or to applications of dry materials.

- 1. The distance of the outermost nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.
- 2. Nozzles must always point backward, parallel with the air stream, and never be pointed downwards more than 45 degrees.
- 3. Observe the regulations of the State where applications are made.

#### **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMETAL CONDITIONS.

#### **Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage for pesticide performance. Applying larger droplets reduces drift potential but will not prevent drift if applications are made improperly or under unfavorable environmental conditions. (See information on Wind, Temperature and Humidity, and Temperature Inversions in subsequent sections).

### **Controlling Spray Droplet Size**

**Volume** – Use high flow rate nozzles to apply the greatest practical spray volume. Nozzles with higher rated flow generally produce larger droplets.

**Pressure** - When higher flow rates are needed, use higher flow rate nozzles rather than increasing spray pressure. Do not exceed the nozzle manufacturer's recommended pressures. Lower pressure produces larger droplets in many types of nozzles.

Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation** – For aerial application, the required practice is to orient nozzles so that the spray is released parallel to the airstream. This orientation usually produces larger droplets as compared to other nozzle orientations. Significant nozzle deflection from horizontal will reduce droplet size and increase drift potential.

**Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles for both ground and aerial applications. Solid stream nozzles oriented straight back usually produce the largest droplets and the lowest drift potential in aerial applications.

**Boom Length** – For some aerial use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height - Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment** – When aerial applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by the path of the aircraft upwind. Swath adjustment or offset distance should increase when conditions favor increased drift potential (higher winds, smaller droplets, etc.).

**Wind** – Drift potential is lowest between wind speeds of 3-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application should be avoided below 3 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they may potentially affect spray drift.

**Temperature and Humidity** – When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions – Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the low speed and variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common during conditions of limited cloud cover and little to no wind. They often begin to form as the sun sets and may often continue into the morning. The presence of a temperature inversion may be indicated by ground fog. However, if fog is not present, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversions. Smoke that remains in layers and moves laterally in a concentrated cloud (under low speed wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### **TURFGRASSES**

(Including Residential and Institutional Lawns, Athletic Fields, Golf Course Fairways and Roughs, and Commercial Sod Farms)

**Tigris Sulfen 4 SC** can be used to control broadleaf, grass, and sedge weeds in established turfgrasses (seeded, sodded, or sprigged). Turfgrasses should be established (good root system; uniform stand) resistant to **Tigris Sulfen 4 SC** (see below). A healthy root system is necessary to fill in exposed edges, which are more susceptible to **Tigris Sulfen 4 SC**.

Resistant Tu	rfgrasses
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Cool Season Grasses - Apply Tigris Sulfen 4 SC at 4 to 8 fl. oz. per acre (unless noted) to:

Bentgrass, Creeping\*

Fescue Fine\*\* (Festuca rubra)

Fescue, Tall\*\* (Festuca arundinacea)

Ryegrass, Perennial (Lolium perenne)

Bluegrass, Kentucky (Poa pratensis)

Bluegrass, Rough\*\*\* (Poa trivialis)

# Warm Season Grasses - Apply Tigris Sulfen 4 SC at 8 to 12 fl. oz. per acre to:

Bahiagrass\*\*\* (Paspalum notatum) Buffalograss (Buchloe dactyloides)

Carpetgrass (Axonopus affinis)

Centipedegrass (Eremochloa ophiuroides)

Kikuyugrass (Pennisetum clandestinum)

Seashore Paspalum (Paspalum vaginatum)

Zoysiagrass\*\*\* (Zoysia japonica)

Bermudagrass (Cynodon dactylon)

Bermudagrass Hybrids (Cyn bluegrass)

St. Augustinegrass\*\*\* (Stenotaphrum secundatum)
\*Apply a maximum of 4 fl. oz. **Tigris Sulfen 4 SC** to creeping bentgrass.

\*\*An undesirable plant response can occur if applying Tigris Sulfen 4 SC to certain varieties of Chewings fine fescue or tall fescue.

\*\*\*St. Augustine grass and some varieties of bahiagrass, rough bluegrass or zoysiagrass, particularly turfgrass that has been stress-weakened can experience temporary leaf surface discoloration (removed upon mowing) upon application of Tigris Sulfen 4 SC. Chemicals, certain cultural practices, disease, mechanical exposure and cultivation and weather can all be causes of stress-weakened turf.

Not all varieties or cultivars have been tested with Tigris Sulfen 4 SC. Consult with university or weed management specialists for information on using Tigris Sulfen 4 SC with specific local varieties or cultivars of turfgrass. Prior to treatment on new turfgrass varieties, test response to Tigris Sulfen 4 SC by applying to a small area of turfgrass

Do not apply more than 0.375 lb. sulfentrazone (12.0 fl. oz. product) per acre per 12-month period. The 12-month period starts at the point of first application.

#### **Pre-Emergence Weed Control**

When applied as indicated on this label, the following weeds will be controlled or suppressed with Tigris Sulfen 4 SC.

Summer Annual Weeds - Apply in early spring, prior to germination of weed seeds.				
Broadleaf Weeds:	Grassy Weeds:			
Black medic (Medicago lupulina)	Barnyardgrass (Echinochloa crusgalli)			
Common purslane (Portulaca oleracea)	Crabgrass, large (Digitaria sanguinalis)			
Pigweed, redroot (Amaranthus retroflexus)	Crabgrass, smooth (Digitana ischaemum)			
Pigweed, smooth (Amaranthus hybridus)	Foxtail, green (Setaria viridis)			
Prostrate knotweed (Polygonum aviculare)	Foxtail, yellow (Setaria glauca)			
Spurge (Euphorbia spp.)	Goosegrass (Eleusine indica)			
Spurge, prostrate (Euphorbia supine)				
Spurge, spotted (Euphorbia maculate)				

Winter Annual Weeds - Apply in late summer or early fall.

#### **Broadleaf Weeds:**

Buttercups (Ranunculus spp.)

Carolina geranium (Geranium carolinianum)

Chickweed, common (Stellaria media)

Chickweed, mouseear (Cerastium vulgatum)

Common groundsel (Senecio vulgaris)

Corn Speedwell (Veronica arvensis)

Hairy bittercress (Cardamine hirsute)

Henbit (Lamium amplexicaule) Knawel (Scleranthus annuus)

Large Hop clover (Trifolium campestre)

Parsley piert (Alchemilla microcarpa)

Spurweed (Soliva pterosperma)

Violet, Johnny-jump-up (Viola rafinesquii)

# **Grassy Weeds:**

Annual bluegrass (Poa annua)

Annual ryegrass (Lolium multiflorum)

# Post-Emergence Weed Control

When applied as indicated on this label, the following weeds in turfgrass will be controlled or suppressed with Tigris Sulfen 4 SC:

# **Broadleaf Weeds:**

Bedstraw, catchweed (Galium aparine) Beggarweed, Florida (Desmodium tortuosum)

Bittercress (Cardamine spp.) Black Medic (Medicago lupulina)

Buttercup (Ranunculus spp.)

Carolina geranium (Geranium carolinianum)

Carpetweed (Mollugo verticillata) Chickweed, common (Stellaria media)

Lambsquarters, common (Chenopodium album) Lawn burweed (spurweed) (Soliva pterosperma)

Lespedeza, common (Lespedeza striata) Mallow, common (Malva neglecta) Onion, wild (Allium canadense)

Parsley piert (Alchemilla arvensis) Pigweed, redroot (Amaranthus retroflexus) Pigweed, smooth (Amaranthus hybridus)

Chickweed, mouseear (Cerastium vulgatum) Cinquefoil (Potentilla spp.) Clover (Trifolium spp.) Copperleaf (Acalypha spp.) Cudweed (Gnaphalium spp.) Dandelion (Taraxacum officinale) Dock, curly (Rumex crispus) Dollarweed (Hydrocotyle umbellata) Eclipta (Eclipta prostrata)

Evening primrose (Oenothera biennis)

Fiddleneck (Amsinckia spp.) Filaree (*Erodium* spp.) Galinsoga (Galinsoga ciliata) Garlic, wild (Allium vineale) Goldenrod (Solidago spp.) Ground ivy (Glechoma hederacea) Groundsel, common (Senecio vulgaris) Henbit (Lamium amplexicaule)

Knawel (Scleranthus annuus)

Knotweed, prostrate (Polygonum aviculare) Kochia (Kochia scoparia)

**Grassy Weeds:** 

Goosegrass (Eleusine indica)

Sedges:

Kyllinga, green (Kyllinga brevifolia) Nutsedge, purple (Cyperus rotundus)\* Sedge, cylindrical (Cyperus retrorsus) Sedge, Surinam (Cyperus surinamensis)

Kyllinga, false green (Kyllinga gracillima) Nutsedge, yellow (Cyperus esculentus) Sedge, globe (Cyperus globulosus) Sedge, Texas (Cyperus polystachyos)

Pigweed, tumble (Amaranthus albus)

Puncture weed (Tribulus terrestris)

Pusley, Florida (Richardia scabra)

Redweed (Melochia corchorifolia)

Rocket, London (Sisymbrium irio)

Sorrel, red (Rumex acetosella)

Spurge, annual (Euphorbia spp.)

Velvetleaf (Abutilon theophrasti)

Violet, wild (Viola pratincola)

Speedwell (Veronica spp.)

Pineapple weed (Matricaria matricarioides)

Plantain, buckhorn (Plantago lanceolata)

Purslane, common (Portulaça oleracea)

Shepherd's purse (Capsella bursa-pastoris)

Spurge, prostrate (Euphorbia humistrata)

Violet, Johnny-jump-up (Viola rafinesquii)

Woodsorrel, creeping (Oxalis corniculata) Woodsorrel, yellow (Oxalis stricta)

Star of Bethlehem (Ornithogalum umbellatum)

Spurge, spotted (Euphorbia maculata)

Smartweed, PA (Polygonum pensylvanicum)

\*NOTE: Split applications give optimum control of purple nutsedge. When actively growing purple nutsedge is evident, apply as indicated below:

Cool season grasses: 2 - 4 fl. oz. Tigris Sulfen 4 SC per acre first application, followed by second application of 4 - 6 fl. oz. per acre (do not exceed 8 fl. oz. total on cool season grasses).

Warm season grasses: 6 - 8 fl. oz. Tigris Sulfen 4 SC per acre first application, followed by second application of 4 - 6 fl. oz. per acre (do not exceed 12 fl. oz. total on warm season grasses).

Observe maximum rate per acre based on turf variety, as indicated above.

Allow 35 days between applications.

#### **Application Instructions**

Apply amount of Tigris Sulfen 4 SC indicated above to turfgrass to control or suppress indicated weeds.

Best control is achieved with grassy weeds when applied with grasses are actively growing and small (pre-tiller stage). Application rates lower than 12 fl. oz./acre will control grasses for 60 days.

Optimum control of broadleaf weeds will occur if application is made shortly after weed emergence.

Applications to sprigged, overseeded or reseeded areas: Turfgrasses can be sprigged, overseeded or reseeded after Tigris Sulfen 4 SC applications. Best results are obtained from waiting at least 1 month after Tigris Sulfen 4 SC application before sprigging, overseeding or reseeding. If slight plant response can be tolerated, overseeding of Bermudagrass with perennial ryegrass can be done between 2 to 4 weeks after Tigris Sulfen 4 SC application.

Observing proper fertilization, irrigation and soil cultivating practices, and using mechanical or power seeding equipment will give optimum overseeding or reseeding results.

Optimum weed control is obtained with thorough spray coverage.

#### **Tank Mixes and Adjuvants**

Tank mixing with other pesticides registered for use on turfgrass can extend the weed control range and enhance efficacy of Tigris Sulfen 4 SC for both pre-emergence and post-emergence control. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Use of adjuvants or surfactants with **Tigris Sulfen 4 SC** can cause short-term discoloration of some turf species.

Tigris, LLC does not advise use of **Tigris Sulfen 4 SC** with surfactants or adjuvants.

# **Precautions**

- Temporary undesirable effects can be caused by the use of surfactants with Tigris Sulfen 4 SC. Perform an on-site evaluation of surfactants for effects to turfgrasses and mixture compatibility prior to use.
- Use of Tigris Sulfen 4 SC mixed with or applied within 7 days of herbicides containing the active ingredient trinexapac-ethyl can result in temporary turfgrass discoloration. Applying Tigris Sulfen 4 SC and trinexapac-ethyl herbicides 7 or more days apart decreases possibility of discoloration.

#### Restrictions

- The maximum single application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than three Tigris Sulfen 4 SC applications in a 12-month period. The 12-month period starts at the point of first application.
- Establish sod production areas for three (3) months before initial treatment with Tigris Sulfen 4 SC.
- Pre harvest interval is 3 months.
- Do not apply to ornamental beds or landscape ornamental plants.
- Do not feed forage or allow grazing of turf treated with Tigris Sulfen 4 SC.
- Use of Tigris Sulfen 4 SC with surfactants is not advised unless surfactant/sulfentrazone combinations have previously proven to be safe to a particular turf variety.
- Do not apply **Tigris Sulfen 4 SC** to tees or putting greens on golf courses.

#### **NON-CROP USES**

### For use in Railroad, Highway, Roadside, Pipeline and Utility Rights of Way, Industrial Areas, Fence Rows, and Other Listed Non-Crop Sites

Apply Tigris Sulfen 4 SC to control susceptible weeds, maintain bare ground and complete vegetation control, and for residual control of germinating weeds in non-cropland.

When applied as indicated on this label, the following weeds will be controlled with Tigris Sulfen 4 SC:

Beggarweed, Florida (Desmodium tortuosum)

Carpetweed (Mollugo verticillata) Chickweed, common (Stellaria media)

Copperleaf Hophornbeam (Acalypha ostryifolia)

Crabgrass species (Digitaria spp.) Croton, tropic (Cretan glandulosus) Daisy, American (Coreopsis grand/flora) Dayflower, common (Commelina communis) Dayflower, Virginia (Commelina virginica)

Dock, curly (Rumex crispus) Fixweed (Descurainia sophia) Galinsoga, hairy (Galinsoga ciliata)

Groundcherry, clammy (seedling) (Physalis heterophylla)

Groundcherry, cutleaf (Physalis angulata)

Jimsonweed (Datura stramonium)

Kochia (Kochia scoparia)

ALS/Triazine-resistant Kochia (Kochia scoparia)

Lambsquarters, common (Chenopodium album)

Lettuce, wild (Lactuca virosa) Mallow, common (Malva neglecta) Mexicanweed (Caperonia castanifolia) Milkweed, honeyvine (Ampelamus albidus) Morningglory species (Ipomoea spp.) Mustard species (Brassica spp.) Nightshade species (Solanum spp.) Nutsedge species (Cyperus spp.) Palmer amaranth (Amaranthus-palmeri)

Pigweed, redroot (Amaranthus retroflexus) Pigweed, smooth (Amaranthus hybridus)

Texasweed (Caperonia palustris) Thistle, Russian (Salsola iberica)

Waterhemp, common (Amaranthus rudis) Waterhemp, tall (Amaranthus tuberculatus)

See LISTED WEED SPECIES section of this label for information on additional weeds.

Application can be made to non-crop use sites including:

- Railroad Rights-of-Way including railroad yards, railroad crossings, and railroad bridge abutments.
- Highway, Roadside, Pipeline, and Utility Rights-Of-Way including, but not limited to guardrails, road shoulders, electric utility substations, pipeline pumping stations, around electric transmission towers, around distribution line poles, and other areas where complete vegetation control is needed.
- Industrial Areas, Fence Rows, and Other Non-Crop Sites including production facilities, tank farms, storage areas, parking areas, lumber yards, airports, military installations, along fence rows, and similar non-crop sites.

#### **Application Rates**

Apply 8 - 12 fl. oz./acre

# Use higher rates:

- To extend length of control.
- On soils with fine soil textures.
- On soils with more than 2% organic matter.

Do not use on soils with less than 1% organic matter (sandy soils).

#### **Application Instructions**

Apply Tigris Sulfen 4 SC as a broadcast treatment at rates indicated, in enough water to obtain good coverage and to make at least 10 gallons finished spray per acre.

#### Restrictions

- The maximum single application rate for **Tigris Sulfen 4 SC** is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- The maximum annual application rate for Tigris Sulfen 4 SC is 12.0 fl. oz./A, the equivalent of 0.375 lb. a.i./A.
- Do not make more than one Tigris Sulfen 4 SC application in a 12-month period. The 12-month period starts at the point of first application.
- Do not use on soils with less than 1% organic matter (sandy soils).
- Applications by helicopter can only be made to railroad rights of way.

In order to assure appropriate amounts of moisture for activation of product, best results will be obtained if **Tigris Sulfen 4 SC** is applied in early spring, late summer, or fall.

Make application with a boom and nozzle sprayer or boomless application system. Make application at spray pressure of 25 PSI or below, unless the manufacturer specifies otherwise. Achieve best possible spray delivery and coverage with minimum amounts of fine spray droplets by utilizing properly chosen and adjusted nozzles, spray tips, and screens. Applications only to railroad rights of way can be made by helicopter.

#### **Tank Mixes**

Tank mix **Tigris Sulfen 4 SC** with burndown herbicides (such as 2,4-D, dicamba, diquat, glyphosate, glyphosate trimesium, etc.). Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions. Adjuvants recommended for tank mix partner can be used.

# STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not use or store around the home.

**PESTICIDE STORAGE:** Store product in original container only, away from other pesticides, fertilizer, food, or feed. Store in a cool, dry place and avoid excess heat.

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

#### **CONTAINER HANDLING: Nonrefillable container.**

Nonrefillable Container (Equal to or Less than 5 Gallons): Do not reuse or refill this container. 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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available. If recycling is not available, puncture or dispose of in a sanitary landfill or incineration or if allowed by state and local authorities, by burning. If burned stay out of smoke.

Nonrefillable Container (Greater than 5 Gallons): Do not reuse or refill this container. 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 ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available. If recycling is not available, puncture or dispose of in a sanitary landfill or incineration or if allowed by state and local authorities, by burning. If burned stay out of smoke.

# **CONTAINER HANDLING: Refillable container.**

Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing 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, or by other procedures approved by State and local authorities.

# Steps to be taken in case material is released or spilled:

In case of release or spill, isolate area and keep unprotected persons or animals away from area. Dike and contain the spill with inert material (sand, earth, cat litter or commercial clay, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing and was affected skin areas with soap and water. Wash clothing before re-use. Keep the spill out of all sewers and open bodies of water.

#### LIMITATION OF WARRANTY AND LIABILITY

**IMPORTANT:** READ BEFORE USE. Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If these terms and conditions are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following 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. Ineffectiveness, injury, and other unintended consequences

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may result because of such factors as manner of use or application (including misuse), the presence of other materials, weather conditions, and other unknown factors, all of which are beyond the control of Tigris, LLC. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Tigris, LLC makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond statements on this label.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, neither Tigris, LLC, the manufacturer, nor the Seller shall be liable for any indirect, special, incidental or consequential damages resulting from the use, handling, application, storage, or disposal of this product. 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, handling, application, or storage of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid.

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